29 Metals

Golden Grove

DWER ANNUAL ENVIRONMENTAL REPORT

L9423/2024/1

1 JANUARY 2025 – 31 DECEMBER 2025

PROJECT NAME: DWER AER – L9423/2024/1
REPORTING PERIOD: 1 JANUARY 2025 – 31 DECEMBER 2025
LICENCE HOLDER: GOLDEN GROVE OPERATIONS PTY LTD
PREMISES DETAILS: SCUDDLES AND GOSSAN HILL MINE

CORPORATE ENDORSEMENT

"I hereby certify to the best of my knowledge, the information within this Annual Environmental Report is true and correct and addresses the reporting requirements of DWER Licence L9423/2024/1."

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1 INTRODUCTION

1.1 Purpose

Golden Grove Annual Environmental Report (AER) is prepared in accordance with the requirements of the Department of Water and Environmental Regulations (DWER) Licence L9423/2024/1 conditions 36 and 37 for the period of 1 January 2025 to 31 December 2025 as summarised in Table 1:

Table 1: Annual Environmental Report

Condition or table	Parameter	Comments
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	Section 3 of this report
Table 12	Specified monitoring of point source emissions and limit exceedances to surface water	Section 2.3 of this report
Table 13	Monitoring of emissions to land	Section 2.4 of this report
Table 14	Monitoring of inputs and outputs	Section 2.5 of this report
Table 15	Monitoring of ambient groundwater quality and limit exceedances	Section 2.6 of this report
Table 17	Vegetation health monitoring	Section 2.7 of this report
Condition 34	Compliance (Annual Audit Compliance Report [AACR])	Appendix A
Condition 35	Complaints summary	Section 5 of this report
Conditions 27 and 30	Calibration information, data comparison against previous monitoring results and licence limits	Section 2
37 (a)	Any relevant process, production or operational data recorded under conditions 8, 9 and 10	Sections 2.5.1 and 2.5.2
37 (b)	An assessment of the information contained within the report against previous monitoring results and licence triggers and limits	Appendix C
37 (c)	Water balance data required under condition 19	Section 6.1 of this report
37 (d)	a review of the conceptual hydrogeological model for the site with an assessment of the potential impacts of TSF3 and the Clay Borrow Pit Water Storage Dam on groundwater within and outside of the premises boundary.	Section 6.2 of this report
37 (e)	A monthly water balance for the Clay Borrow Pit Water Storage Dam. The water balance shall, as a minimum record the following: (i) rainfall at the Premises; (ii) volume of dewatering effluent discharged; (iii) volume of water recovered; (iv) volume of water used onsite for dust suppression and processing; (v) evaporation rate; (vi) estimate of seepage losses; and (vii) stored water level (RL) start of the month and end of the month.	The Clay Borrow Pit Water Storage Dam has been suspended as Golden Grove is still using the material located in the area.

1.2 Operational overview

29Metals Pty Ltd owns and operates the Golden Grove mine, which is located in the Mid-West region of Western Australia. The mine is approximately 250 km east of Geraldton and consists of two underground mines (Scuddles and Gossan Hill), one new underground mine currently in the construction phase (Gossan Valley), a processing plant, supporting infrastructure, and several decommissioned open pits.

29Metals Pty Ltd mines a Volcanic Hosted Massive Sulphide (VMS) deposit to produce concentrate products of Copper, Zinc, Precious metals and Lead. Scuddles and Gossan Hill mines are expected to deliver approximately 1.7 million tonnes per annum of metal concentrate product for approximately ten years whereas Gossan Valley is expected to have a nominal eight-year mine life (with extensions possible depending on resource growth and meeting economic hurdles), producing a steady rate of 0.5 Mtpa, totalling 4.1 Mt of ore over the life of mine (LOM).

Zinc and copper ores are extracted from Scuddles and Gossan Hill mines using sub-level stoping methods. Before 2019, copper oxide, copper sulphide, and gold oxide ores were extracted from open pits above Gossan Hill and Scuddles. The extracted ore goes through crushing, grinding, and flotation to produce copper, zinc, and high precious metal (HPM) concentrates. The concentrate is then transported via road to Geraldton Port and exported to smelters in Asia and Europe.

Golden Grove is a regulated prescribed premises under the jurisdiction of the Department of Water and Environmental Regulation (DWER) as per the Environmental Protection Act 1986 (EP Act). Golden Grove Operations Pty Ltd (a subsidiary of 29Metals) holds Licence L9423/2024/1 (the licence) for the mining operation, issued on 27 March 2024.

The prescribed premises categories described in Table 2, apply to the premises.

Table 2: L9423/2024/1 Prescribed premises activities.

Category	Category description	Assessed production capacity
5	Processing or beneficiation of metallic or non-metallic ore	2,100,000 tonnes per annual period
6	Mine dewatering	3,500,000 tonnes per annual period
54	Sewage facility	300 cubic metres (m3) per day
61	Liquid waste facility	5,000 tonnes per annual period
89	Putrescible landfill site	Not more than 5,000 tonnes per annual period

1.3 Production Statistics

During the reporting period, a total of 1,477 kt of ore was mined from Scuddles and Gossan Hill underground mines. This amount is below the Category 5 assessed production capacity of 2,100 ktpa established on the licence.

Production information is related in the Table 3 below.

Table 3: Production summary.

Product	Unit	Amount 2024	Amount 2025	% Change
Total Ore Mined	kt	1,474	1,477	0.20
Total Ore Milled	kt	1,480	1,448	-2.16
Metal Production				
Copper	kt	22	22	No change
Zinc	kt	57	35	-38.6
Gold	koz	21	15	-28.57
Silver	koz	822	746	-9.25
Waste Rock Mined	kt	863.72	704.83	-18.40
Waste Rock taken to surface	kt	408.55	613.33	50.12

1.4 Activities

Main activities that occurred during the reporting period include:

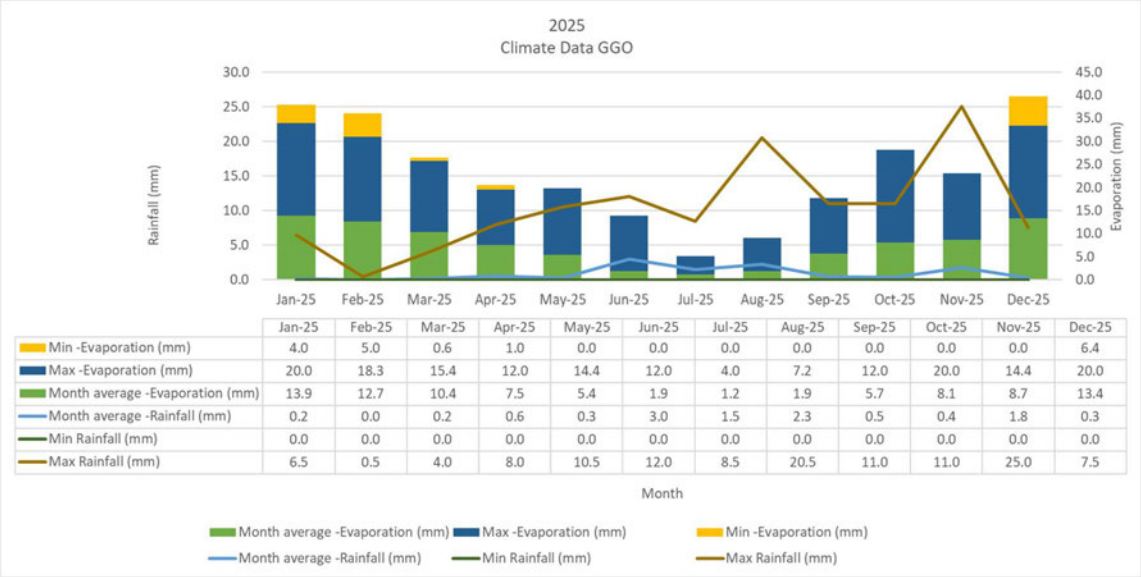
- Underground mining at the Gossan Hill and Scuddles underground mines
- Gossan Valley – a third underground mine is currently under construction and approved under Works Approval W6922/2024/1, issued by DWER.
- Completion of several projects, including the Gossan Hill Go Bay extension, drill pads, and access for geotechnical works across the site.
- Commissioning and operational stage of TSF4.
- Airwell pumps connected to the recovery existing bores to control the seepage in the Evaporation Pond A – EPA (MB34, SB17B, SB76, SB31B, SB33B and SB78).
- Environmental Investigation and Strategy started in late 2023 to address the seepage issue from the Evaporation Pond A (EPA). External consultants worked on the implementation of this strategy and provided a report in February 2024 with the potential alternatives to mitigate the Total Dissolved Solids (TDS) exceedances. Golden Grove is currently assessing feasibility of the mitigation options outlined in the investigation. Based on this decision, Golden Grove has received approval (Mining Proposal 127751 and Mining Proposal 501900) to convert one of the gravel pits on-site into this water storage structure (Pond D). This activity is discussed in detail in section 4.3.
- Monitoring activities are ongoing to ensure compliance with the Prescribed Premises Licence
- Mining Closure Plan has been reviewed and submitted to the relevant Government Agency for approval.

2 ENVIRONMENTAL MONITORING

2.1 Climate

Golden Grove records site rainfall and evaporation rates to undertake monthly water balance. The site obtains the daily information from a rainfall gauge and an evaporation pan. Daily readings have been averaged to monthly and are presented in Figure 1

Figure 1. 2025 Golden Grove Climate Data (monthly average)



	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Min -Evaporation (mm)	4.0	5.0	0.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4
Max -Evaporation (mm)	20.0	18.3	15.4	12.0	14.4	12.0	4.0	7.2	12.0	20.0	14.4	20.0
Month average -Evaporation (mm)	13.9	12.7	10.4	7.5	5.4	1.9	1.2	1.9	5.7	8.1	8.7	13.4
Month average -Rainfall (mm)	0.2	0.0	0.2	0.6	0.3	3.0	1.5	2.3	0.5	0.4	1.8	0.3
Min Rainfall (mm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Rainfall (mm)	6.5	0.5	4.0	8.0	10.5	12.0	8.5	20.5	11.0	11.0	25.0	7.5

The total rainfall measured during the reporting period is 335.8 mm, 4.51% more than the 2024 reporting period (321.3 mm). The total evaporation rates were higher during 2025 (2677.8 mm) than the previous reporting period (2660.5 mm).

2.2 Water Monitoring

Golden Grove undertakes sampling according to conditions 25, 26 and 27 of L9423/2024/1 and the Environmental Sampling Procedure and Schedule developed in accordance with the licence requirements.

Table 4. Water Monitoring Requirements

Cond.	L9423/2024/1 Condition	Golden Grove description
25	The licence holder shall ensure that: a. all water samples are collected and preserved in accordance with AS/NZS 5667.1; b. all wastewater sampling is conducted in accordance with AS/NZS 5667.10; c. all surface water sampling is conducted in accordance with AS/NZS 5667.4; d. all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and e. all laboratory samples are submitted to and tested by a laboratory with current National Association of Testing Authorities (NATA) accreditation for the parameters being measured unless indicated otherwise in the relevant table.	Golden Grove complied with the sampling requirements in 2025 as per below: • Golden Grove undertook all the bore sampling according to AS/NZS 5667.11 and AS/NZS 5667.1 • Golden Grove undertook surface water sampling according to AS/NZS 5667.4 and AS/NZS 5667.1 • Golden Grove undertook wastewater sampling according to AS/NZS 5667.10 and AS/NZS 5667.1 • ALS Environmental conducted testing on all on-site samples. The laboratory is accredited by NATA.

Cond.	L9423/2024/1 Condition	Golden Grove description
26	The licence holder shall ensure that: a. monthly monitoring is undertaken at least 15 days apart; b. quarterly monitoring is undertaken at least 45 days apart; c. six monthly monitoring is undertaken at least 5 months apart; and d. annual monitoring is undertaken at least 9 months apart.	Golden Grove considers the periodical gap required for monitoring events, and it is reflected in the sampling schedule presented in Table 5
27	The licence holder shall ensure that all monitoring equipment used on the premises comply with the conditions of this licence and is calibrated in accordance with the manufacturer's specifications.	All monitoring equipment utilised for compliance reporting undergo regular calibration as needed.

Table 5. Environmental Sampling Schedule

Sampling Event	Frequency	When
Daily Monitoring	Daily	Daily
Surface Water	Monthly	Monthly
Surface Water TSFs	Quarterly	Apr, Jun, Aug, Nov
Production Bore Monitoring	Monthly	Monthly
ROM Bore Monitoring	Monthly	Monthly
Groundwater Levels	Monthly	Monthly
Groundwater Samples	Quarterly	Apr, Jun, Aug, Nov
Potable	Monthly	Monthly
Sewage	Quarterly	Apr, Jul, Nov*
Dust Deposition	Six Monthly	Six Monthly
Flowmeters	Monthly	Monthly – within 3 days of the End of Month
Lake Wownaminya Sediment	Quarterly	Apr, Jun, Aug, Nov

* No access to the area in January

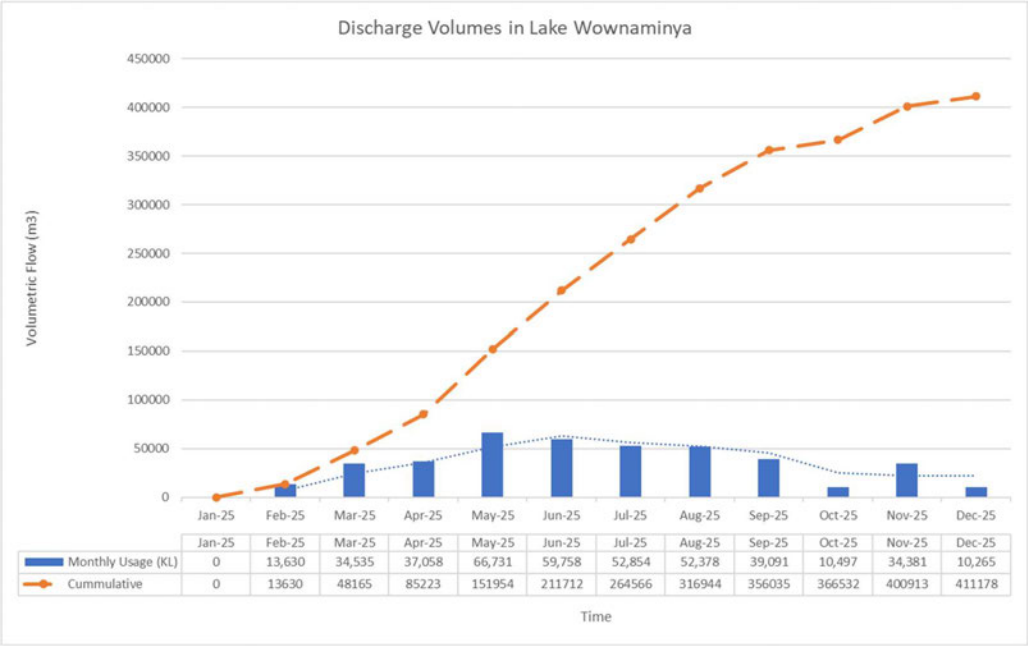
2.3 Emissions to Surface Water – D1

According to conditions 21, 22 and 28 of L9423/2024/1, Golden Grove requires to monitor volumes and quality of treated water discharges to Lake Wownaminya.

Flowmeter FIT4051 measures the discharge to the lake from the Evaporation Pond A, and the readings are taken daily during the daily water monitoring regime. A total of 411,178 KL of treated water was discharged into the Lake in 2025.

Monthly volumes of water discharge into the lake are summarised in Figure 2

Figure 2. Monthly Discharge Volumes in Lake Wownaminya in 2025



The water quality of the treated discharge into the lake was monitored according to licence requirements under Condition 22 (Table 10).

Four sampling events showed some exceedances of the Selenium limit (0.02 mg/L) at the lake discharge point. These events occurred in May (0.05 mg/L), September (0.03 mg/L), October (0.031 mg/L), and November (0.047 mg/L). Golden Grove is investigating to determine the cause of these exceedances and to implement a mitigation strategy.

Sampling for the months of January, February, March, June, August and December was not carried out, as there was not sufficient water at the Lake Discharge Point. The results for the 2025 period are summarised in Table 6.

Table 6. Form WR1: Monitoring summary at Lake Discharge Point (D1)

Emission Point	Parameter	Unit	Limit	Results	Sample date and time
D1	Volumetric flow rate	kL	Not specified	411,178 (total)	Daily
	pH		≥6.0 ≤9.0	6.42 – 7.78	Refer to Appendix B
	Electrical Conductivity	µS/cm	N/A	11600 - 14500	
	Total aluminium	mg/L	N/A	<0.01 - 0.13	
	Arsenic	mg/L	<0.5	<0.01 – 0.001	
	Cadmium	mg/L	<0.01	0.0009 - 0.0068	
	Chromium (Total)	mg/L	<1.0	<0.001 – 0.002	
	Chromium III*		N/A	Not recorded*	
	Chromium IV*		N/A	Not recorded*	
	Copper	mg/L	<0.4	0.004 - 0.036	
	Total iron	mg/L	N/A	<0.05 – 0.27	
	Lead	mg/L	<0.1	<0.001	
	Manganese	mg/L	N/A	0.018 - 1.56	
	Mercury	mg/L	-	<0.0001	
	Nickel	mg/L	N/A	<0.001 – 0.002	
	Selenium	mg/L	<0.02	0.01 - 0.05	
	Total Nitrogen (as N)	mg/L	N/A	6.7 - 17.3	
	Nitrate (as NO_3)	mg/L	N/A	2.19 - 14.1	
	Total Phosphorous (as P)	mg/L	N/A	0.1 – 0.35	
	Sulphate	mg/L	<3800	1620 - 2320	
	TRH	mg/L	<15	0 – 0.96	
	Total Suspended Solids	mg/L	<100	<5 - 5	
	Total Dissolved Solids	mg/L	N/A	8060 – 9690	
	Total Acidity ($CaCO_3$)	mg/L	<40 mg/L	4 - 14	
	Zinc	mg/L	<20 mg/L	0.009 – 1.69	

*Chromium III and Chromium IV were not monitored as they are not required by condition 28 of L9423/2024/1

2.4 Emissions to Land – L1

Golden Grove operates a wastewater treatment plant (WWTP), which comprises an irrigation area. The effluent irrigated to land (L1) is monitored according to Condition 13 of L9423/2024/1:

Table 7. Licence Condition – Emission to Land

Cond.	L9423/2024/1 Condition	Golden Grove description
13	The licence holder shall manage the irrigation of wastewater treated at the wastewater treatment plant (WWTP) such that: a. no irrigation generated run-off, spray drift or discharge occurs beyond the boundary of the defined irrigation area; b. treated wastewater is evenly distributed over the irrigation area; c. no soil erosion occurs; d. irrigation does not occur on land that is waterlogged; and e. vegetation cover is maintained over the irrigation area.	• No evidence of irrigation outside the boundary of the irrigation area was observed during the weekly visual WWTP inspections conducted during the reporting period. • Maintenance of the plant was conducted during the reporting period as required. • No evidence or erosion or waterlogging was observed during the regular inspections conducted. • Regrowth of vegetation is trimmed when required.

Condition 28 (Table 13) in L9423/2024/1 requires that Golden Grove monitor the volumetric flowrate and water quality of the effluent discharged.

A total volume of 136,126 KL of wastewater was discharged to the irrigation area at an average of 372.94 Kl/day.

Water quality monitoring results for the treated effluent for 2025 are detailed in Appendix B.

Table 8 shows a summary of water quality discharged during the reporting period. No non-compliances were recorded.

Table 8. Form LR1 - Monitoring of Emissions to Land

Emission Point	Parameter	Result	Units	Averaging period	Method	Sample date and time
L1	Volumetric flow rate	372.94	m3/day	-	Flowmeter readings	Continuous (Monthly)
	pH	7.61 – 7.92	pH units	Spot sample	AS/NZS 5667.10	Quarterly (Refer to Appendix B.)
	Biochemical Oxygen Demand	<2 – 8	mg/L			
	Total Suspended Solids	<5 – 6	mg/L			
	Total Nitrogen	23.6 – 51.4	mg/L			
	Total Phosphorus	7.1 – 7.52	mg/L			
	E. coli	<1 - 18	cfu/100 mL			

The clay borrow pit project did not go ahead as the site is still using the material of this area. Therefore, no monitoring applies to L2 in table 13 of the licence.

2.5 Inputs and outputs monitoring

2.5.1 Controlled waste – Industrial Wash Water

L9423/2024/1 condition 8 allows to Golden Grove to tanker a maximum of 5,000 tonnes of industrial wash water annually.

Industrial wash water originated at Geraldton Port from cleaning of berth, ships and ships loading facilities is tankered back to the premises through a licensed controlled waste carrier. Once the water is back on-site, it is discharged into a concrete-lined sump in the bunded processing plant via an enclosed pipeline and reused as process water in the processing plant.

Total industrial wash water received at the premises during the reporting period was 577.1 kilolitres or tonnes, being consistent with previous years and below the 5000 tonnes limit. A monthly breakdown of the amount received is presented in Figure 3.

Figure 3. Amount of controlled waste (L150 industrial wash water) received in 2025.

2.5.2 Onsite and offsite waste disposal

Conditions 9 and 10 of L9423/2024/1 authorise Golden Grove to manage an on-site waste disposal facility. The waste facility is a registered Category 89 Putrescible landfill site, which is authorised to receive:

- Inert waste type 1 – all waste types
- Putrescible waste – biodegradable waste
- Inert waste type 2 – tyres
- Special waste type 2 – medical waste; and
- Sewage

The type and estimated quantity (cubic metres) of each load of waste disposed at the landfill facility is recorded and monitored daily. During the reporting period, approximately 5280 m^3 (Approximately 1,320 tonnes) of putrescible waste and 12 m^3 of medical waste were disposed of in the authorised facilities. No tyres were disposed of in the landfill; instead, tyres were taken to Perth to recycling facilities and used back on site. A total of 151,810 m^3 of sewage was received at the Wastewater Treatment Plant (WWTP) in 2025.

Information on waste sent offsite for recycling is summarised in Table 9.

Table 9. Waste recycled from Golden Grove in 2025.

Waste Type	Unit	Amount (Tonnes)
Non-hazardous waste		
Cardboard	Tonnes	2.4
Steel	Tonnes	0
Aluminium	Tonnes	0
Hazardous waste		
Oil	Tonnes	10.46
Grease	Tonnes	0
Batteries	Tonnes	6.62

2.5.3 Processing of reclaimed tailings

The following processing of reclaimed tailings occurred at the premises in the annual period.

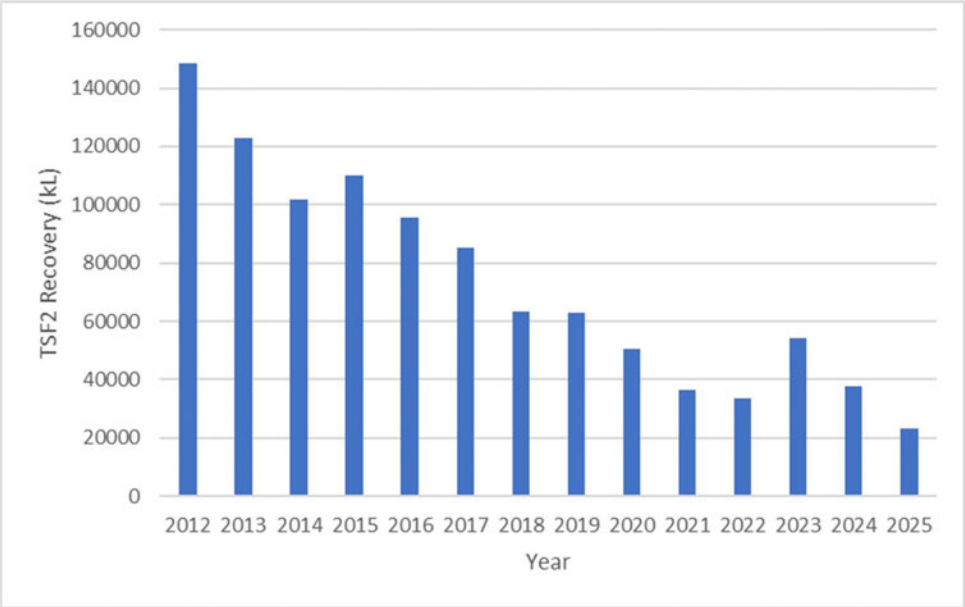
Table 10. Processing of reclaimed tailings in 2025.

Aspect	Quantity (Mt)
Tailings reclaimed from TSF2 to paste plant.	168,680
Tailings used at paste plant.	144,994
Screened waste - returned from paste plant.	27,936

2.5.4 TSF2 Seepage Recovery System

The historical trend shows that groundwater levels at TSF2 have mostly fallen because of ongoing seepage recovery pumping, as shown in Figure 4

Figure 4. Annual water volumes (kL) recovered by the TSF2 seepage recovery system.



The clay borrow pit project did not proceed as the site still uses this area's material. Therefore, no monitoring for the recovery of stored dewatering effluent was conducted on-site during the reporting period.

2.6 Monitoring of Ambient Groundwater Quality and Limit Exceedances

According to condition 30 of L9423/2024/1, Golden Grove is required to undertake groundwater monitoring and record and investigate any exceedance of any trigger value specified in Table 15 of the licence. A data summary of the groundwater quality data is provided in Table 12. Detailed data is provided in Appendix B, and laboratory reports are presented in Appendix D. Graphs showing historical data trends are shown in Appendix C.

Some bores could not be monitored during the reporting period. Table 11 provides reason of why the monitoring could not be done and a summary of the groundwater monitoring events in 2025.

Table 11. Groundwater Monitoring Gap and event summary in 2025.

Bore	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Reason why monitoring could not be conducted
MB11			^		^			^			^		The bore was dry during all the quarterly monitoring events.
MB13			^		^			^			^		The bore was dry during all the quarterly monitoring events.
MB16				0		0		0			0		-
MB18				0		0		0			0		-
MB19			^		^			^			^		The bore was dry during all the quarterly monitoring events.
MB21				0		0		0			0		-
MB22			^		^			^			^		The bore was dry during all the quarterly monitoring events.
MB23			^		^			^			^		The bore was decommissioned due to construction of Evaporation Pond D. A new bore (MB23A) has been installed near the location of MB23. The resumption of this sampling event is scheduled for Q2 - 2026.
MB24			^		^			^			^		No access during all the quarterly monitoring events.
MB46			^		^			^			^		The bore was dry during all the quarterly monitoring events.
MB47			^		^			^			^		The bore was dry in Q1, and water was not sufficient for Q2, Q3 and Q4
GGW50			^		^			^			^		No access during all the quarterly monitoring events
MB58				0		0		0			0		-
MB63			^		^			^			^		No access during all the quarterly monitoring events.
MB64				0		0		0			0		-
MB65				0		0		0			0		-
MB67				0		0		0			0		-
MB68A			^		^			^			^		The bore was dry during all the quarterly monitoring events.
MB69			^		^			^			^		The bore was dry during all the quarterly monitoring events.

Bore	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Reason why monitoring could not be conducted
MB70A				0		0		^			^		The bore was dry in Q3 and Q4
MB71A				0		0		0			0		-
MB73A			^			0		0			0		No access during Q1.
MB74B			^			0		0			0		No access during Q1
PP01			^		^			^			^		The bore was dry during all the quarterly monitoring events.
MB76			^		^			^			^		The bore has not been commissioned.
MB77			^		^			^			^		The bore has not been commissioned.
MB78			^		^			^			^		The bore has not been commissioned.
ROM11			^		^			0			0		Insufficient water to obtain samples in Q1 and Q2.
ROM12			^		^			0			^		Insufficient water to obtain samples in Q1, Q2 and Q4.
ROM13			^		^			0			^		Insufficient water to obtain samples in Q1, Q2 and Q4.
ROM14			^		^			0			^		Insufficient water to obtain samples in Q1, Q2 and Q4.
ROM15			^		^			0			0		Insufficient water to obtain samples in Q1 and Q2.
ROM16			^		^			^			^		The bore was dry during all the quarterly monitoring events.
ROM9			^			0		^			^		Insufficient water to obtain samples in Q1, Q3 and Q4.

LEGEND	
^	Dry | Insufficient water to sample | Restricted access | Not commissioned | Decommissioned
0	Sampling undertaken
	Q1
	Q2
	Q3
	Q4

Table 12. Summary of monitoring of emissions to land (Form GR1) in 2025.

Emission Point	Parameter	Unit	Limit	Result	Averaging period	Method	Sample date and time
MB11 MB13	Standing Water Level (SWL)	mbgl	5	23.48 – 120.87	Monthly	-	Refer to Appendix B
MB16 MB18 MB19 MB21 MB22 MB23 MB24 MB46 MB47 GGW50 MB58 MB63 MB64 MB65 MB67 MB68A MB69 MB70A MB71A MB73A MB74B PP01 MB76 MB77 MB78	Arsenic	mg/L	0.5	<0.001 – 0.002	Quarterly	AS/NZS 5667.11	Refer to Appendix B
	Cadmium	mg/L	0.01	<0.0001 – 0.0044			
	Chromium	mg/L	1.0	<0.001 – 0.007			
	Copper	mg/L	0.4	<0.001 – 0.009			
	Lead	mg/L	0.1	<0.001			
	Mercury		-	<0.0001 – 0.0011			
	Total nitrogen (as N)		-	0.2 – 16.6			
	Nitrate (as NO_3)		-	0.02 – 15.4			
	pH		≥ 6.0 ≤ 9.0	6.82 – 7.97			
	Selenium	mg/L	0.02	<0.01			
	Sulphate	mg/L	1000	23 – 815			
	Total Dissolved Solid (TDS)	mg/L	5000	309 - 6690			
	Total acidity ($CaCO_3$)	mg/L	40	3 - 52			
	Zinc	mg/L	20	0.005 – 1.9			

Emission Point	Parameter	Unit	Limit	Result	Averaging period	Method	Sample date and time
ROM11 ROM12 ROM13 ROM14 ROM15 ROM16	Standing Water Level (SWL)	mbgl	5	6.97 – 9.46	Monthly	-	Refer to Appendix B
	Arsenic	mg/L	0.5	<0.001 - 0.002	Quarterly	AS/NZS 5667.11	Refer to Appendix B
	Cadmium	mg/L	0.01	0.0002 - 0.136			
	Chromium	mg/L	1.0	<0.001 - 0.002			
	Copper	mg/L	0.4	0.004 - 0.041			
	Lead	mg/L	0.1	<0.001 - 0.006			
	Mercury		-	<0.0001			
	Total nitrogen (as N)		-	1.3 - 78			
	Nitrate (as NO_3)		-	0.9 - 72.2			
	pH		≥ 6.0 ≤ 9.0	4.69 - 7.65			
	Selenium	mg/L	0.02	<0.01			
	Sulphate	mg/L	3000	43 - 1690			
	Total Dissolved Solid (TDS)	mg/L	5000	654 - 11300			
	Total acidity ($CaCO_3$)	mg/L	40	6 - 63			
	Zinc	mg/L	20	0.042 - 33.2			
ROM9	Standing Water Level (SWL)	mbgl	5	6.87 – 7.43	Monthly	-	Refer to Appendix B

Emission Point	Parameter	Unit	Limit	Result	Averaging period	Method	Sample date and time
	Arsenic	mg/L	0.5	<0.001	Quarterly	AS/NZS 5667.11	Refer to Appendix B
	Cadmium	mg/L	-	0.0885			
	Chromium	mg/L	1.0	<0.001			
	Copper	mg/L	0.4	0.05			
	Lead	mg/L	0.1	<0.001			
	Mercury		-	<0.0001			
	Total nitrogen (as N)		-	1.4			
	Nitrate (as NO_3)		-	0.47			
	pH		≥ 6.0 ≤ 9.0	6.77			
	Selenium	mg/L	0.02	<0.01			
	Sulphate	mg/L	3000	2370			
	Total Dissolved Solid (TDS)	mg/L	-	15100			
	Total acidity ($CaCO_3$)	mg/L	40	40			
	Zinc	mg/L	20	6.36			

All the groundwater results are within the limits defined in operating licence L9423/2024/1, except for the following bores:

- Monitoring Bore MB18, which had TDS exceedances in Q1 (5520 mg/L), Q2 (5140 mg/L), Q3 (6690 mg/L), and Q4 (5550 mg/L)
- Monitoring Bore MB16, which had Acidity as CaCO3 exceedances in Q2 (52 mg/L).
- ROM11, which had Cadmium exceedances in Q3 (0.136 mg/L) and Q4 (0.0726 mg/L), TDS exceedances in Q3 (5020 mg/L), Total acidity as CaCO3 exceedances in Q3 (63 mg/L), and Zinc exceedances in Q3 (33.2 mg/L)
- ROM 13, which had Cadmium exceedances in Q3 (0.0214 mg/L), pH exceedances in Q3 (4.69 mg/L), and TDS exceedances in Q3 (11300 mg/L).

Section 4 provides more detailed information about these exceedances and the mitigation strategies being implemented.

2.7 Vegetation Health Monitoring

The assessment of Vegetation Health is required according to condition 31 of L9423/2024/1, in case the SWL measured during ambient groundwater monitoring is less than 5 metres below ground level (mbgl). During the reporting period, the SWL levels were between 6.87 and 120.87 mbgl; thus, no vegetation health monitoring was executed.

3 ENVIRONMENTAL INCIDENTS

Minor environmental incidents occurred during 2025. Table 13 summarises these with the corresponding actions taken to mitigate environmental impact.

Table 13. Minor Incidents Summary Table in 2025

Date	Description	Action
17/01/2025	**INC-0004028** Whilst conducting a site inspection at TSF4, 2 kangaroos were found in difficulty in the seepage pond water.	29M coordinator notified of 2 live, 2 dead kangaroos and attempts made to assist live ones out of the water. Following several attempts the live kangaroos were retrieved from the water and set free outside the pond windrows, where they made their way into the bush. The 2 dead kangaroos were retrieved and disposed of as per the environmental department instructions
30/01/2025	**INC-0004055** Noticed a HDY leak on the IT loader while doing pre-start on the GO line	Got the WESTRAC fitter to have a look at WL90 and noticed the Park brake calliper leaking and put the IT into the workshop. Report was completed. Undertake cleanup and dispose of contaminated material at the bioremediation area.
08/02/2025	**INC-0004085** During the process of cleaning out the core saw sump full of cuttings there has been a breakdown with a seal on the truck causing spillage of cuttings and sulphides on the ground around core shed area	Report was completed. Undertake cleanup and dispose of contaminated material.
18/02/2025	**INC-0004102** Truck Operator has driven off from Scuddles fuel bay with fuel discharge attached. At end of shift IP has pulled up to the Scuddles fuel bay to refuel. A surface driller who was also at the fuel bay, came over to him whilst he was refuelling to talk to him. Another truck has pulled up behind IP to refuel, and IP has gone over to talk to them. IP has got in the	Scene frozen. Shift supervisor contacted. BAPL maintenance department contacted to repair truck fuel intake. Spill kits utilised to clean up spill. Undertake cleanup and dispose of contaminated material at the bioremediation area.

Date	Description	Action
	truck and driven off with the fuel discharge still attached resulting in a fuel spill and damage to the truck fuel intake.	
22/05/2025	**INC-0004268** LV and kangaroo interaction. Deceased kangaroo reported by passerby.	Deceased kangaroo reported by passerby. Mother deceased, joey saved and given to wildlife company.
02/07/2025	**INC-0004346** 6 wheeler tipper carrying waste from a drill rig sump has had a large spill on the main road to camp whilst crossing the road. The Site Supervisor assessed the sump scheduled for cleaning and identified that the material within appeared to be quite solid. Additionally, the location of the sump was not suitable for positioning the Vac Truck due to access limitations. The decision was made to complete the task using an excavator and an end tipper truck. Historically, the excavator would build a stockpile nearby to allow the material to dry before being loaded out. Due to restricted space in the current work area layout, this was not achievable. The team opted to load the material directly into the tipper truck. As excavation progressed, it became evident that beneath the surface crust, the material had a high moisture content. When loaded into the truck, the sediment settled at the bottom while the water rose to the top. The excavator operator misjudged the ratio of solids to water and inadvertently overfilled the truck. As the truck moved off from the stop sign, the excessive liquid and loose material spilled over the top of the tray.	Report was completed. Undertake cleanup and dispose of contaminated material.
31/08/2025	**INC-0004425** After being topped up with fuel the D11 dozer fuel tank has vented fuel to the ground resulting in a spill.	Advised CEM Supervisor Requested spill kit Asked for the statements to be taken. Undertake cleanup and dispose of contaminated material.
02/09/2025	**INC-0004428** Whilst crossing the Freedom rd. bitumen crossing the WT 18 water cart has had a hydraulic hose fail, a resulting oil spill has occurred	Report was completed. Undertake cleanup and dispose of contaminated material.
13/09/2025	**INC-0004443** ADT 17 Moxy truck had a Hydraulic hose blow whilst in operation 13/9/25. A small spill has resulted under the truck. Approx 5 litres.	Stopped the truck, called the workshop and prepare the report. Undertake cleanup and dispose of contaminated material
17/09/2025	**INC-0004449** Upon a pre-work inspection by a contractor a small water treatment chemical spill was found at the FNDC, upon inspection a broken SMC fitting was found to be the cause. The Product was Inhibitor EPC8130, the dosing pump was not operational, so it was just leakage from the storage container, the spill volume was less than 1-2 litres.	Chemical spill contained, using absorbents and area secured. Report was completed.
09/10/2025	**INC-0004502** Kangaroo found dead at rd. side near Gossan Valley CEM compound 9/10/25.	Removed from rd. and made CEM leadership aware. Report was completed.

Date	Description	Action
22/10/2025	**INC-0004515** A fuel line has spilt whilst undertaking a maintenance task - refuelling according to the team and a small spill has resulted	Report was completed. Undertake cleanup and dispose of contaminated material.
12/11/2025	**INC-0004554** Bird found dead at the airport parking lot.	Removed from parking lot and disposed of accordingly.
17/11/2025	**INC-0004562** At approximately 04:45 on 14 November 2025, the Leading Hand was travelling from Golden Grove Village to site at the start of shift. Early morning low-light conditions combined with roadside vegetation along Gosson Valley Road significantly reduced side visibility. While driving within the posted speed limit and using operational spotlights, a kangaroo suddenly entered the roadway from behind vegetation at the track's edge, leaving insufficient reaction time to avoid contact. The vehicle made low-speed impact with the animal. The driver stopped, conducted a hazard assessment, and confirmed there were no damage to the vehicle, and no ongoing risk to other road users. The kangaroo sustained significant trauma and was euthanised on humane grounds. A pouch check was completed, and no joeys were present. The animal was moved clear of the access track to prevent obstruction or secondary incidents. No other workers or vehicles were in the vicinity at the time of the event. Wildlife activity is known to increase along this section of road during dawn and dusk, particularly where vegetation grows close to the trafficable surface. The incident is considered unavoidable due to the unpredictable movement of native fauna and environmental conditions at the time.	The driver stopped the vehicle safely, assessed the situation, and verified that there was no vehicle damage. The animal was euthanised due to fatal injury, and the area was checked for any joeys. The animal was moved off the access track and the driver continued to site. Reported to HSEQT Advisor and Alt Project Manager.
08/12/2025	**INC-0004593** Operator was sweeping the stores carpark and when he was reversing, he saw a trail of HYD oil and pulled up straight away, he then noticed that there was a faulty HYD fitting.	Report was completed. Undertake cleanup and dispose of contaminated material.
13/12/2025	**INC-0004601** Pierced hole in IBC full of Descaler.	Report was completed. Undertake cleanup and dispose of contaminated material.
31/12/2025	**INC-0004625** Exceedances of discharge limits for selenium at the lake discharge point (Licence breach)	Please refer to section 4 for further details.
31/12/2025	**INC-0004621** Minor hydraulic oil spill from the CEM water cart AWT09 at the WRD upper stockpile area	Report was completed. Undertake cleanup and dispose of contaminated material.

4 ENVIRONMENTAL COMPLIANCE

According to condition 34 of L9423/2024/1, Golden Grove is required to submit an Annual Audit Compliance Report (AACR). This report is presented in Appendix A.

Non-compliance and mitigation alternatives have been summarised below.

4.1 Non-compliance – Lake Discharge Point Selenium exceedance

4.1.1 Background

Four sampling events showed some exceedances of the Selenium limit (0.02 mg/L) at the lake discharge point. These events occurred in May (0.05 mg/L), September (0.03 mg/L), October (0.031 mg/L), and November (0.047 mg/L) of 2025. Golden Grove is investigating to determine the cause of these exceedances and to implement a mitigation strategy. Selenium sampling frequency at the lake discharge point was increased to monitor exceedance. Selenium concentrations are currently below the license limit.

4.2 Non-compliance - MB16 Total Acidity as $CaCO_3$ exceedance

4.2.1 Background

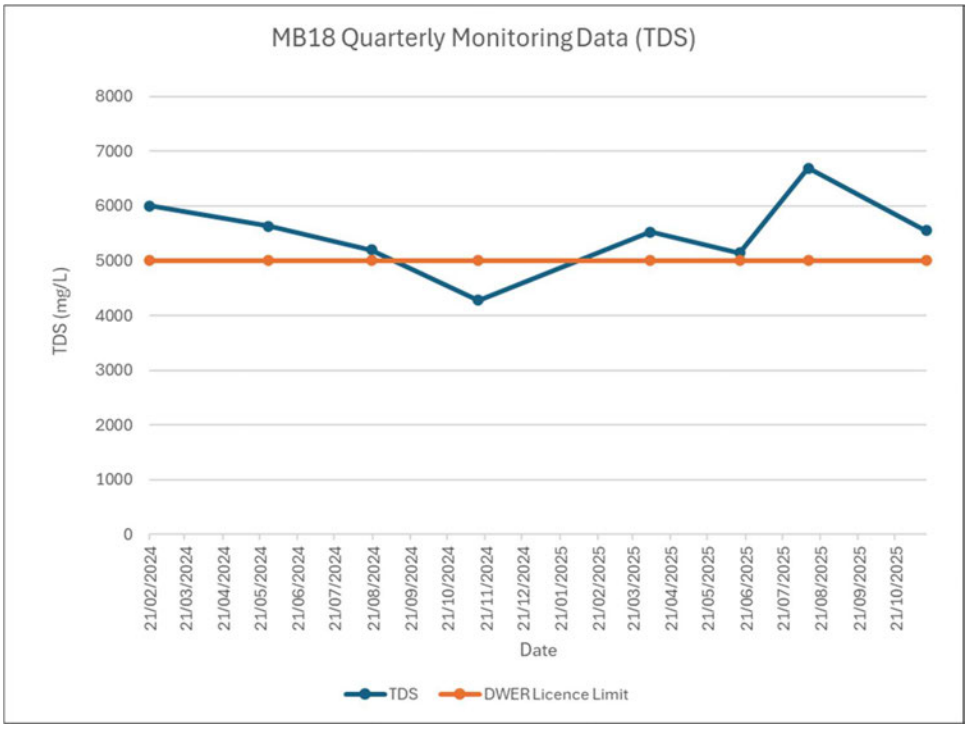
In 2025, Monitoring Bore 16 exceeded the DWER limit of 40 mg/L for Total Acidity as CaCO3 during Q2. Golden Grove will continue with the monitoring regime to confirm any evidence of contamination in Monitoring Bore 16, as it appears to be an outlier event. Based on those results, Golden Grove will decide on any further course of action

4.3 Non-compliance - MB18 Total Dissolved Solids exceedance

4.3.1 Background

In 2025, Monitoring Bore 18 exceeded the DWER limit of 5000 mg/L for Total Dissolved Solids (TDS) during the whole quarter monitoring events of the year. Multiple investigations carried out in the area suggest that the source of TDS high levels is caused by a seepage from Evaporation Pond A.

Figure 5. MB18 TDS Exceedance



4.3.2 Investigation

Non-compliance in Monitoring Bore 18 for TDS was initially identified in 2011. Multiple investigations and remedial works have been undertaken so far as per below:

- 2011 – URS studies:

  This study indicates that the most likely origin of TDS exceedances was the seepage of the evaporation ponds, which was accumulating in an artificial aquifer created within a permeable alluvium and a laterite layer. In 2011, 21 monitoring bores were replaced by seven new bores to improve seepage recovery rates in the long run.

- 2015 – URS studies:

  During the monitoring events carried out in April and June 2016, TDS levels exceeded the DWER limit. Studies concluded that the origin of elevated TDS levels was the seepage coming from Evaporation Pond A (URS, 2015). Subsequently, DWER increased the TDS limit from 4,000 mg/L to 5,000 mg/L and requested the presentation of a report outlining actions to mitigate the seepage and associated timing.

- 2016 – Big Dog Hydrogeology studies:

  In November 2016, Big Dog Hydrogeology presented a report that was submitted to DWER, where it was concluded that there is no potential for environmental contamination caused by seepage migration in the deep groundwater system. This conclusion was based on various observations made during the study:

  - Dewatering in the Scuddles and Gossan Hill underground mines captures all the seepage as the deep groundwater system is drawn towards these areas.
  - No abstractors of groundwater are present along the current and future flow paths.
  - Even though the seepage has affected the groundwater quality in the deep groundwater system, this one will no longer exist as a resource due to the dewatering occurring in the mining operations.

  According to the conclusion of the report that indicates that the water quality above the threshold limit does not present any environmental harm because of the seepage migration to the deep groundwater system, Big Dog Hydrogeology recommended to change the conditions of the monitoring bores MB16, MB18 and MB19 from compliance to interpretation bores in the DWER licence.

- 2017 – AECOM studies:

  An electromagnetic survey was conducted to understand the extent of shallow seepage, identify the groundwater plume, and assess it against the occurrence and thickness of the shallow aquifer. The investigation indicates that the seepage from Evaporation Pond A seems to be contained within the palaeovalley, which may have a preferred flow path through shallow laterite along the southern side of the palaeovalley, and the presence of pisolitic laterite within the palaeovalley.

- 2018 – Installation of trench and recovery bores by EMR in 2018:

  A seepage interception trench of 220 metres was installed and excavated to the top of the caprock. The base of the sump is at 1.6 m depth, and it contains a buried pipeline that extends 70 m along the southwest side of EPA and 150 m along the southeast side of the Evaporation Pond A. Recovery bores equipped with pumps by Airwell were also installed. The seepage interception trench was commissioned in August 2019.

- 2020/2021 – AECOM assessment:

  Golden Grove engaged AECOM to develop a seepage recovery program assessment, where data from 65 monitoring bores in the proximity of the evaporation ponds were evaluated: 23 SB-series shallow monitoring bores slotted between 1m and 11.5m depth within the laterite and alluvial deposits near the surface; 19 IB-series intermediate monitoring bores (excluding bore IB31 that was replaced by IB31B in 2011) slotted between 6m and 30m depth within the saprolitic clay unit, which is present between the laterite at the surface and saprock at depth; 23 MB-series deep monitoring bores slotted between 21m and 79m within the saprock interval between the saprolite and fresh bedrock.

AECOM determined that the site's evaporation ponds are causing long-term seepage that accumulates in laterite and alluvial deposits within a shallow palaeovalley beneath the site. This seepage in the mound flows laterally until it drains down to the saprock aquifer through old mineral exploration holes, gravel-packed bore annuli, and fracture and relict features within the saprolite layer. It also flows vertically down to the saprock aquifer close to the surface beneath parts of Evaporation Pond A and Evaporation Pond B.

Seepage passes through the saprolite layer and disperses within the saprock aquifer, which hosts the regional groundwater flow system. The dispersal pattern is not continuous because of irregularities in the bedrock type, weathering profiles, and rock fracturing. Once in the saprock aquifer, seepage-affected groundwater migrates north and northeastwards within the cone of depression surrounding the Scuddles Mine and southeast towards the Gossan Hill Mine.

According to AECOM's findings, the data from MB18 does not accurately represent the natural conditions of the saprock aquifer, given that all the bores showed a consistent pumping rate throughout the whole year, suggesting that EPA was seeping at a constant rate. Longer-term trends do not indicate a significant increase in seepage, indicating that the seepage recovery program effectively dewaters the seepage from the evaporation ponds.

- 2021 – 2022 Golden Grove monitoring scheme:

  The effects of the seepage recovery system on the plume have been monitored regularly since its installation with the TDS exceedance at MB18 remaining. During July 2022, the TDS (Total Dissolved Solids) levels in the water only slightly exceeded the licensing criteria and had decreased since the previous monitoring event. This suggested the possibility of a downward trend. Golden Grove recommended waiting for another monitoring round to confirm this before deciding on any further course of action. However, no such downward trend was observed during the analysis of the third quarter.

- 2022 – Golden Grove Sump Testing:

  During the fourth quarter of 2022, a test sump was installed to the south of the pond. The purpose of this installation was to monitor the refill and drawdown rates, with the aim of determining the viability of installing deeper seepage recovery trenches as an option for seepage management in the future. Unfortunately, it was not possible to achieve the required depth using the on-site equipment, and as a result, the test was unsuccessful so far.

- 2023 – Golden Grove and EGI – Evaporation Pond Seepage strategy and investigation:

  In August 2023, Golden Grove developed an Evaporation Pond Seepage Strategy to be implemented together with EGI consisting of:

  - Desktop review: Investigation and improvement of the existing conceptual model previous review of all historical reports
  - Environmental Risk Assessment: Develop an Environmental Risk Assessment to identify potential receptors and evaluate the source. Assess and propose further recommendations concerning whether remediation is required before final closure.
  - Development of a Sampling, Analysis and Quality Plan (SAQP) for field study
  - Execute a field investigation that includes soil sampling, assessment of vegetation stress, installation of shallow standpipe monitoring bores, permeability testing on suitable monitoring bores, and creating a saline soil impact map.
  - Evaluate alternatives to prevent further salinisation.
  - Conduct field trials
  - Analysis and reporting.

  This investigation started in November 2023, and the results from stage 1 were received in February 2024 (Detailed Salinity Seepage Investigation Pond A and B)

- 2024 – EGI (Detailed Salinity Seepage Investigation Pond A and B results):

- Desktop review and SAQP: Based on the desktop review and the SAQP results an updated hydrogeological conceptual model was developed by EGI, with principal differences compared to the existing model from 2014 including:
    - ✓ Seepage from the ponds has resulted in a saturated zone, leading to the formation of a perched water table with a limited extent. This perched water table may be restricted to above the caprock, which is typically found at depths of 2 to 3 meters below ground level.
    - ✓ The Standing Water Level of the deeper Saprock Aquifer is currently 35 to 45 mbgl.
    - ✓ The installed collection sump system may not be functioning as intended or may be inadequately designed to effectively capture seepage from the evaporation ponds.
    - ✓ Data from shallow groundwater wells and electromagnetic surveys conducted by AECOM in 2017 indicate that the saturated zone extends beyond the reach of the collection sump system.
    - ✓ Some deeper wells drilled into the Saprock may act as conduits, allowing highly saline water from the saturated zone to migrate into the deeper groundwater system.
- Environmental Risk Assessment: The findings from the initial risk assessment categorised the consequences of shallow groundwater contamination as high, while the consequences of regional groundwater contamination and vegetation loss were classified as medium. Following the implementation of the risk treatment strategies proposed by EGI during the Environmental Risk Assessment, the risk levels for all three aspects will be effectively reduced to low.

  Due to the ongoing nature of the seepage during mine life, EGI recommended that remediation is required prior to closure. EGI suggested that concepts for remediation are incorporated into Stage 2 of works, which will explore remediation options in further detail.
- Based on the results of the field salinity investigation, review of recent groundwater monitoring datasets, and updates to the evaporation pond conceptual site models, EGI recommended the following actions:
    - ✓ Stage 2 – Site Assessment: Additional site understanding in regards to Area-wide groundwater monitoring event and interpretation, Monitoring and analysis of potential source and impacted aquifer ionic water chemistry, Hydraulic property investigation of all aquifers, investigation of ground conditions surrounding downward seepage migration, and Estimation of seepage losses from evaporation ponds and TSFs.
    - ✓ Design feasibility: Feasibility of replacing seepage interception trench with open toe drain and downgradient hydraulic barrier, and feasibility of installing additional higher yield extraction wells along the entire interception trench length.

- 2024 - 2025 - Golden Grove:

  Golden Grove is currently in the process of assessing the feasibility of seepage mitigation options as per the EGI (2023) seepage study. As part of this process and previous studies, Golden Grove decided to construct a new evaporation pond (Pond D) to enhance flexibility in managing the site's water balance and seepage mitigation options. Based on this decision, Golden Grove has received approval (Mining Proposal 127751 – 2024 and Mining Proposal 501900 - 2025) to convert one of the gravel pits on-site into this water storage structure (Pond D). This will give GGO the opportunity to potentially rehabilitate and re-line the evaporation ponds.

4.3.3 Monitoring

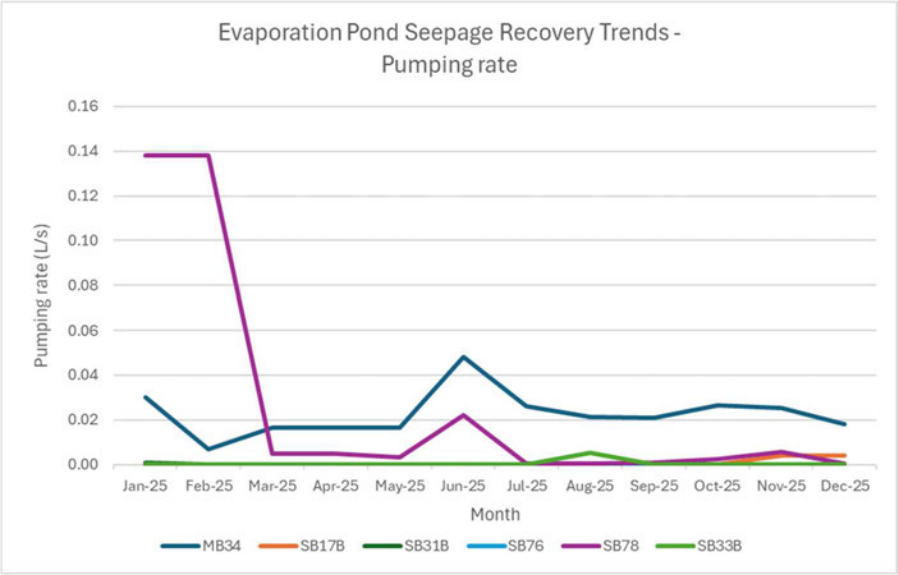
Seepage recovery bore data from the existing seepage recovery bores in the Evaporation Pond A (MB34, SB17B, SB76, SB78, SB31B and SB33B) is presented in **Table 14**.

Table 14. Seepage Recovery Bores Data 2025 (Evaporation Pond A).

Month	MB34		SB17B		SB31B		SB76		SB78		SB33B	
	Total (kL)	Pumping Rate (L/s)	Total (kL)	Pumping Rate (L/s)	Total (kL)	Pumping Rate (L/s)	Total (kL)	Pumping Rate (L/s)	Total (kL)	Pumping Rate (L/s)	Total (kL)	Pumping Rate (L/s)
Jan	77.62	0.03	0.00	0.00	2.54	0.00	0.00	0.00	358.24	0.14	0.00	0.00
Feb	17.90	0.01	0.00	0.00	0.02	0.00	0.00	0.00	358.24	0.14	0.00	0.00
Mar	42.50	0.02	0.00	0.00	0.06	0.00	0.00	0.00	12.50	0.00	0.00	0.00
Apr	42.50	0.02	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	0.00	0.00
May	42.50	0.02	0.00	0.00	0.00	0.00	0.00	0.00	8.15	0.00	0.00	0.00
Jun	125.29	0.05	0.00	0.00	0.00	0.00	0.00	0.00	57.72	0.02	0.00	0.00
Jul	68.22	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.00
Aug	55.51	0.02	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.00	13.57	0.01
Sep	54.40	0.02	0.00	0.00	0.00	0.00	0.00	0.00	2.12	0.00	0.00	0.00
Oct	68.34	0.03	0.00	0.00	0.01	0.00	0.00	0.00	6.51	0.00	0.00	0.00
Nov	65.87	0.03	10.42	0.00	0.01	0.00	0.00	0.00	14.26	0.01	0.00	0.00
Dec	46.83	0.02	10.42	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00

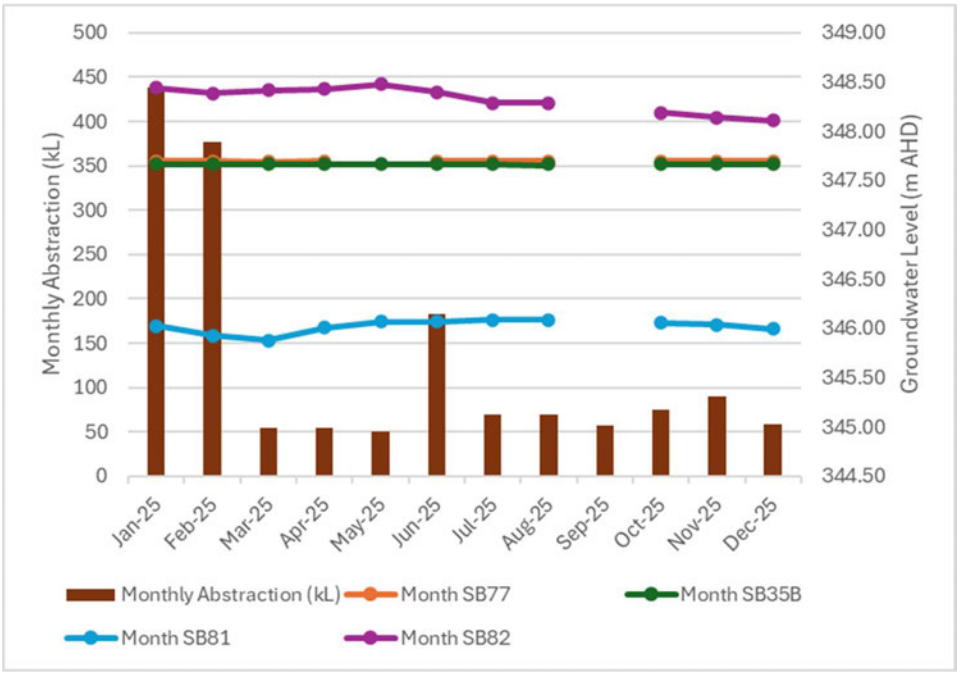
MB34 is equipped with a 1.8L/cycle Airwell pump, whereas SB17B, SB76, SB78, SB31B, and SB33B are equipped with a 0.8L/cycle Airwell pump. The data indicate null pumping rates from SB17B, SB31B, and SB76. Bore SB33B pumped small amounts of seepage in August (0.01 L/sec). Abstraction from MB34 fluctuated between 0.01 L/sec to 0.05 L/sec with the highest recovery rate in June. Pumping rates from SB78 fluctuates between 0 L/sec and 0.14L/sec during the year, showing the highest rate in January and February. Pumping rates are related in Figure 6

Figure 6. Evaporation Pond Seepage Recovery Trends – Pumping rate



According to the monitoring data, bores SB77, SB81 and SB35B have been steady since the beginning of 2025; bore SB82 have decreased its level by 0.33 m. The groundwater levels have shown a more significant decline when the recovery bores pumped larger quantities of seepage.

Figure 7. Hydrographs near the recovery bores showing abstraction drawdowns



4.4 Non-compliance – ROM bores exceedances

4.4.1 Background

In 2025, 2 ROM bores exceeded the DWER limits for Cadmium, Total Dissolved Solids (TDS), Total acidity as CaCO3, Zinc and pH:

- ROM11 had Cadmium exceedances in Q3 (0.136 mg/L) and Q4 (0.0726 mg/L), TDS exceedances in Q3 (5020 mg/L), Total acidity as CaCO3 exceedances in Q3 (63 mg/L), and Zinc exceedances in Q3 (33.2 mg/L)
- ROM 13 had Cadmium exceedances in Q3 (0.0214 mg/L), pH exceedances in Q3 (4.69 mg/L), and TDS exceedances in Q3 (11300 mg/L).

Golden Grove will continue with the monitoring regime to confirm any evidence of contamination in those ROM bores, as they appear to be an outlier event. Based on those results, Golden Grove will decide on any further course of action.

5 ENVIRONMENTAL COMPLAINT

During the reporting period no environmental complaints were received.

6 OTHER INFORMATION (CONDITION 38)

6.1 Water Balance

Golden Grove maintains a comprehensive annual water balance for the premises. A summary of the water balance required by condition 19 of L9423/2024/1 is in Table 15.

In 2025, the amount of monthly rainfall varied from 1.0 mm to 85.8 mm, being June the wettest month and February being the driest. Similarly, monthly evaporation was high throughout the year, ranging between 37 mm and 432.2 mm.

From January to April and during August, around 893,158 kL of tailings (slurry) were deposited in TSF3, with the highest discharge of 388,805 kL occurring in January.

During the last quarter of 2023, AECOM developed a site Water Balance Model (WBM), which includes upcoming and future key projects. The model allows forecasting and estimation of on-site water movements, reducing the potential of spills and upset conditions relating to water supply.

6.2 Conceptual Hydrogeological Model Review

AECOM conducted a groundwater monitoring review to meet the requirements under the Licence to Take Water (GWL103574(10) and GWL209427(2)) and Golden Grove's Water Operating Strategy. For over 36 years, 29 metals and previous occupants have been extracting groundwater from the premises. During this time, a comprehensive monitoring programme has been implemented to identify potential environmental impacts on- and off—site.

The Groundwater Review conducted by AECOM, considered the potential impacts to groundwater caused by seepage in the evaporation ponds (EPA/EPB) and TSF2 (there is no evidence that TSF3 is affecting groundwater and its surroundings). Seepage from the evaporation ponds is currently managed according to the information related in section 4.1. TSF2 seepage recovery abstraction, combined with the drawdown effects from the Scuddles Mine, is controlling the extent and size of the seepage mounding.

AECOM Groundwater Review is provided in Appendix E.

Table 15. Water balance 2025 TSF3

Aspect	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Rainfall (mm)	6.7	1	4.8	18.3	10.5	85.8	47.4	72.4	15.5	12.5	52.5	8.5	335.8
Volume of tailings deposited (m^3)	388,805	171,418	170,110	142,122	0	0	0	20,703	0	0	0	0	893,158
Evaporation total rate (mm)	432.2	293.2	323.4	223.6	163.1	54.2	37	59.4	171.3	131.9	261.4	415.5	2,677.8
Decant water recovery volumes (kL)	237,530	145,772	101,027	90,327	93	150	136	160	1,891	104	96	101	577,387
Seepage recovery volumes (kL)	22,048	12,116	25,752	35,388	14,375	9,910	7,809	11,840	8,560	8,006	7,684	1,705	165,193
Estimate of seepage losses (kL)	112,270	4,929.44	30,583.3	14,392.9	0	0	0	36,936.3	0	0	0	0	199,112
Toe drainage recovery volumes (kL)	22,048	12,116	25,752	35,388	14,375	9,910	7,809	11,840	8,560	8,006	7,684	1,705	165,193
Tailings density (85%)	14.0%	18.8%	16.2%	17.9%	-	-	-	9.1%	-	-	-	-	15.85%

Appendix A. ANNUAL AUDIT COMPLIANCE REPORT

Government of **Western Australia**
Department of **Water and Environmental Regulation**

Annual Audit Compliance Report Form

Environmental Protection Act 1986, Part V Division 3

Once completed, please submit this form either via email to info@dwer.wa.gov.au, or to the below postal address:

Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DC WA 6919

Section A – Licence details			
Licence number:	L9423/2024/1	Licence file number:	DER2023/000822
Licence holder name:	Golden Grove Operations Pty Ltd		
Trading as:	-		
ACN:	114 868 325		
Registered business address:	Level 2, 1100 Hay Street, WEST PERTH WA 6005		
Reporting period:	01/01/2025 **to** 31/12/25		

Section B – Statement of compliance with licence conditions
Did you comply with all of your licence conditions during the reporting period? (please tick the appropriate box)
☐ Yes – please complete: • section C; • section D (if required); and • sign the declaration in Section F.
☒ No – please complete: • section C; • section D (if required); • section E; and • sign the declaration in Section F.

Section C – Statement of actual production	
Provide the actual production quantity for this reporting period. Supporting documentation is to be attached.	
Prescribed premises category	**Actual production quantity**
Category 5: Processing or beneficiation of metallic or non-metallic ore	1,448,000 tonnes
Category 6: Mine dewatering	1257.9 ML
Category 54: Sewage facility	136,126 m3
Category 61: Liquid waste facility	577.1 tonnes
Category 89: Putrescible landfill site	1,320 tonnes

Section D – Statement of actual Part 2 waste discharge quantity	
Provide the actual Part 2 waste discharge quantity for this reporting period. Supporting documentation is to be attached.	
Prescribed premises category	**Actual Part 2 waste discharge quantity**
Category 5: Processing or beneficiation of metallic or non-metallic ore Tailings Total (dry weight)	766,668 Dry Metric Tonnes
Category 6: Mine dewatering	411.2 ML

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	22	Date(s) of non-compliance:	15/05/2025 17/05/2025 22/08/2025 22/09/2025 20/10/2025 01/11/2025 29/11/2025
Details of non-compliance:			
Selenium concentrations in the Lake Discharge Point exceeded the limit of 0.02 mg/L as determined by sampling during May, August, September, October, and November in 2025 (concentration ranging from 0.03 – 0.06 mg/L).			
What was the actual (or suspected) environmental impact of the non-compliance? **NOTE** – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.			
Refer to Section 4 of the Annual Environmental Report for details. • Golden Grove is investigating to determine the cause of these exceedances and to implement a mitigation strategy. • Sediment sampling at Lake Wownaminya show no increase in selenium concentrations			
Cause (or suspected cause) of non-compliance:			
Refer to Section 4 of the Annual Environmental Report for details. • Golden Grove is investigating to determine the cause of these exceedances and to implement a mitigation strategy.			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:			

Section E – Details of non-compliance with licence condition	
Further samples have been taken for analysis. Selenium sampling frequency at the lake discharge point was increased to monitor exceedance. Since December the selenium levels have fluctuated, however, they are currently below the license limit. A sampling program has been completed to delineate the source of the elevated selenium. The results are currently being reviewed in order to inform mitigation options.	
Was this non-compliance previously reported to DWER?	
☒ Yes, and	
☐ Reported to DWER verbally	Date: / /
☒ Reported to DWER in writing	Date: 01/01/2026

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	30	Date(s) of non-compliance:	16/06/2025
Details of non-compliance:			
Total Acidity as CaCO3 concentrations in groundwater monitoring bore MB16 exceeded the limit of 40 mg/L as determined by sampling during Q2 monitoring event in 2025 (52 mg/L).			
What was the actual (or suspected) environmental impact of the non-compliance? **NOTE** – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.			
Refer to Section 4 of the Annual Environmental Report for details. • Grove will continue with the monitoring regime to confirm any evidence of contamination in Monitoring Bore 16, as it appears to be an outlier event. Based on those results, Golden Grove will decide on any further course of action			
Cause (or suspected cause) of non-compliance:			
Refer to Section 4 of the Annual Environmental Report for details. • Grove will continue with the monitoring regime to confirm any evidence of contamination in Monitoring Bore 16, as it appears to be an outlier event. Based on those results, Golden Grove will decide on any further course of action			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:			
Refer to Section 4 of the Annual Environmental Report for details. • Grove will continue with the monitoring regime to confirm any evidence of contamination in Monitoring Bore 16, as it appears to be an outlier event. Based on those results, Golden Grove will decide on any further course of action			
Was this non-compliance previously reported to DWER?			
☒ Yes, and			
☐ Reported to DWER verbally		Date: / /	
☒ Reported to DWER in writing		Date: 31/03/2026	

Section E – Details of non-compliance with licence condition

Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.

Condition no:	30	Date(s) of non-compliance:	04/04/2025 16/06/2025 11/08/2025 15/11/2025

Details of non-compliance:

Total Dissolved Solids (TDS) concentrations in groundwater monitoring bore MB18 exceeded the limit of 5,000 mg/L as determined by sampling during Q1, Q2, Q3 and Q4 monitoring events in 2025 (concentration ranging from 5,140 - 6,690 mg/L).

What was the actual (or suspected) environmental impact of the non-compliance?

NOTE – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.

Refer to Section 4 of the Annual Environmental Report for details.

Based on several observations, previous investigations identified no potential for environmental harm associated with seepage migration in the deep groundwater system:

- All seepage effluent within the deeper aquifer is drawn towards and collected by the dewatering operations in the Gossan Hill and Scuddles mines. Given the abstraction operation, both mines form a groundwater sink where all groundwater in the area is drawn towards.
- Although the seepage has affected the groundwater quality in the deep groundwater system, this one will no longer exist as a resource due to the dewatering occurring in the mining operations.
- Dewatering the deep groundwater system across the Golden Grove mine is required to maintain safe working conditions in underground mines and is an authorised activity under a groundwater licence. Dewatering is monitored and reported to the DWER as per the licence's conditions.

Cause (or suspected cause) of non-compliance:

Refer to Section 4 of the Annual Environmental Report for details.

Exceedances of the TDS limit in MB18 were first identified in 2011 and have been an ongoing issue reported and investigated in previous Annual Audit Compliance Reports, Annual Environmental Reports, and technical reports. These investigations determined that the TDS exceedances at M18 originated at the Evaporation Pond A, which contains mine dewatering water.

Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:

Refer to Section 4 of the Annual Environmental Report for details.

A seepage interception trench and seepage recovery bores were installed around the EPA in 2018. The 220 m trench was excavated to the top of the caprock. The base of the sump is at 1.6 m depth, containing a buried pipeline that extends 150 m along the southeast side and 70 m along the southwest side of the pond. The system was commissioned in August 2019. The interception trench aims to capture seepage from the pond and pump the seeping effluent back into the pond. Seepage recovery and pumping rates are monitored, and data reported as required. In Q4 2022, a test sump was installed to the south of the pond to monitor refill and drawdown rates to determine whether the future installation of deeper seepage recovery trenches will be viable as a seepage management option. Unfortunately, the required depth could not be achieved with available equipment and, therefore, the test was unsuccessful. In August 2023, Golden Grove developed an Evaporation Pond Seepage Strategy. External consultants worked on implementing this strategy and provided a report in February 2024 with the potential alternatives to mitigate the Total Dissolved Solids (TDS) exceedances. Golden Grove is currently progressing through the assessment and implementation of this strategy. As part of this process and previous studies, Golden Grove decided to construct a new evaporation pond (Pond D) to enhance flexibility in managing the site's

Section E – Details of non-compliance with licence condition	
water balance and seepage mitigation options. Based on this decision, Golden Grove has received approval (Mining Proposal 127751 – 2024 and Mining Proposal 501900 - 2025) to convert one of the gravel pits on-site into this water storage structure (Pond D).	
Was this non-compliance previously reported to DWER?	
☒ Yes, and	
☐ Reported to DWER verbally	Date: / /
☒ Reported to DWER in writing	Date: 09/07/2025 and 31/03/2026

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	30	Date(s) of non-compliance:	07/08/2025 13/11/2025

Details of non-compliance:

During 2025, concentrations of Cadmium, TDS, Total acidity as CaCO3, and Zinc exceeded the limits of 0.01 mg/L, 5,000 mg/L, 40 mg/L, and 20 mg/L, respectively, as outlined below:

- ROM 11 showed Cadmium exceedances in Q3 (0.136 mg/L) and Q4 (0.0726 mg/L), TDS exceedances in Q3 (5020 mg/L), Total acidity as CaCO3 exceedances in Q3 (63 mg/L), and Zinc exceedances in Q3 (33.2 mg/L)
- ROM 13 showed Cadmium exceedances in Q3 (0.0214 mg/L), pH exceedances in Q3 (4.69 mg/L), and TDS exceedances in Q3 (11300 mg/L).

What was the actual (or suspected) environmental impact of the non-compliance?

NOTE – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.

Refer to Section 4 of the Annual Environmental Report for details.

- Golden Grove will continue with the monitoring regime to confirm any evidence of contamination in those ROM bores, as they appear to be an outlier event. Based on those results, Golden Grove will decide on any further course of action.

Cause (or suspected cause) of non-compliance:

Refer to Section 4 of the Annual Environmental Report for details.

- Golden Grove will continue with the monitoring regime to confirm any evidence of contamination in those ROM bores, as they appear to be an outlier event. Based on those results, Golden Grove will decide on any further course of action.

Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:

Refer to Section 4 of the Annual Environmental Report for details.

- Golden Grove will continue with the monitoring regime to confirm any evidence of contamination in those ROM bores, as they appear to be an outlier event. Based on those results, Golden Grove will decide on any further course of action.

Was this non-compliance previously reported to DWER?

☒ Yes, and	
☐ Reported to DWER verbally	Date: / /
☒ Reported to DWER in writing	Date: 31/03/2026

Section F – Declaration

I / We declare that the information in this Annual Audit Compliance Report is true and correct and is not false or misleading in a material particular[1].

I / We consent to the Annual Audit Compliance Report being published on the Department of Water and Environmental Regulation's (DWER) website.

[redacted]

Date:	31/03/2026	Date:	
Seal (if signing under seal):			

[1] It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular.

[2] AACRs can only be signed by the licence holder or an authorised person with the legal authority to sign on behalf of the licence holder.

Appendix B. MONITORING DATA

Appendix B. MONITORING DATA

Appendix B1: Monitoring of point source emissions at Lake Wownaminya Discharge Point (D1)

Row Labels	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH	-	-	-	7.45	6.42	-	7.5	-	7.74	7.78	7.27	-
Electrical Conductivity (µS/cm)	-	-	-	11600	14500	-	13100	-	13400	12000	12200	-
Total aluminium (mg/l)	-	-	-	0.13	0.03	-	<0.01	-	0.02	<0.01	<0.01	-
Arsenic (mg/l)	-	-	-	<0.001	<0.001	-	<0.001	-	<0.001	0.001	<0.001	-
Cadmium (mg/l)	-	-	-	0.001	0.0068	-	0.0016	-	0.0026	0.0009	0.0021	-
Chromium (Total) (mg/l)	-	-	-	<0.001	<0.001	-	<0.001	-	0.002	0.001	<0.001	-
Copper (mg/l)	-	-	-	0.005	0.036	-	0.004	-	0.008	0.010	0.013	-
Total iron (mg/l)	-	-	-	0.27	0.18	-	0.06	-	0.08	<0.05	<0.05	-
Lead (mg/l)	-	-	-	<0.001	<0.001	-	<0.001	-	<0.001	<0.001	<0.001	-
Manganese (mg/l)	-	-	-	0.018	1.56	-	0.211	-	0.135	0.026	0.577	-
Mercury (mg/l)	-	-	-	<0.0001	<0.0001	-	<0.0001	-	<0.0001	<0.0001	<0.0001	-
Nickel (mg/l)	-	-	-	<0.001	0.002	-	<0.001	-	<0.001	<0.001	<0.001	-
Selenium (mg/l)	-	-	-	0.01	0.05	-	0.02	-	0.03	0.031	0.047	-
Total Nitrogen (calc) (as N) (mg/l)	-	-	-	6.7	9.5	-	12.1	-	17.3	14.7	13.5	-
Nitrate (as NO_3) (mg/l)	-	-	-	6.1	4.55	-	9.05	-	14.1	13.0	2.19	-
Total Phosphorous (as P) (mg/l)	-	-	-	0.16	0.1	-	0.35	-	0.15	0.20	0.17	-
Sulphate (mg/l)	-	-	-	1620	2300	-	2160	-	2320	2160	2060	-
TRH (mg/L)	-	-	-	0	0.96	-	0.12	-	0.18	0	0	-
Total Suspended Solids (mg/l)	-	-	-	5	<5	-	<5	-	<5	<5	<5	-
Total Dissolved Solids (mg/l)	-	-	-	8060	9070	-	9160	-	9690	8550	9380	-
Total Acidity ($CaCO_3$) (mg/l)	-	-	-	4	14	-	8	-	5	9	9	-
Zinc (mg/l)	-	-	-	0.064	1.69	-	0.111	-	0.12	0.009	0.174	-

(-) Lake not pumping at time of sampling – No water available to sample.

Appendix B2: Wastewater Treatment Plant (WWTP) Irrigation Discharge (L1)

Months	Date	Total Nitrogen (mg/L)	pH	Total Phosphorous (mg/L)	Total Suspended Solids (mg/L)	Biochemical Oxygen Demand (mg/L)	E. coli (cfu/100 ml)
January	-	-	-	-	-	-	-
April	14/04/2025	23.6	7.61	7.18	<5	4	18
July	29/07/2025	51.4	7.92	7.1	<5	<2	~3
November	03/11/2025	24.1	7.24	7.52	6	8	<1

(-) No access to the area.

Appendix B3: Monitoring Bores Water Quality Data

Monitoring Bores	Months	Date	Arsenic (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Lead (mg/L)	Mercury (mg/L)	Total Nitrogen (as N) (mg/L)
MB16	Apr	4/04/2025	<0.001	<0.0001	0.006	<0.001	<0.001	<0.0001	3.7
	Jun	16/06/2025	<0.001	0.0001	0.006	<0.001	<0.001	<0.0001	4.8
	Aug	9/08/2025	<0.001	<0.0001	0.006	<0.001	<0.001	<0.0001	5
	Nov	15/11/2025	<0.001	0.0002	0.006	<0.001	<0.001	<0.0001	4.7
MB18	Apr	4/04/2025	<0.001	0.0001	<0.001	<0.001	<0.001	0.0004	6.4
	Jun	16/06/2025	<0.001	0.0002	<0.001	<0.001	<0.001	0.0011	5.8
	Aug	11/08/2025	<0.001	0.0002	<0.001	<0.001	<0.001	0.0009	5.8
	Nov	15/11/2025	<0.001	0.0001	<0.001	<0.001	<0.001	0.0004	6.6
MB21	Apr	3/04/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	14.9
	Jun	15/06/2025	<0.001	<0.0001	<0.001	0.002	<0.001	<0.0001	16.5
	Aug	9/08/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	16.6
	Nov	14/11/2025	<0.001	0.0003	<0.001	0.004	<0.001	<0.0001	16.5

Monitoring Bores	Months	Date	Arsenic (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Lead (mg/L)	Mercury (mg/L)	Total Nitrogen (as N) (mg/L)
MB58	Apr	2/04/2025	<0.001	<0.0001	<0.001	0.001	<0.001	<0.0001	6.7
	Jun	14/06/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	6.7
	Aug	6/08/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	7.3
	Nov	12/11/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	7.8
MB64	Apr	2/04/2025	<0.001	0.0002	<0.001	0.007	<0.001	<0.0001	7.6
	Jun	14/06/2025	<0.001	0.0002	<0.001	0.004	<0.001	<0.0001	2.6
	Aug	6/08/2025	<0.001	0.0006	<0.001	0.009	<0.001	<0.0001	8
	Nov	12/11/2025	<0.001	0.0006	<0.001	0.007	<0.001	<0.0001	1.2
MB65	Apr	2/04/2025	<0.001	<0.0001	<0.001	0.003	<0.001	<0.0001	0.6
	Jun	14/06/2025	<0.001	<0.0001	<0.001	0.001	<0.001	<0.0001	0.7
	Aug	6/08/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	1.8
	Nov	12/11/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.4
MB67	Apr	3/04/2025	<0.001	<0.0001	0.007	<0.001	<0.001	<0.0001	7.6
	Jun	15/06/2025	<0.001	<0.0001	0.007	<0.001	<0.001	<0.0001	6.9

Monitoring Bores	Months	Date	Arsenic (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Lead (mg/L)	Mercury (mg/L)	Total Nitrogen (as N) (mg/L)
	Aug	8/08/2025	<0.001	<0.0001	0.007	0.001	<0.001	<0.0001	7.4
	Nov	13/11/2025	<0.001	0.0001	0.007	0.001	<0.001	<0.0001	7.6
MB70A	Apr	3/04/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	<0.1
	Jun	15/06/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	0.2
MB71A	Apr	3/04/2025	<0.001	0.0042	<0.001	<0.001	<0.001	<0.0001	9.2
	Jun	15/06/2025	<0.001	0.0035	<0.001	0.002	<0.001	<0.0001	9.1
	Aug	8/08/2025	<0.001	0.0044	<0.001	0.009	<0.001	<0.0001	10
	Nov	13/11/2025	<0.001	0.0039	<0.001	0.007	<0.001	<0.0001	9.1
MB73A	Jun	15/06/2025	0.002	<0.0001	<0.001	<0.001	<0.001	<0.0001	7.7
	Aug	8/08/2025	0.002	<0.0001	<0.001	<0.001	<0.001	<0.0001	7.7
	Nov	13/11/2025	0.002	<0.0001	<0.001	<0.001	<0.001	<0.0001	7.8
MB74B	Jun	15/06/2025	0.002	<0.0001	<0.001	0.001	<0.001	<0.0001	3.4
	Aug	8/08/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	4.9
	Nov	13/11/2025	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0001	4.5

Monitoring Bores	Months	Date	Arsenic (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Lead (mg/L)	Mercury (mg/L)	Total Nitrogen (as N) (mg/L)
ROM11	Aug	7/08/2025	<0.001	0.136	0.002	0.024	<0.001	<0.0001	78
	Nov	13/11/2025	<0.001	0.0726	0.002	0.041	0.004	<0.0001	55.9
ROM12	Aug	7/08/2025	<0.001	0.0002	0.001	0.008	<0.001	<0.0001	3.1
ROM13	Aug	7/08/2025	0.002	0.0214	0.002	0.012	0.006	<0.0001	52.3
ROM14	Aug	7/08/2025	<0.001	0.0002	<0.001	0.007	<0.001	<0.0001	6.8
ROM15	Aug	7/08/2025	<0.001	0.0025	0.002	0.004	<0.001	<0.0001	3
	Nov	13/11/2025	<0.001	0.0037	<0.001	0.01	0.001	<0.0001	1.3
ROM9	Jun	17/06/2025	<0.001	0.0885	<0.001	0.05	<0.001	<0.0001	1.4

Monitoring Bores	Months	Date	Nitrate (as NO_3) (mg/L)	pH	Selenium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total acidity ($CaCO_3$)	Zinc
MB16	Apr	4/04/2025	3.54	7.06	<0.01	622	3670	20	0.013
	Jun	16/06/2025	4.24	6.91	<0.01	615	3760	52	0.009
	Aug	9/08/2025	4.52	7.9	<0.01	671	4380	26	0.019
	Nov	15/11/2025	4.21	7.17	<0.010	665	3860	17	0.067
MB18	Apr	4/04/2025	6.03	6.82	<0.01	630	5520	10	0.011
	Jun	16/06/2025	4.88	7.17	<0.01	776	5140	14	0.008
	Aug	11/08/2025	5.23	7.11	<0.01	772	6690	16	0.01
	Nov	15/11/2025	4.4	7.16	<0.010	737	5550	10	0.008
MB21	Apr	3/04/2025	13.3	7.66	<0.01	78	1010	4	0.013
	Jun	15/06/2025	14.7	7.48	<0.01	81	1080	6	0.017
	Aug	9/08/2025	15.4	7.95	<0.01	82	1180	6	0.019
	Nov	14/11/2025	14.7	7.63	<0.010	80	1060	5	0.093
MB58	Apr	2/04/2025	5.77	6.89	<0.01	30	346	4	0.014
	Jun	14/06/2025	5.77	7.16	<0.01	31	354	4	0.009

Monitoring Bores	Months	Date	Nitrate (as NO_3) (mg/L)	pH	Selenium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total acidity ($CaCO_3$)	Zinc
	Aug	6/08/2025	6.01	7.02	<0.01	31	379	4	0.014
	Nov	12/11/2025	6.95	7.23	<0.010	31	347	3	0.009
MB64	Apr	2/04/2025	6.34	7.65	<0.01	110	1120	5	0.075
	Jun	14/06/2025	1.51	7.66	<0.01	119	1190	6	0.054
	Aug	6/08/2025	7.12	7.73	<0.01	114	1270	4	0.28
	Nov	12/11/2025	0.53	7.97	<0.010	110	1170	3	0.134
MB65	Apr	2/04/2025	<0.01	7.25	<0.01	189	1770	11	0.008
	Jun	14/06/2025	<0.01	7.55	<0.01	193	1850	12	0.006
	Aug	6/08/2025	0.04	7.77	<0.01	178	1880	6	0.012
	Nov	12/11/2025	<0.01	7.76	<0.010	190	1860	16	0.014
MB67	Apr	3/04/2025	6.68	7.25	<0.01	38	448	5	0.01
	Jun	15/06/2025	6.24	7.19	<0.01	37	447	5	0.008
	Aug	8/08/2025	6.27	7.07	<0.01	33	466	8	0.017
	Nov	13/11/2025	6.3	7.43	<0.010	37	444	6	0.031

Monitoring Bores	Months	Date	Nitrate (as NO_3) (mg/L)	pH	Selenium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total acidity ($CaCO_3$)	Zinc
MB70A	Apr	3/04/2025	0.04	7.53	<0.01	95	675	11	0.641
	Jun	15/06/2025	0.02	7.56	<0.01	100	695	14	0.572
MB71A	Apr	3/04/2025	8.42	7.4	<0.01	738	2110	16	1.83
	Jun	15/06/2025	7.99	7.4	<0.01	569	1860	10	1.5
	Aug	8/08/2025	9.08	7.21	<0.01	815	2160	16	1.9
	Nov	13/11/2025	8.12	7.47	<0.010	597	1870	12	1.69
MB73A	Jun	15/06/2025	6.23	7.61	<0.01	78	798	4	0.017
	Aug	8/08/2025	6.66	7.59	<0.01	72	844	5	0.006
	Nov	13/11/2025	6.73	7.68	<0.010	75	776	8	0.015
MB74B	Jun	15/06/2025	2.65	7.47	<0.01	23	309	10	0.005
	Aug	8/08/2025	3.72	7.16	<0.01	27	316	8	0.006
	Nov	13/11/2025	3.91	7.45	<0.010	27	331	8	0.022
ROM11	Aug	7/08/2025	72.2	6.59	<0.01	1690	5020	63	33.2
	Nov	13/11/2025	50.1	7.19	<0.010	1560	4000	25	18.4

Monitoring Bores	Months	Date	Nitrate (as NO_3) (mg/L)	pH	Selenium (mg/L)	Sulphate (mg/L)	Total Dissolved Solids (mg/L)	Total acidity ($CaCO_3$)	Zinc
ROM12	Aug	7/08/2025	1.41	7.65	<0.01	43	654	7	0.042
ROM13	Aug	7/08/2025	47.7	4.69	<0.01	468	11300	20	0.933
ROM14	Aug	7/08/2025	4.95	7.31	<0.01	221	984	6	0.043
ROM15	Aug	7/08/2025	2.22	6.9	<0.01	495	3060	10	0.517
	Nov	13/11/2025	0.9	6.74	<0.010	585	2720	18	0.381
ROM9	Jun	17/06/2025	0.47	6.77	<0.01	2370	15100	40	6.36

Appendix B4: Standing Water Level (SWL) of Monitoring Bores

Month / SWL (m)	MB11	MB13	MB16	MB18	MB19	MB21	MB22	MB23	MB24	MB46	MB47	GGW50	MB58
January	Dry	Dry	46.48	45.67	Dry	51.96	Dry	57.07	Blocked	Dry	49.71	31.60	33.89
February	Dry	Dry	46.56	45.58	Dry	Blocked	Dry	Blocked	Blocked	Dry	Dry	37.49	33.88
March	Dry	Dry	46.68	45.65	Dry	Blocked	Dry	Blocked	Blocked	Dry	Dry	Blocked	33.85
April	Dry	Dry	46.74	45.70	Dry	52.55	Dry	No Access	Blocked	Dry	Dry	Blocked	33.83
May	Dry	Dry	46.58	45.59	Dry	52.11	Dry	Removed	Blocked	Dry	49.85	Blocked	33.60
June	Dry	Dry	46.68	45.71	Dry	52.10	Dry	Removed	Blocked	Dry	49.83	Blocked	33.60
July	Dry	Dry	46.74	45.77	Dry	52.09	Dry	Removed	Blocked	Dry	49.78	Blocked	33.66
August	Dry	Dry	46.74	45.84	Dry	52.26	Dry	Removed	Blocked	Dry	49.75	Blocked	33.63
September	Dry	Dry	46.76	45.75	Dry	52.26	Dry	Removed	Blocked	Dry	49.76	Blocked	33.63
October	Dry	Dry	46.87	45.79	Dry	52.45	Dry	Removed	Blocked	Dry	49.83	Blocked	33.68
November	Dry	Dry	46.85	45.80	Dry	52.45	Dry	Removed	Blocked	Dry	Dry	Blocked	33.69
December	Dry	Dry	46.84	45.75	Dry	52.49	Dry	Removed	Blocked	Dry	Dry	Blocked	33.72

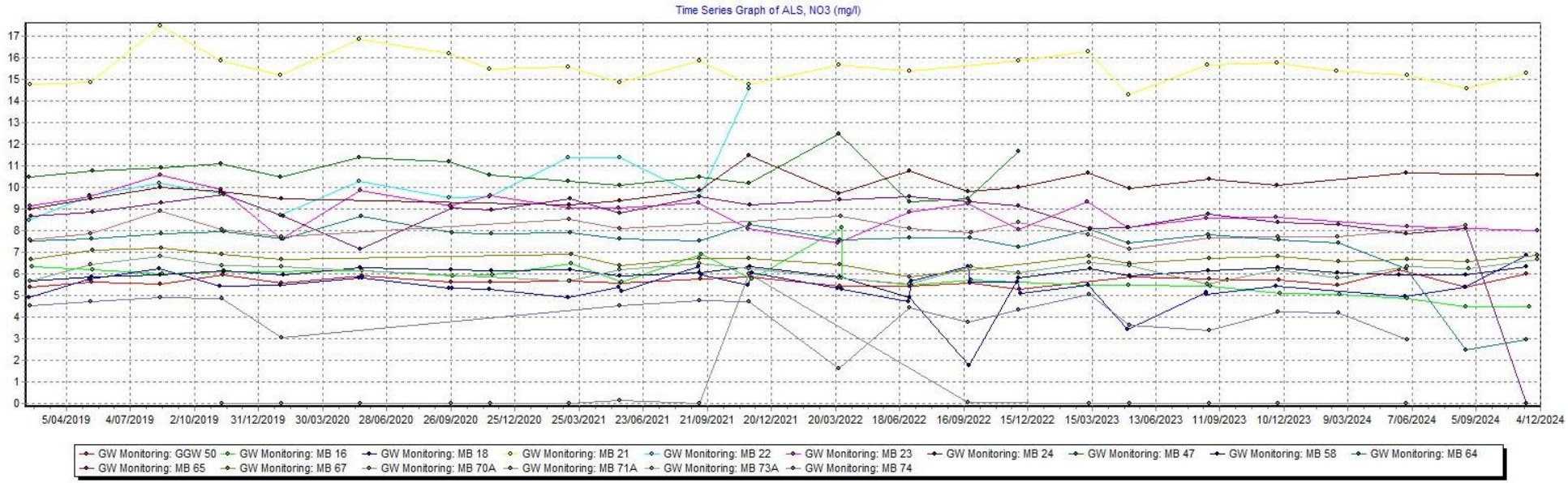
Month / SWL (m)	MB63	MB64	MB65	MB67	MB68A	MB69	MB70A	MB71A	MB73A	MB74B	PP01
January	No access	23.64	32.34	70.40	Dry	Dry	120.55	70.41	60.00	64.04	Dry
February	No access	23.66	26.36	Blocked	Dry	Dry	Blocked	70.57	Blocked	64.00	Dry
March	No access	23.49	26.43	Blocked	Dry	Dry	Blocked	70.67	Blocked	64.13	Dry
April	No access	23.74	26.73	70.13	Dry	Dry	Dry	69.93	60.21	64.18	Dry
May	No access	23.48	26.29	70.57	Dry	Dry	120.87	70.64	60.20	64.14	Dry
June	No access	23.50	26.31	70.37	Dry	Dry	120.75	70.58	60.45	64.03	Dry
July	No access	23.54	26.50	70.36	Dry	Dry	120.77	70.93	60.44	64.48	Dry
August	No access	23.54	26.39	70.35	Dry	Dry	120.78	70.85	60.34	64.38	Dry
September	No access	23.54	26.39	70.33	Dry	Dry	Dry	70.83	60.30	64.38	Dry
October	No access	23.56	26.48	73.20	Dry	Dry	Dry	71.15	60.55	64.56	Dry
November	No access	23.56	26.50	73.20	Dry	Dry	Dry	71.10	60.57	64.48	Dry
December	No access	23.60	26.54	73.25	Dry	Dry	Dry	71.08	60.60	60.46	Dry

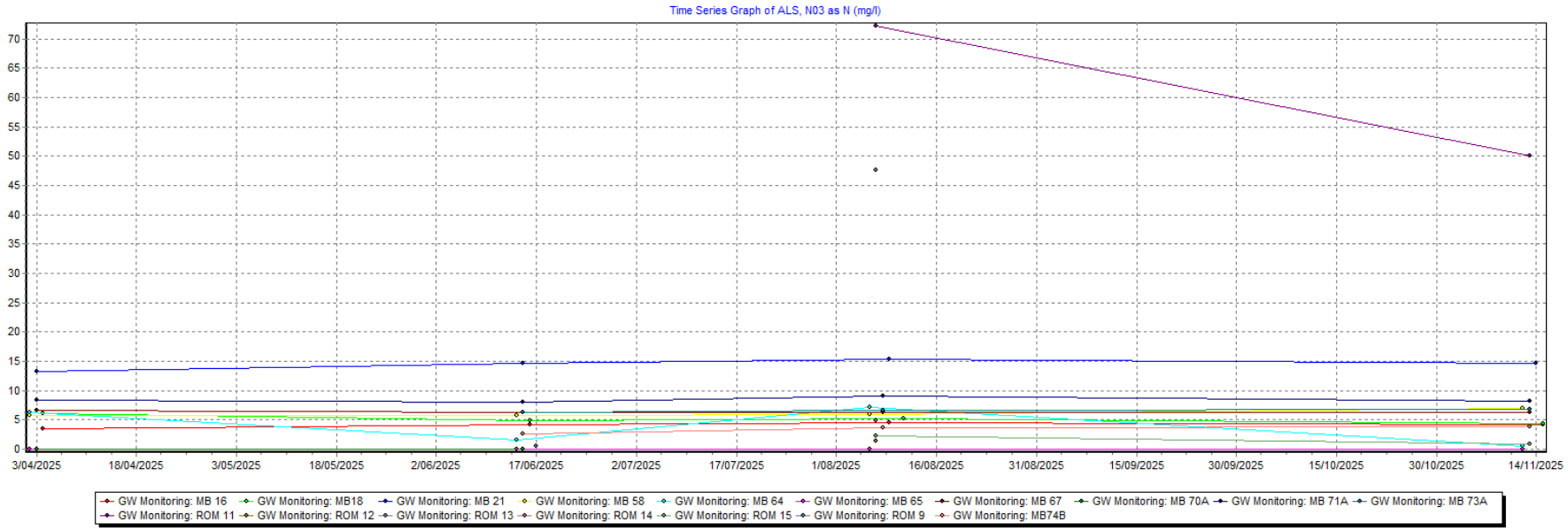
Month / SWL (m)	ROM11	ROM12	ROM13	ROM14	ROM15	ROM16	ROM9
January	-	-	-	-	-	-	-
February	7.52	7.35	7.39	7.53	8.67	Dry	-
March	6.97	7.87	7.62	7.94	9.06	Dry	-
April	8.07	7.80	7.66	8.02	9.00	Dry	7.26
May	7.96	7.75	7.69	8.00	8.98	Dry	-
June	7.95	7.76	7.70	8.01	9.00	Dry	7.43
July	8.00	7.85	7.78	8.05	9.04	Dry	-
August	8	7.85	7.78	8.05	9.04	Dry	-
September	8.42	8.58	8.27	8.41	9.46	Dry	-
October	7.79	Dry	8.26	8.42	8.85	Dry	-
November	7.79	Dry	8.26	8.42	8.85	Dry	6.87
December	7.81	Dry	8.28	8.44	8.85	Dry	-

Appendix C. GROUNDWATER MONITORING DATA GRAPHS

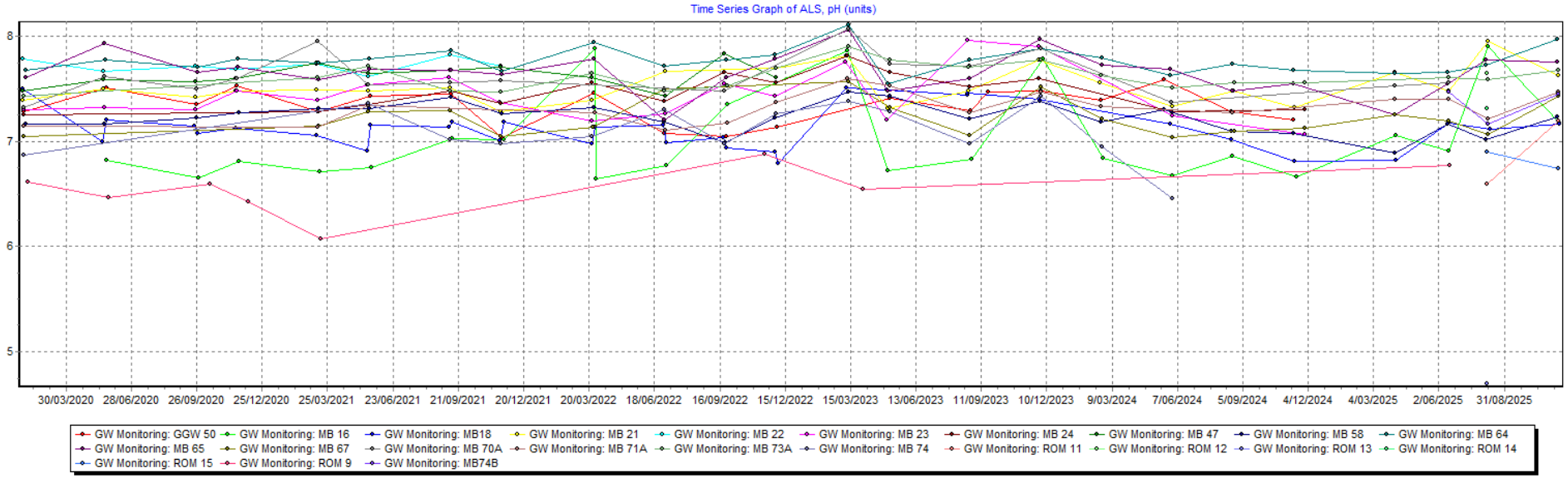
Appendix C. GROUNDWATER MONITORING DATA GRAPHS

Appendix C1: Nitrate as NO3

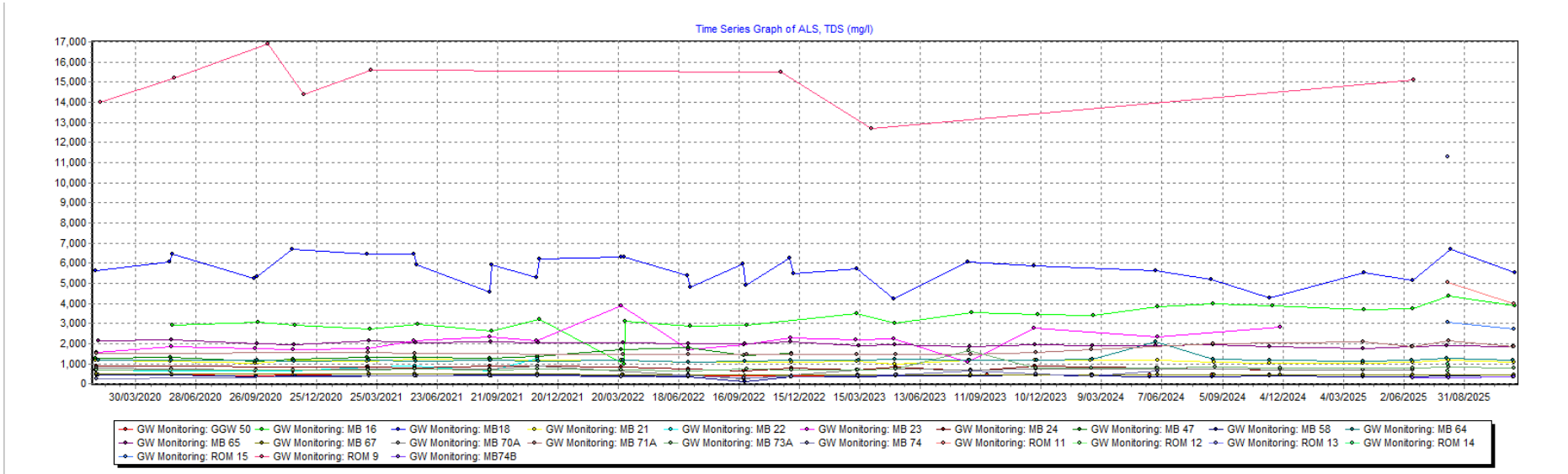



Time Series Graph of ALS, N03 as N (mg/l)
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
3/04/2025
18/04/2025
3/05/2025
18/05/2025
2/06/2025
17/06/2025
2/07/2025
17/07/2025
1/08/2025
16/08/2025
31/08/2025
15/09/2025
30/09/2025
15/10/2025
30/10/2025
14/11/2025
GW Monitoring: MB 16
GW Monitoring: MB18
GW Monitoring: MB 21
GW Monitoring: MB 58
GW Monitoring: MB 64
GW Monitoring: MB 65
GW Monitoring: MB 67
GW Monitoring: MB 70A
GW Monitoring: MB 71A
GW Monitoring: MB 73A
GW Monitoring: ROM 11
GW Monitoring: ROM 12
GW Monitoring: ROM 13
GW Monitoring: ROM 14
GW Monitoring: ROM 15
GW Monitoring: ROM 9
GW Monitoring: MB74B

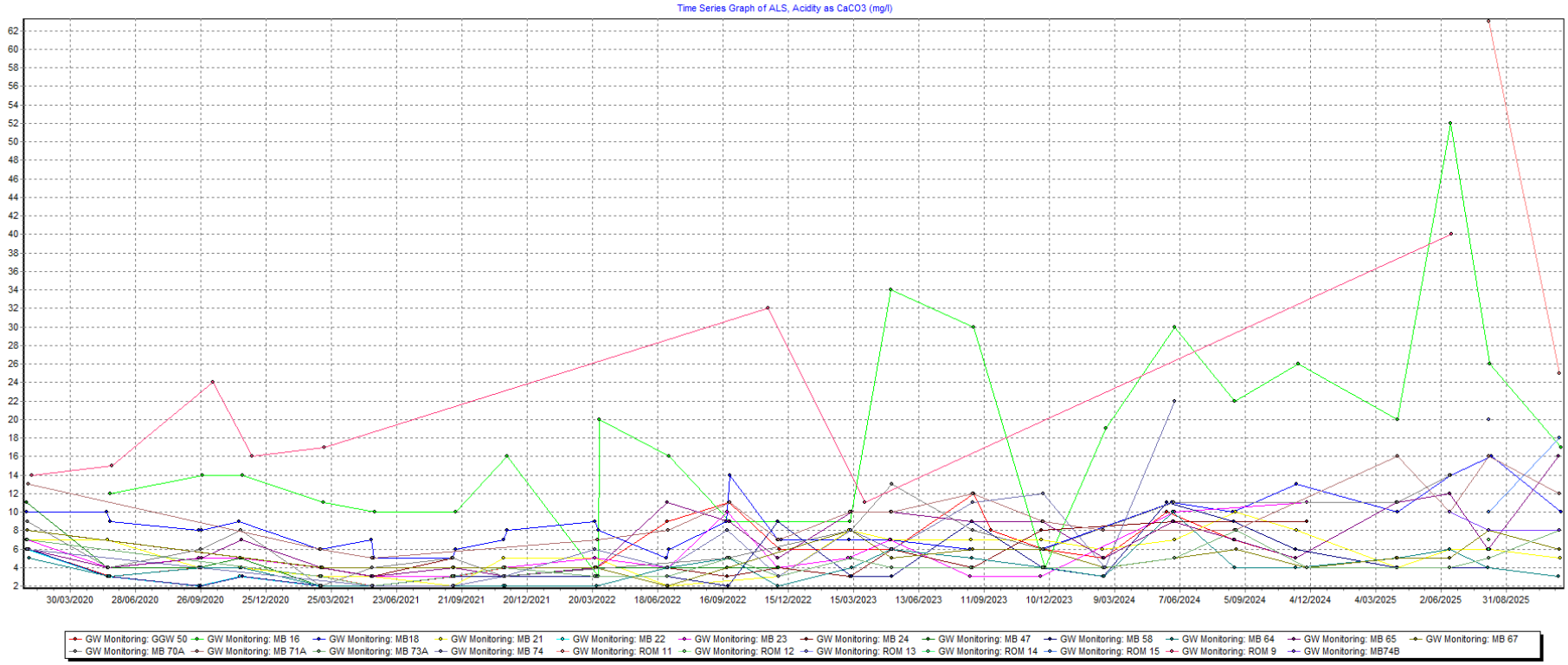
Appendix C2: pH



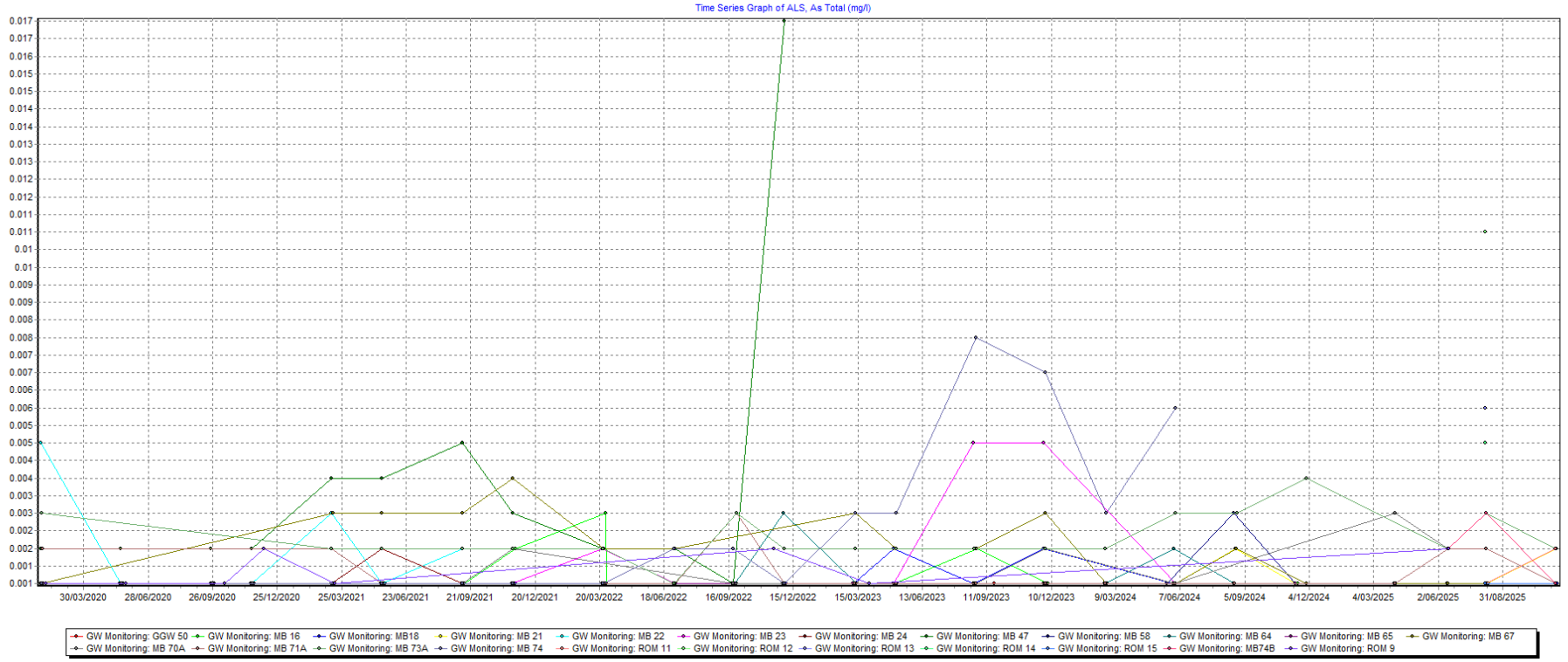
Appendix C3: TDS



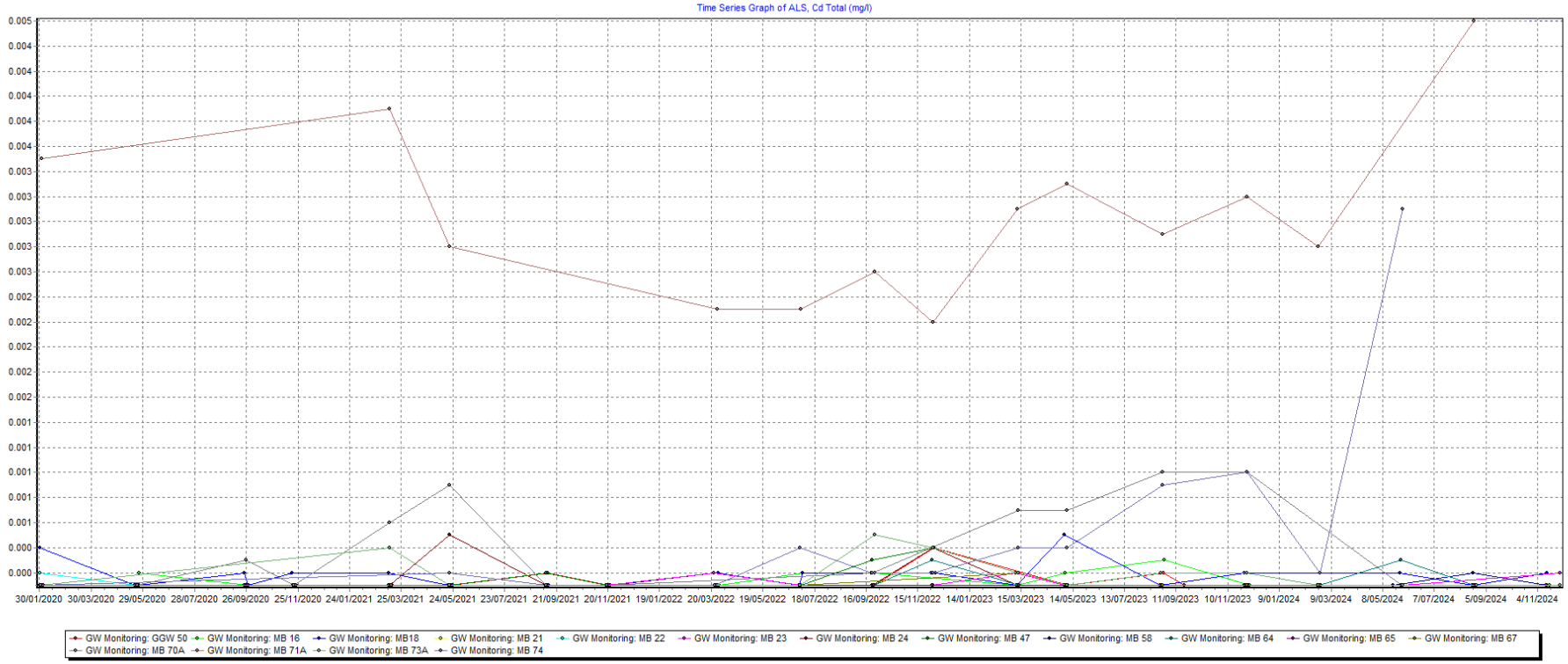
Appendix C4: Total acidity as CaCO3

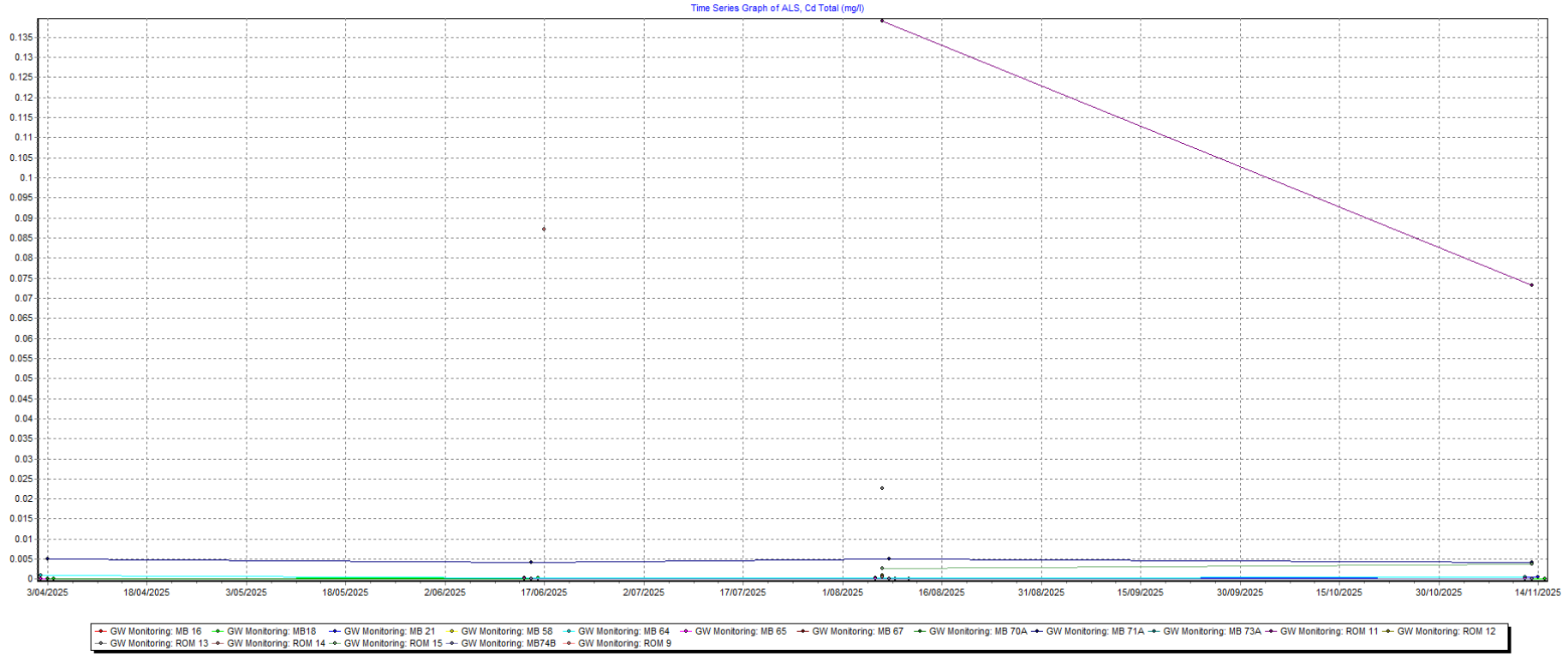


Appendix C5: Total Arsenic

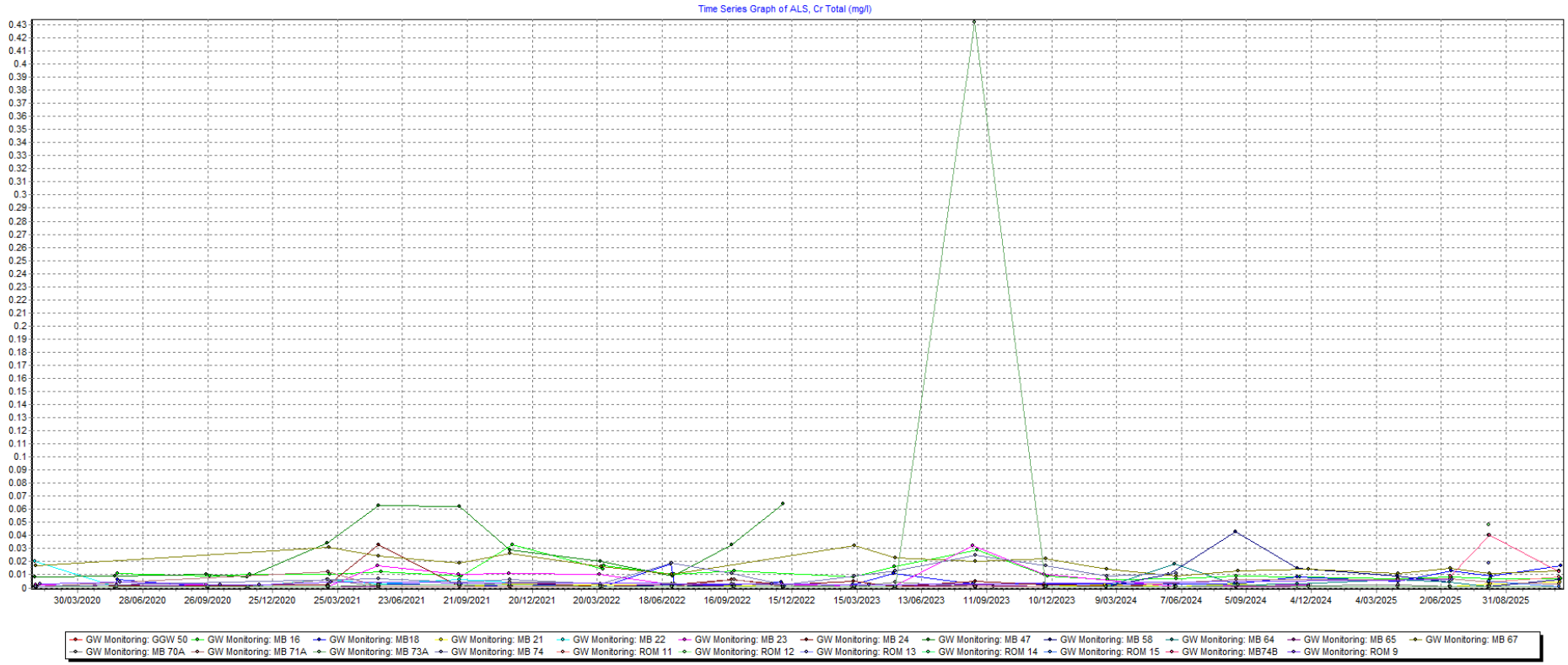


Appendix C6: Total Cadmium

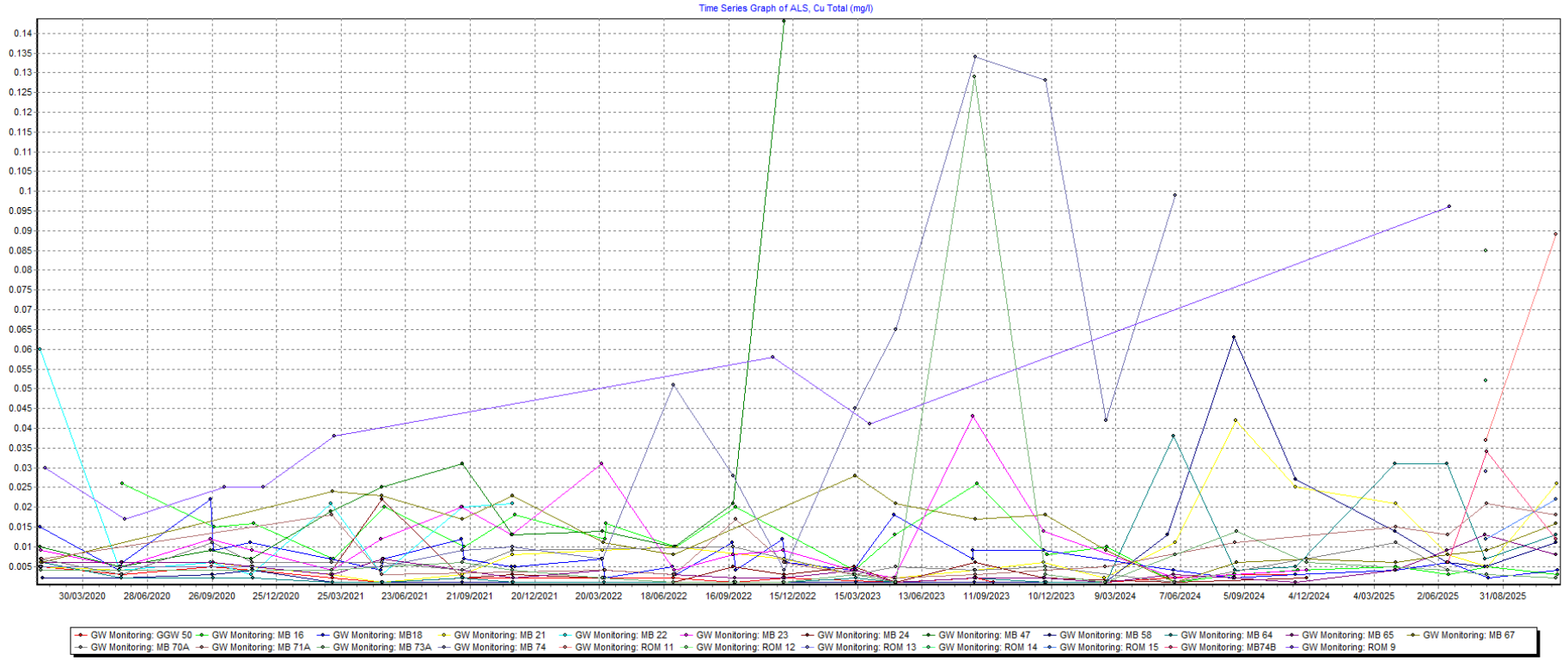



Time Series Graph of ALS, Cd Total (mg/l)
0.135
0.13
0.125
0.12
0.115
0.11
0.105
0.1
0.095
0.09
0.085
0.08
0.075
0.07
0.065
0.06
0.055
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
3/04/2025
18/04/2025
3/05/2025
18/05/2025
2/06/2025
17/06/2025
2/07/2025
17/07/2025
1/08/2025
16/08/2025
31/08/2025
15/09/2025
30/09/2025
15/10/2025
30/10/2025
14/11/2025
GW Monitoring: MB 16
GW Monitoring: MB18
GW Monitoring: MB 21
GW Monitoring: MB 58
GW Monitoring: MB 64
GW Monitoring: MB 65
GW Monitoring: MB 67
GW Monitoring: MB 70A
GW Monitoring: MB 71A
GW Monitoring: MB 73A
GW Monitoring: ROM 11
GW Monitoring: ROM 12
GW Monitoring: ROM 13
GW Monitoring: ROM 14
GW Monitoring: ROM 15
GW Monitoring: MB74B
GW Monitoring: ROM 9

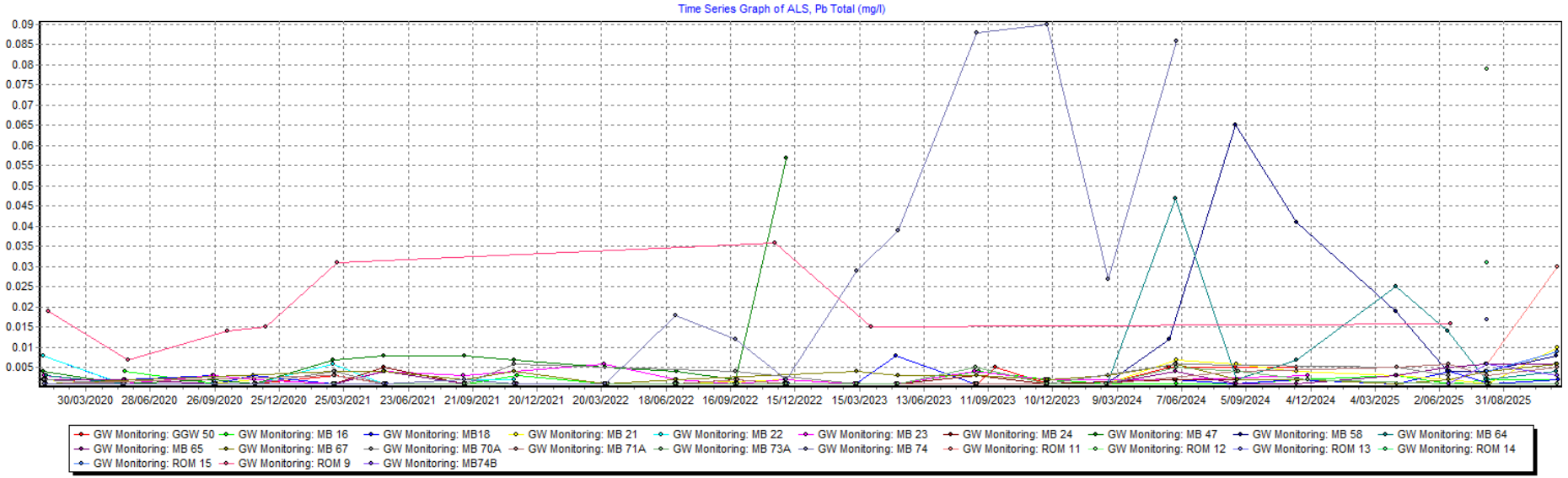
Appendix C7: Total Chromium



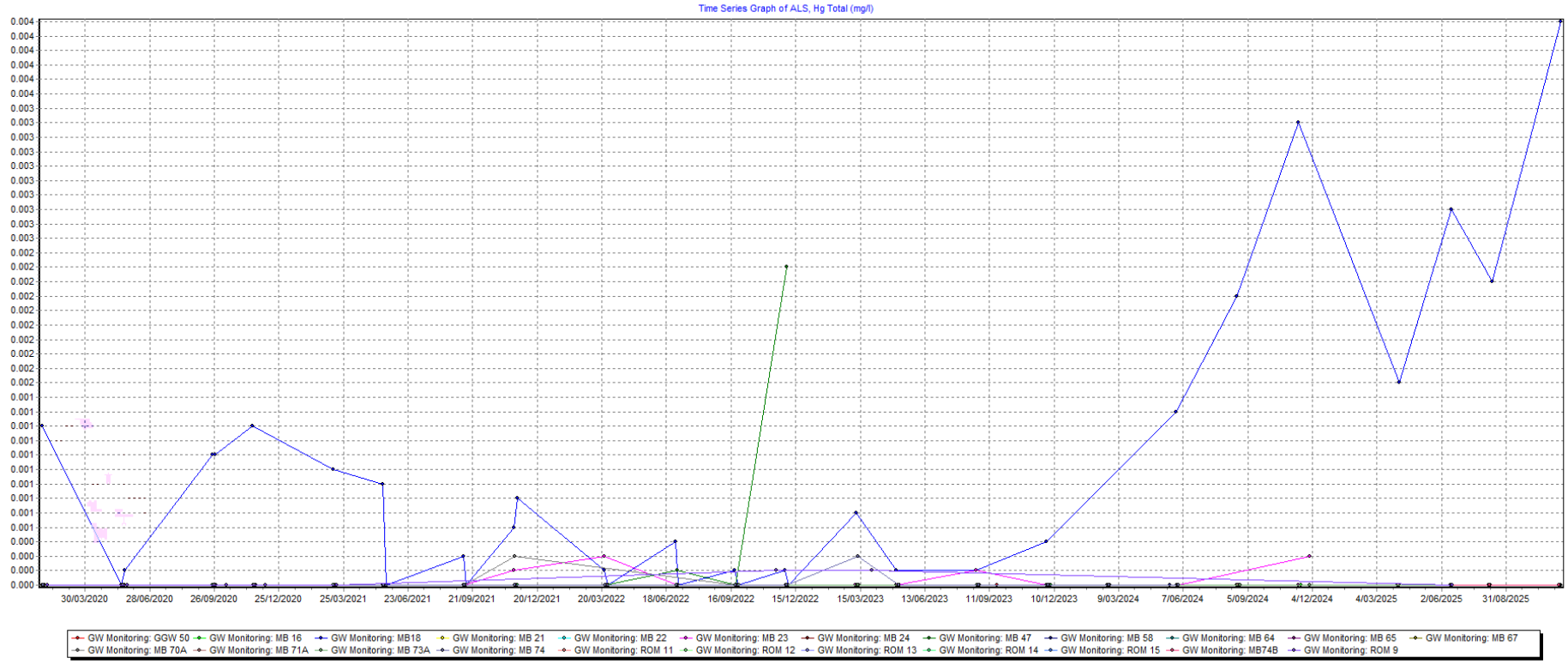
Appendix C8: Total Copper



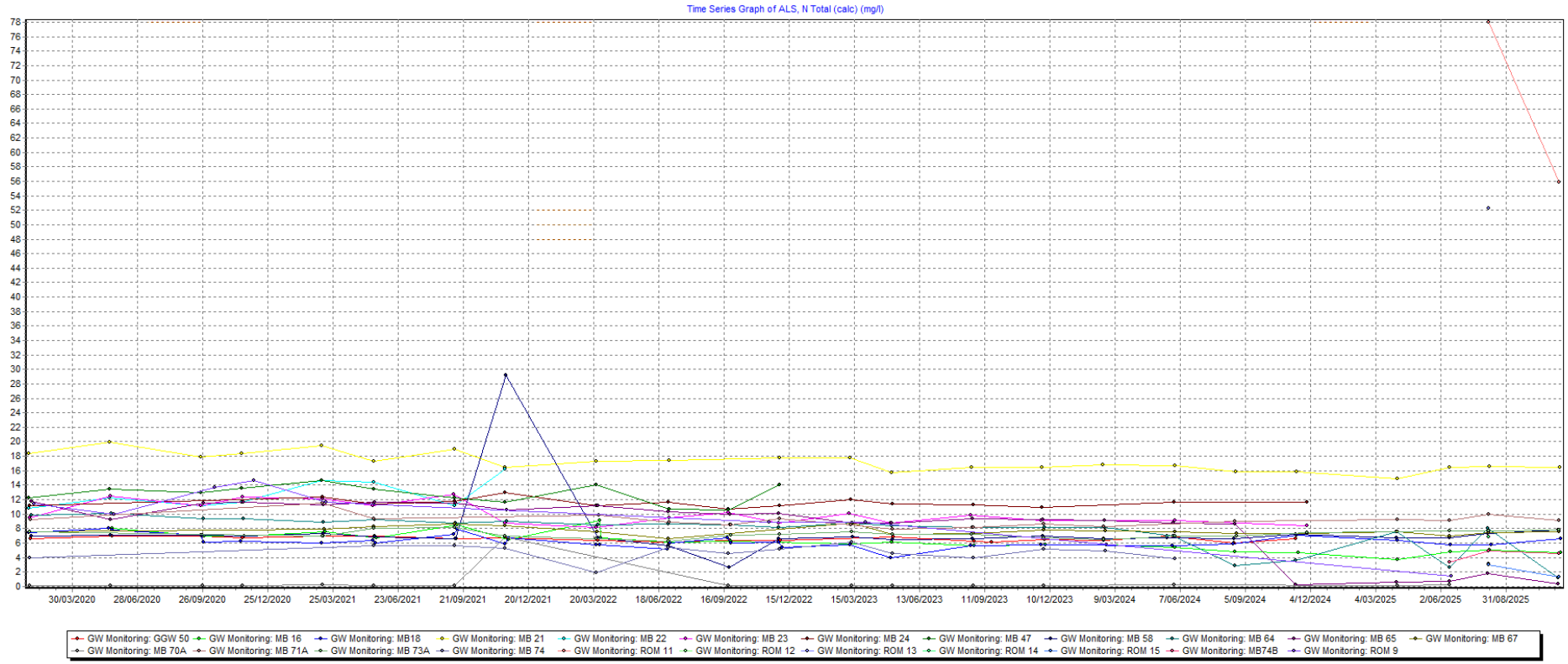
Appendix C9: Total Lead



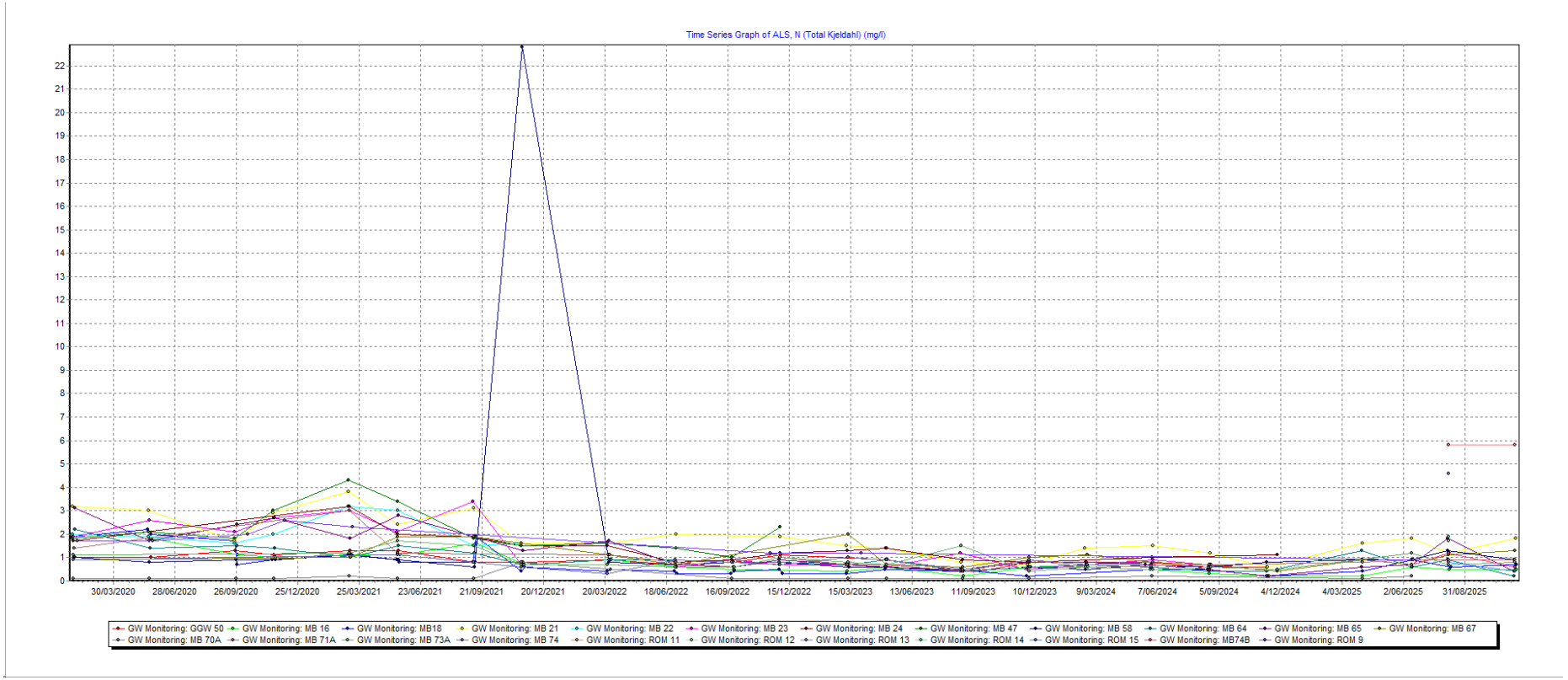
Appendix C10: Total Mercury



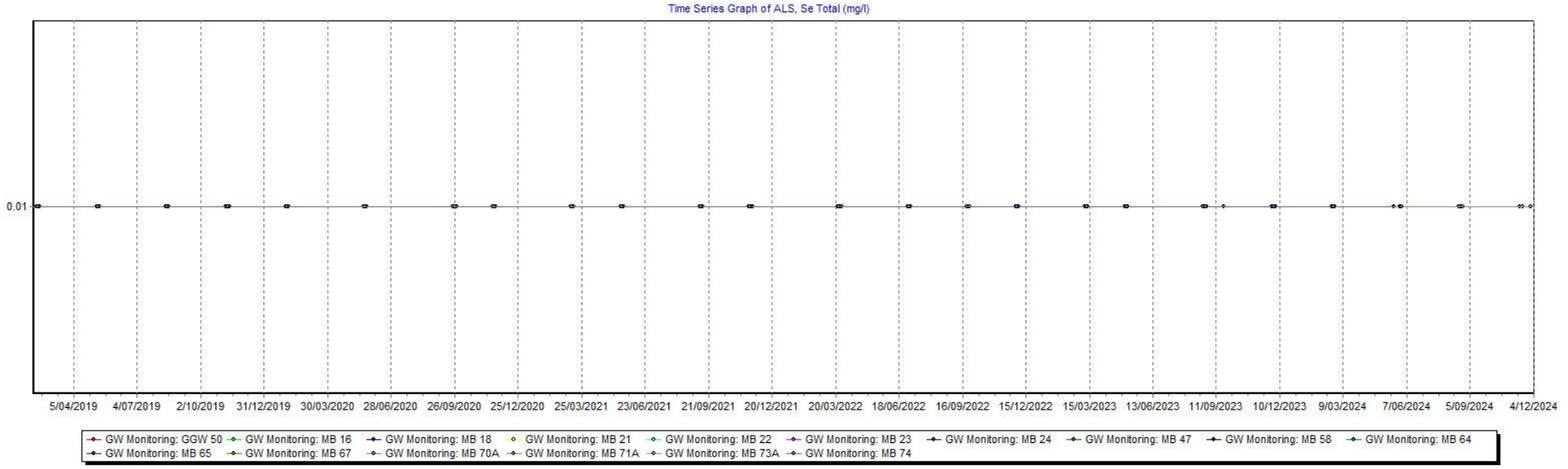
Appendix C11: Total Nitrogen



Appendix C11a: Total Nitrogen Kjeldahl

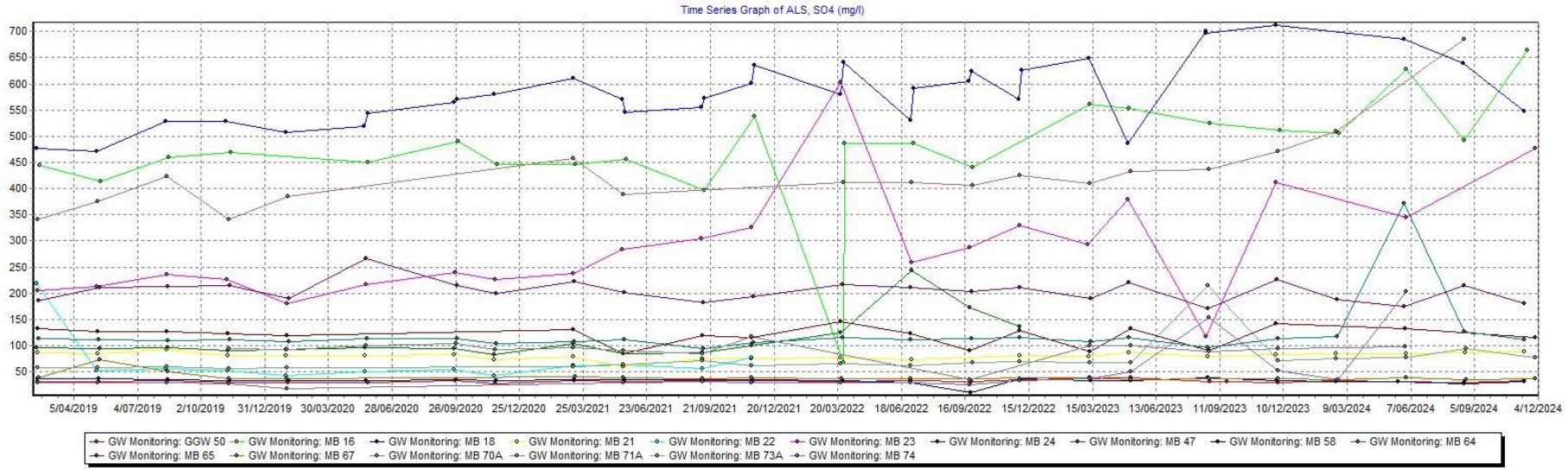


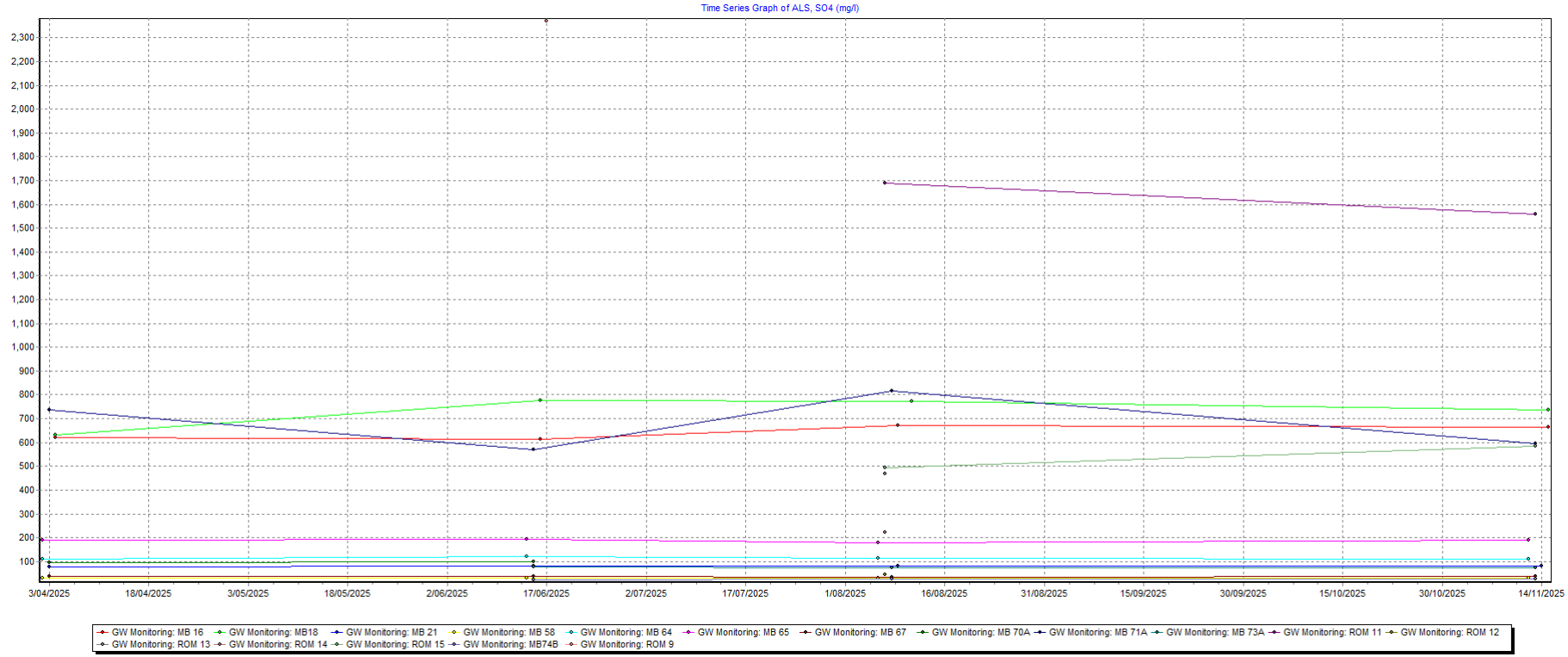
Appendix C12: Total Selenium



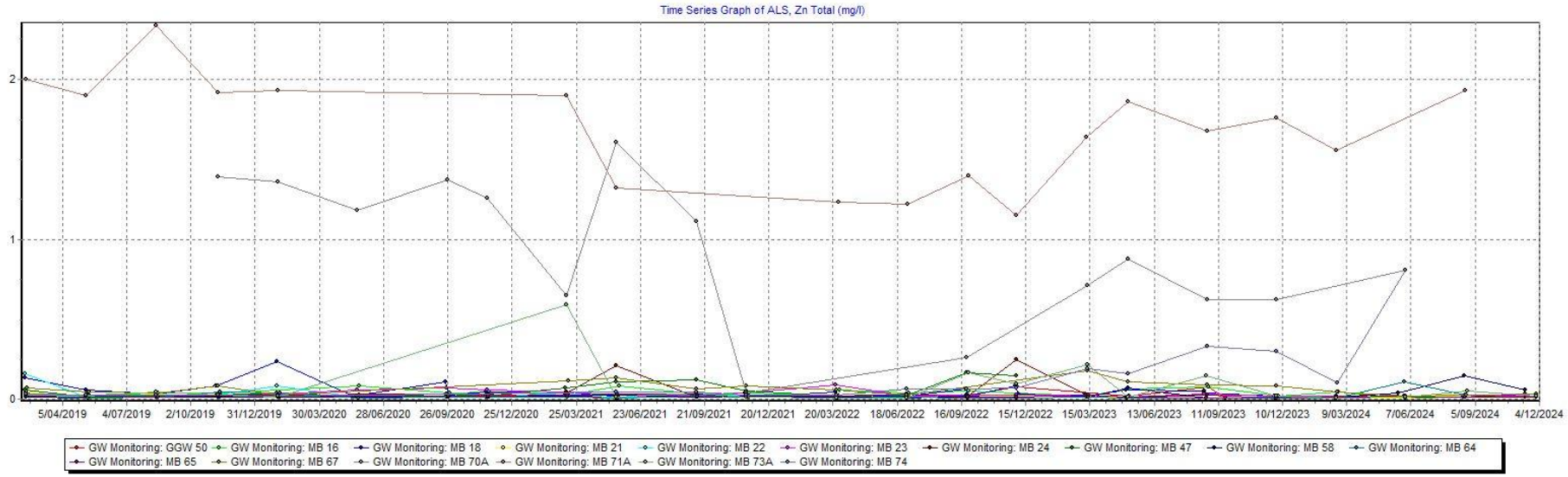
Time Series Graph of ALS, Se Total (mg/l)
0.01
3/04/2025
18/04/2025
3/05/2025
18/05/2025
2/06/2025
17/06/2025
2/07/2025
17/07/2025
1/08/2025
16/08/2025
31/08/2025
30/09/2025
15/10/2025
30/10/2025
14/11/2025
GW Monitoring: MB 16
GW Monitoring: MB18
GW Monitoring: MB 21
GW Monitoring: MB 58
GW Monitoring: MB 64
GW Monitoring: MB 65
GW Monitoring: MB 67
GW Monitoring: MB 70A
GW Monitoring: MB 71A
GW Monitoring: MB 73A
GW Monitoring: ROM 11
GW Monitoring: ROM 12
GW Monitoring: ROM 13
GW Monitoring: ROM 14
GW Monitoring: ROM 15
GW Monitoring: MB74B
GW Monitoring: ROM 9

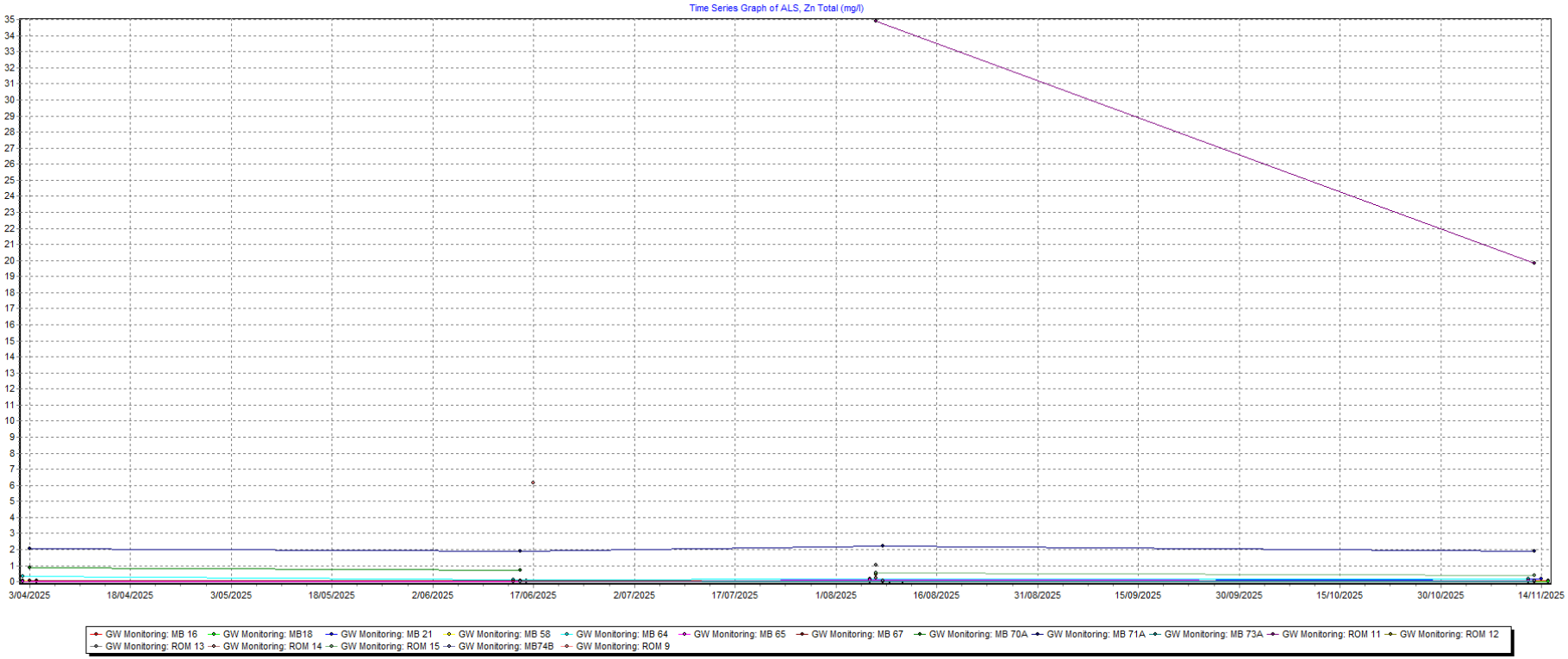
Appendix C13: Total Sulphate




Time Series Graph of ALS, SO4 (mg/l)
2,300
2,200
2,100
2,000
1,900
1,800
1,700
1,600
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
3/04/2025
18/04/2025
3/05/2025
18/05/2025
2/06/2025
17/06/2025
2/07/2025
17/07/2025
1/08/2025
16/08/2025
31/08/2025
15/09/2025
30/09/2025
15/10/2025
30/10/2025
14/11/2025
GW Monitoring: MB 16
GW Monitoring: MB18
GW Monitoring: MB 21
GW Monitoring: MB 58
GW Monitoring: MB 64
GW Monitoring: MB 65
GW Monitoring: MB 67
GW Monitoring: MB 70A
GW Monitoring: MB 71A
GW Monitoring: MB 73A
GW Monitoring: ROM 11
GW Monitoring: ROM 12
GW Monitoring: ROM 13
GW Monitoring: ROM 14
GW Monitoring: ROM 15
GW Monitoring: MB74B
GW Monitoring: ROM 9

Appendix C14: Total Zinc




Time Series Graph of ALS, Zn Total (mg/l)
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
3/04/2025
18/04/2025
3/05/2025
18/05/2025
2/06/2025
17/06/2025
2/07/2025
17/07/2025
1/08/2025
16/08/2025
31/08/2025
15/09/2025
30/09/2025
15/10/2025
30/10/2025
14/11/2025
GW Monitoring: MB 16
GW Monitoring: MB18
GW Monitoring: MB 21
GW Monitoring: MB 58
GW Monitoring: MB 64
GW Monitoring: MB 65
GW Monitoring: MB 67
GW Monitoring: MB 70A
GW Monitoring: MB 71A
GW Monitoring: MB 73A
GW Monitoring: ROM 11
GW Monitoring: ROM 12
GW Monitoring: ROM 13
GW Monitoring: ROM 14
GW Monitoring: ROM 15
GW Monitoring: MB74B
GW Monitoring: ROM 9

Appendix D. LABORATORY REPORTS

CERTIFICATE OF ANALYSIS

Work Order	: **EP2505158**	Page	: 1 of 11
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Customer Services EP
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61 8 9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 04-Apr-2025 08:00
Order number	: 2049366	Date Analysis Commenced	: 04-Apr-2025
C-O-C number	: ----	Issue Date	: 14-Apr-2025 12:23
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 15		
No. of samples analysed	: 15		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Inorganic Chemist	Perth Inorganics, Wangara, WA

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EG035: Positive Mercury for samples EP2505158- 005, 010, and 013 has been confirmed by re-preparation and re-analysis.
- EG020: It is recognised that total Cd,Cu,Mn and Zn concentrations are less than dissolved for samples EP2505158 -001,-003 and -015. However, the difference is within experimental variation of the methods.
- EG020: Mn results for EP2505158 -001 have been confirmed by re-extraction and re-analysis
- EG035: Poor matrix spike recovery obtained for Mercury on sample EP2505154- 002 due to possible matrix interference. Results have been confirmed by re-preparation and re-analysis.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB65	GGW81	GGW80	MB64	MB53
				Sampling date / time	02-Apr-2025 00:00	02-Apr-2025 00:00	02-Apr-2025 00:00	02-Apr-2025 00:00	02-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505158-001	EP2505158-002	EP2505158-003	EP2505158-004	EP2505158-005
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.25**	**7.69**	**7.31**	**7.65**	**6.96**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**3160**	**4970**	**1400**	**2050**	**5940**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**1770**	**2950**	**818**	**1120**	**3900**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**302**	**564**	**226**	**199**	**1620**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**11**	**8**	**7**	**5**	**20**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**189**	**320**	**72**	**110**	**797**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**907**	**1270**	**410**	**584**	**1400**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**42**	**76**	**41**	**27**	**115**
Magnesium	7439-95-4	1	mg/L		**48**	**91**	**30**	**32**	**324**
Sodium	7440-23-5	1	mg/L		**540**	**826**	**168**	**334**	**657**
Potassium	7440-09-7	1	mg/L		**16**	**53**	**12**	**13**	**24**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.002**	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	**0.0007**	<0.0001	**0.0002**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.002**
Copper	7440-50-8	0.001	mg/L		**0.003**	**0.008**	**0.001**	**0.007**	<0.001
Nickel	7440-02-0	0.001	mg/L		**0.004**	**0.002**	<0.001	<0.001	**0.002**
Lead	7439-92-1	0.001	mg/L		<0.001	**0.001**	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB65	GGW81	GGW80	MB64	MB53
				Sampling date / time	02-Apr-2025 00:00	02-Apr-2025 00:00	02-Apr-2025 00:00	02-Apr-2025 00:00	02-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505158-001	EP2505158-002	EP2505158-003	EP2505158-004	EP2505158-005
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.008**	**0.041**	**0.007**	**0.075**	**0.009**
Manganese	7439-96-5	0.001	mg/L		**0.176**	**0.035**	<0.001	**0.006**	**0.001**
Iron	7439-89-6	0.05	mg/L		**0.10**	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.03**	**0.09**	**0.11**	**1.34**	**0.44**
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.002**	<0.001	**0.001**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	**0.0008**	<0.0001	**0.0009**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.001**	<0.001	**0.006**	**0.003**
Copper	7440-50-8	0.001	mg/L		**0.004**	**0.012**	**0.003**	**0.031**	**0.003**
Nickel	7440-02-0	0.001	mg/L		**0.005**	**0.002**	<0.001	**0.003**	**0.003**
Lead	7439-92-1	0.001	mg/L		**0.003**	**0.007**	**0.002**	**0.025**	**0.002**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.028**	**0.056**	<0.005	**0.349**	**0.011**
Manganese	7439-96-5	0.001	mg/L		**0.146**	**0.040**	**0.003**	**0.071**	**0.021**
Iron	7439-89-6	0.05	mg/L		**0.17**	**0.31**	**0.28**	**1.35**	**0.88**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	**0.0002**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	**0.0002**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	**0.22**	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.01	**2.01**	**6.20**	**6.34**	**4.46**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		<0.01	**2.23**	**6.20**	**6.34**	**4.46**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.6**	**0.5**	**1.0**	**1.3**	**0.5**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB65	GGW81	GGW80	MB64	MB53
				Sampling date / time	02-Apr-2025 00:00	02-Apr-2025 00:00	02-Apr-2025 00:00	02-Apr-2025 00:00	02-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505158-001	EP2505158-002	EP2505158-003	EP2505158-004	EP2505158-005
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**0.6**	**2.7**	**7.2**	**7.6**	**5.0**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB59	MB58	MB90	MB92	MB49
			Sampling date / time	02-Apr-2025 00:00	02-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505158-006	EP2505158-007	EP2505158-008	EP2505158-009	EP2505158-010
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	7.34	6.89	7.72	7.35	6.91
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	2700	569	1810	2940	6270
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	1380	346	1010	1830	4260
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	363	125	----	----	1860
Total Hardness as CaCO3	----	1	mg/L	----	----	282	467	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	----	----	<1	<1	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	----	----	<1	<1	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	----	----	128	77	----
Total Alkalinity as CaCO3	----	1	mg/L	----	----	128	77	----
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	8	4	6	10	10
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	187	30	127	304	1030
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	788	161	510	807	1620
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	40	9	42	65	186
Magnesium	7439-95-4	1	mg/L	64	25	43	74	339
Sodium	7440-23-5	1	mg/L	416	54	268	419	573
Potassium	7440-09-7	1	mg/L	14	7	11	24	30
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Antimony	7440-36-0	0.001	mg/L	----	----	<0.001	<0.001	----
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	0.002	<0.001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB59	MB58	MB90	MB92	MB49
				Sampling date / time	02-Apr-2025 00:00	02-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505158-006	EP2505158-007	EP2505158-008	EP2505158-009	EP2505158-010
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Bismuth	7440-69-9	0.001	mg/L		----	----	<0.001	<0.001	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	**0.0004**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	**0.011**	**0.002**
Copper	7440-50-8	0.001	mg/L		<0.001	**0.001**	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.001**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.008**	**0.014**	**0.005**	**0.005**	**0.015**
Manganese	7439-96-5	0.001	mg/L		<0.001	<0.001	**1.12**	**0.007**	<0.001
Molybdenum	7439-98-7	0.001	mg/L		----	----	**0.007**	**0.004**	----
Silver	7440-22-4	0.001	mg/L		----	----	<0.001	<0.001	----
Thallium	7440-28-0	0.001	mg/L		----	----	<0.001	<0.001	----
Uranium	7440-61-1	0.001	mg/L		----	----	<0.001	<0.001	----
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	**0.13**	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**1.22**	**2.53**	**0.46**	**1.35**	**0.34**
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.001**	**0.001**	**0.006**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0001**	<0.0001	<0.0001	<0.0001	**0.0007**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.009**	**0.007**	**0.030**	**0.006**
Copper	7440-50-8	0.001	mg/L		**0.006**	**0.014**	**0.004**	**0.002**	**0.006**
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.009**	**0.002**	**0.006**	**0.004**
Lead	7439-92-1	0.001	mg/L		**0.003**	**0.019**	**0.004**	**0.002**	**0.004**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.043**	**0.039**	**0.027**	**0.014**	**0.046**
Manganese	7439-96-5	0.001	mg/L		**0.028**	**0.165**	**1.12**	**0.047**	**0.014**
Iron	7439-89-6	0.05	mg/L		**1.88**	**3.82**	**0.85**	**2.71**	**1.24**
EG035F: Dissolved Mercury by FIMS									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB59	MB58	MB90	MB92	MB49
				Sampling date / time	02-Apr-2025 00:00	02-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505158-006	EP2505158-007	EP2505158-008	EP2505158-009	EP2505158-010
					Result	Result	Result	Result	Result
EG035F: Dissolved Mercury by FIMS - Continued									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	**0.0001**
EG052G: Silica by Discrete Analyser									
Reactive Silica	----	0.05	mg/L		----	----	**19.5**	**33.2**	----
Reactive Silica as Silicon	----	0.05	mg/L		----	----	**9.12**	**15.5**	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		----	----	**0.02**	**0.03**	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**5.64**	**5.77**	**0.03**	**8.06**	**2.42**
Nitrate as NO3	14797-55-8	0.05	mg/L		----	----	**0.13**	**35.7**	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**5.64**	**5.77**	**0.03**	**8.06**	**2.42**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.6**	**0.9**	<0.1	**0.6**	**0.3**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**6.2**	**6.7**	<0.1	**8.7**	**2.7**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		----	----	**0.03**	**0.04**	----
Total Phosphate	----	0.10	mg/L		----	----	<0.10	**0.12**	----
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		----	----	**19.6**	**30.6**	----
ø Total Cations	----	0.01	meq/L		----	----	**17.6**	**28.2**	----
ø Ionic Balance	----	0.01	%		----	----	**5.42**	**4.18**	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB50	MB60	MB51	RB4	MB41
				Sampling date / time	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505158-011	EP2505158-012	EP2505158-013	EP2505158-014	EP2505158-015
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**6.26**	**7.77**	**6.96**	**7.54**	**7.63**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**2310**	**1850**	**3760**	**2560**	**3700**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**1500**	**1040**	**2530**	**1550**	**2300**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**689**	**310**	**1030**	**482**	**719**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**13**	**8**	**10**	**5**	**6**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**299**	**202**	**516**	**220**	**377**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**641**	**465**	**944**	**697**	**937**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**65**	**35**	**103**	**48**	**95**
Magnesium	7439-95-4	1	mg/L		**128**	**54**	**188**	**88**	**117**
Sodium	7440-23-5	1	mg/L		**220**	**248**	**422**	**336**	**520**
Potassium	7440-09-7	1	mg/L		**12**	**12**	**16**	**12**	**18**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0008**	<0.0001	<0.0001	<0.0001	**0.0002**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.005**	**0.001**	<0.001	**0.001**
Copper	7440-50-8	0.001	mg/L		**0.020**	<0.001	**0.001**	**0.002**	**0.003**
Nickel	7440-02-0	0.001	mg/L		**0.027**	<0.001	<0.001	<0.001	**0.003**
Lead	7439-92-1	0.001	mg/L		**0.002**	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB50	MB60	MB51	RB4	MB41
				Sampling date / time	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505158-011	EP2505158-012	EP2505158-013	EP2505158-014	EP2505158-015
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.238**	**0.008**	**0.026**	**0.021**	**0.421**
Manganese	7439-96-5	0.001	mg/L		**0.015**	<0.001	<0.001	<0.001	**0.004**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.07**	**0.07**	**0.44**	**0.02**	**0.02**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0008**	<0.0001	**0.0001**	**0.0001**	<0.0001
Chromium	7440-47-3	0.001	mg/L		**0.002**	**0.006**	**0.003**	<0.001	**0.001**
Copper	7440-50-8	0.001	mg/L		**0.028**	**0.002**	**0.004**	**0.004**	<0.001
Nickel	7440-02-0	0.001	mg/L		**0.029**	<0.001	<0.001	<0.001	**0.003**
Lead	7439-92-1	0.001	mg/L		**0.007**	**0.002**	**0.004**	**0.001**	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.249**	**0.020**	**0.038**	**0.038**	**1.09**
Manganese	7439-96-5	0.001	mg/L		**0.025**	**0.002**	**0.025**	<0.001	<0.001
Iron	7439-89-6	0.05	mg/L		**0.23**	**0.14**	**0.97**	**0.06**	<0.05
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0001**	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**3.62**	**5.19**	**4.98**	**6.23**	**6.98**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**3.62**	**5.19**	**4.98**	**6.23**	**6.98**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.5**	**0.5**	**0.6**	**0.6**	**0.5**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB50	MB60	MB51	RB4	MB41
				Sampling date / time	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505158-011	EP2505158-012	EP2505158-013	EP2505158-014	EP2505158-015
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**4.1**	**5.7**	**5.6**	**6.8**	**7.5**

CERTIFICATE OF ANALYSIS

Work Order	: **EP2505344**	Page	: 1 of 41
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Customer Services EP
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61 8 9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 08-Apr-2025 10:30
Order number	: 2049366	Date Analysis Commenced	: 08-Apr-2025
C-O-C number	: ----	Issue Date	: 17-Apr-2025 22:23
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 73		
No. of samples analysed	: 73		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
	Inorganics Analyst	Perth Inorganics, Wangara, WA
	Laboratory Technician	Perth Microbiology, Wangara, WA
	Organic Supervisor	Perth Organics, Wangara, WA
	Senior Microbiologist	Perth Microbiology, Wangara, WA

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- ED037 (Alkalinity): NATA accreditation does not cover the performance of this service.
- CFU = colony forming unit
- MF = membrane filtration
- Microbiological Comment: HPC results are reported an approximate (~) when the count of colonies on the plate is outside the range of 10 - 300cfu, in accordance with ALS work instruction QWI-MIC/MW002.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- MW006 is ALS's internal code and is equivalent to AS4276.5.
- EG020: Metals LOR for EP2505344 -009 raised due to high TDS content.
- MW002 and MW006:Analysis Commenced:Date:8/04/2025.Time:1:15PM.
- MM684: Analysis Commenced:Date:08/04/2025.Time:01:30PM.
- MM699:Analysis Commenced:Date:14/04/2025.Time:2:30PM.
- EG020: It is recognised that various total metal concentrations are less than dissolved for various samples. However, the difference is within experimental variation of the methods.
- EG035: Positive Mercury on various samples confirmed by re-preparation and re-analysis.
- EG035: Poor matrix spike recovery obtained for Mercury due to possible matrix interference. Results have been confirmed by re-preparation and re-analysis.
- Microbiological Comment: In accordance with ALS work instruction QWI-MIC/04, membrane filtration result is reported an approximate (~) when the count of colonies on the filtered membrane is outside the range of 10 - 100cfu.
- MW002 is ALS's internal code and is equivalent to AS4276.3.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	LWR01	LWR02	LWR03	LWR04	LWR05
			Sampling date / time	06-Apr-2025 00:00	06-Apr-2025 00:00	06-Apr-2025 00:00	06-Apr-2025 00:00	06-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505344-051	EP2505344-052	EP2505344-053	EP2505344-054	EP2505344-055
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	8.1	8.6	8.4	8.4	8.7
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	12000	16100	4500	11900	32400
EA014 Total Soluble Salts								
Total Soluble Salts	----	5	mg/kg	40900	54600	15300	40500	110000
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	5.7	21.8	2.2	4.8	8.6
ED037: Alkalinity								
ø Carbonate Alkalinity as CaCO3	3812-32-6	5	mg/kg	<5	<5	<5	<5	35
ø Bicarbonate Alkalinity as CaCO3	71-52-3	5	mg/kg	111	61	106	73	106
ø Total Alkalinity as CaCO3	----	5	mg/kg	111	61	106	73	141
ED040S : Soluble Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	11600	18200	2740	11500	18000
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	18000	28500	5950	19200	60600
ED093T: Total Major Cations								
Sodium	7440-23-5	50	mg/kg	19200	21300	2280	10800	41900
Potassium	7440-09-7	50	mg/kg	1160	7510	4120	2680	6070
Calcium	7440-70-2	50	mg/kg	61800	179000	47200	48100	112000
Magnesium	7439-95-4	50	mg/kg	7050	17600	5520	3900	6150
EG005(ED093)-SD: Total Metals in Sediments by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	3070	6800	8770	3890	2440
Iron	7439-89-6	50	mg/kg	11200	9820	32100	12500	4690
EG020-SD: Total Metals in Sediments by ICPMS								
Arsenic	7440-38-2	1.00	mg/kg	1.60	1.78	3.96	2.27	<1.00
Cadmium	7440-43-9	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	7440-47-3	1.0	mg/kg	38.0	28.2	129	54.8	24.1
Copper	7440-50-8	1.0	mg/kg	3.5	7.0	15.0	5.6	2.9

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	LWR01	LWR02	LWR03	LWR04	LWR05
			Sampling date / time	06-Apr-2025 00:00	06-Apr-2025 00:00	06-Apr-2025 00:00	06-Apr-2025 00:00	06-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505344-051	EP2505344-052	EP2505344-053	EP2505344-054	EP2505344-055
				Result	Result	Result	Result	Result
EG020-SD: Total Metals in Sediments by ICPMS - Continued								
Cobalt	7440-48-4	0.5	mg/kg	**1.0**	**2.2**	**4.4**	**1.7**	**0.9**
Lead	7439-92-1	1.0	mg/kg	**1.8**	**2.1**	**6.1**	**1.6**	<1.0
Manganese	7439-96-5	10	mg/kg	**45**	**93**	**102**	**48**	**40**
Nickel	7440-02-0	1.0	mg/kg	**3.1**	**6.4**	**12.7**	**6.2**	**3.0**
Selenium	7782-49-2	0.1	mg/kg	<0.1	**0.2**	<0.1	<0.1	<0.1
Silver	7440-22-4	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	7440-66-6	1.0	mg/kg	**15.7**	**10.2**	**11.5**	**6.8**	**4.4**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.01	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N (Sol.)	14797-55-8	0.1	mg/kg	**1.8**	**1.0**	**8.2**	**5.8**	**18.8**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg	**1.8**	**1.0**	**8.2**	**5.8**	**18.8**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	20	mg/kg	**150**	**260**	**190**	**200**	**300**
EK062: Total Nitrogen as N (TKN + NOx)								
^ Total Nitrogen as N	----	20	mg/kg	**150**	**260**	**200**	**200**	**320**
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	2	mg/kg	**83**	**148**	**128**	**87**	**126**
EP003: Total Organic Carbon (TOC) in Soil								
Total Organic Carbon	----	0.02	%	**0.19**	**0.29**	**0.19**	**0.26**	**0.17**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB70A	MB67	MB71A	MB21	SCO80
				Sampling date / time	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-001	EP2505344-002	EP2505344-003	EP2505344-004	EP2505344-005
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.53**	**7.25**	**7.40**	**7.66**	**8.01**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**1300**	**784**	**3190**	**2020**	**8170**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**675**	**448**	**2110**	**1010**	**5240**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**250**	**75**	**897**	**232**	**2020**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**11**	**5**	**16**	**4**	**5**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**95**	**38**	**738**	**78**	**1340**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**339**	**212**	**620**	**569**	**1940**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**39**	**7**	**102**	**22**	**300**
Magnesium	7439-95-4	1	mg/L		**37**	**14**	**156**	**43**	**309**
Sodium	7440-23-5	1	mg/L		**170**	**113**	**281**	**283**	**918**
Potassium	7440-09-7	1	mg/L		**9**	**10**	**28**	**18**	**22**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	**0.0042**	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.007**	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		**0.003**	<0.001	**0.003**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB70A	MB67	MB71A	MB21	SCO80
				Sampling date / time	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-001	EP2505344-002	EP2505344-003	EP2505344-004	EP2505344-005
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.641**	**0.010**	**1.83**	**0.013**	<0.005
Manganese	7439-96-5	0.001	mg/L		**0.659**	<0.001	**0.035**	**0.001**	**0.937**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.21**	**1.78**	**1.81**	**1.49**	**0.46**
Arsenic	7440-38-2	0.001	mg/L		**0.003**	**0.001**	**0.001**	**0.001**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	**0.0050**	**0.0001**	<0.0001
Chromium	7440-47-3	0.001	mg/L		**0.002**	**0.011**	**0.006**	**0.001**	**0.003**
Copper	7440-50-8	0.001	mg/L		**0.011**	**0.006**	**0.015**	**0.021**	**0.008**
Nickel	7440-02-0	0.001	mg/L		**0.004**	**0.006**	**0.008**	**0.008**	**0.001**
Lead	7439-92-1	0.001	mg/L		**0.005**	**0.001**	**0.005**	**0.003**	**0.004**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.852**	**0.052**	**2.06**	**0.048**	**0.082**
Manganese	7439-96-5	0.001	mg/L		**0.802**	**0.052**	**0.383**	**0.037**	**1.02**
Iron	7439-89-6	0.05	mg/L		**2.18**	**3.06**	**3.21**	**2.83**	**1.01**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.04**	**6.68**	**8.42**	**13.3**	**0.02**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.04**	**6.68**	**8.42**	**13.3**	**0.02**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		<0.1	**0.9**	**0.8**	**1.6**	**0.2**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB70A	MB67	MB71A	MB21	SCO80
				Sampling date / time	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00	03-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-001	EP2505344-002	EP2505344-003	EP2505344-004	EP2505344-005
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		<0.1	**7.6**	**9.2**	**14.9**	**0.2**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB89	MB16B	MB18B	SB15B	MB14B
				Sampling date / time	03-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-006	EP2505344-007	EP2505344-008	EP2505344-009	EP2505344-010
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		7.75	8.01	7.70	7.29	7.75
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		1090	1660	7230	25300	2400
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		576	859	4210	15700	1350
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		----	103	1700	4130	408
Total Hardness as CaCO3	----	1	mg/L		192	----	----	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		64	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L		64	----	----	----	----
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		4	3	8	33	6
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		58	68	535	2420	191
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		296	442	1980	6650	661
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		24	10	191	792	48
Magnesium	7439-95-4	1	mg/L		32	19	298	522	70
Sodium	7440-23-5	1	mg/L		133	282	703	4110	304
Potassium	7440-09-7	1	mg/L		9	16	54	138	19
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.02	<0.01
Antimony	7440-36-0	0.001	mg/L		<0.001	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	0.003	<0.001	<0.002	0.001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB89	MB16B	MB18B	SB15B	MB14B
				Sampling date / time	03-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-006	EP2505344-007	EP2505344-008	EP2505344-009	EP2505344-010
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Bismuth	7440-69-9	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	**0.0003**	**0.0007**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		**0.002**	**0.003**	**0.001**	<0.002	**0.001**
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	**0.008**	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	**0.294**	**0.003**	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.002	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.02	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.014**	<0.005	**0.038**	**0.242**	**0.011**
Manganese	7439-96-5	0.001	mg/L		**0.001**	<0.001	**0.002**	**0.058**	<0.001
Molybdenum	7439-98-7	0.001	mg/L		<0.001	----	----	----	----
Silver	7440-22-4	0.001	mg/L		<0.001	----	----	----	----
Thallium	7440-28-0	0.001	mg/L		<0.001	----	----	----	----
Uranium	7440-61-1	0.001	mg/L		<0.001	----	----	----	----
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	**0.27**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**4.70**	**1.82**	**0.04**	**0.62**	**1.86**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	**0.004**	**0.002**	**0.002**	**0.002**
Cadmium	7440-43-9	0.0001	mg/L		**0.0003**	<0.0001	**0.0004**	**0.0009**	**0.0004**
Chromium	7440-47-3	0.001	mg/L		**0.030**	**0.016**	**0.236**	**0.005**	**0.005**
Copper	7440-50-8	0.001	mg/L		**0.032**	**0.014**	**0.005**	**0.017**	**0.017**
Nickel	7440-02-0	0.001	mg/L		**0.013**	**0.010**	**0.304**	**0.006**	**0.002**
Lead	7439-92-1	0.001	mg/L		**0.007**	**0.002**	**0.001**	**0.008**	**0.006**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.02	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.138**	**0.019**	**0.052**	**0.304**	**0.049**
Manganese	7439-96-5	0.001	mg/L		----	**0.062**	**0.068**	**0.059**	**0.160**
Iron	7439-89-6	0.05	mg/L		**7.13**	**5.30**	**1.16**	**2.64**	**3.47**
EG035F: Dissolved Mercury by FIMS									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB89	MB16B	MB18B	SB15B	MB14B
				Sampling date / time	03-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-006	EP2505344-007	EP2505344-008	EP2505344-009	EP2505344-010
					Result	Result	Result	Result	Result
EG035F: Dissolved Mercury by FIMS - Continued									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG052G: Silica by Discrete Analyser									
Reactive Silica	----	0.05	mg/L		**22.6**	----	----	----	----
Reactive Silica as Silicon	----	0.05	mg/L		**10.6**	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		<0.01	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	**0.02**	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**4.20**	**7.33**	**4.26**	**0.31**	**7.61**
Nitrate as NO3	14797-55-8	0.05	mg/L		**18.6**	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**4.20**	**7.33**	**4.26**	**0.33**	**7.61**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.6**	**0.8**	**0.3**	**0.7**	**0.8**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**4.8**	**8.1**	**4.6**	**1.0**	**8.4**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		**0.05**	----	----	----	----
Total Phosphate	----	0.10	mg/L		**0.17**	----	----	----	----
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**10.8**	----	----	----	----
ø Total Cations	----	0.01	meq/L		**9.85**	----	----	----	----
ø Ionic Balance	----	0.01	%		**4.78**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB14	IB36	MB650	SB79	MB16
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-011	EP2505344-012	EP2505344-013	EP2505344-014	EP2505344-015
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		7.37	7.48	7.18	7.65	7.06
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		2080	9620	9070	12200	6800
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		1150	5530	4830	7080	3670
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		285	1060	2400	2290	1110
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		6	8	8	31	20
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		96	852	641	1340	622
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		580	2430	3040	3070	1670
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		30	150	204	326	91
Magnesium	7439-95-4	1	mg/L		51	167	458	358	215
Sodium	7440-23-5	1	mg/L		262	1460	725	1500	872
Potassium	7440-09-7	1	mg/L		19	68	57	89	48
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		0.0002	0.0013	0.0002	0.0006	<0.0001
Chromium	7440-47-3	0.001	mg/L		0.005	<0.001	<0.001	<0.001	0.006
Copper	7440-50-8	0.001	mg/L		0.002	0.014	<0.001	0.009	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	0.001	0.018	0.004	0.016
Lead	7439-92-1	0.001	mg/L		<0.001	0.014	<0.001	0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB14	IB36	MB650	SB79	MB16
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-011	EP2505344-012	EP2505344-013	EP2505344-014	EP2505344-015
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.042**	**0.322**	**0.017**	**0.031**	**0.013**
Manganese	7439-96-5	0.001	mg/L		**0.008**	**0.014**	**0.008**	**0.002**	<0.001
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.12**	**0.41**	**0.12**	**18.9**	**0.24**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	**0.002**	<0.001	**0.016**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0003**	**0.0021**	**0.0003**	**0.0016**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		**0.007**	**0.003**	**0.009**	**0.104**	**0.007**
Copper	7440-50-8	0.001	mg/L		**0.004**	**0.065**	**0.008**	**0.941**	**0.005**
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.002**	**0.018**	**0.025**	**0.016**
Lead	7439-92-1	0.001	mg/L		**0.002**	**0.047**	**0.004**	**0.806**	**0.003**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.043**	**0.534**	**0.085**	**0.979**	**0.046**
Manganese	7439-96-5	0.001	mg/L		**0.014**	**0.026**	**0.015**	**0.366**	**0.006**
Iron	7439-89-6	0.05	mg/L		**0.28**	**1.38**	**0.46**	**44.9**	**0.64**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0009**	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0019**	**0.0002**	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**0.10**	<0.01	**0.01**	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**14.2**	**10.2**	**6.00**	**4.13**	**3.54**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**14.3**	**10.2**	**6.01**	**4.13**	**3.54**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**3.2**	**1.3**	**0.3**	**0.4**	**0.2**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB14	IB36	MB650	SB79	MB16
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-011	EP2505344-012	EP2505344-013	EP2505344-014	EP2505344-015
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**17.5**	**11.5**	**6.3**	**4.5**	**3.7**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB56	IB19	SB16B	SB81	IB32
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-016	EP2505344-017	EP2505344-018	EP2505344-019	EP2505344-020
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.46**	**7.05**	**7.58**	**7.34**	**7.19**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**3610**	**10300**	**15100**	**3080**	**10800**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**2200**	**6480**	**8440**	**1800**	**6770**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**955**	**2630**	**2300**	**119**	**2270**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**5**	**14**	**9**	**7**	**27**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**503**	**1170**	**1170**	**203**	**1600**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**908**	**2790**	**3710**	**841**	**2580**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**89**	**394**	**338**	**18**	**315**
Magnesium	7439-95-4	1	mg/L		**178**	**400**	**354**	**18**	**361**
Sodium	7440-23-5	1	mg/L		**350**	**1020**	**1940**	**566**	**1290**
Potassium	7440-09-7	1	mg/L		**20**	**94**	**99**	**23**	**109**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	**0.001**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	**0.0004**	**0.0004**	**0.0002**	**0.0316**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	**0.001**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	**0.003**	**0.002**	**0.003**	**0.018**
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.029**	**0.002**	<0.001	**0.182**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB56	IB19	SB16B	SB81	IB32
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-016	EP2505344-017	EP2505344-018	EP2505344-019	EP2505344-020
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.019**	**0.022**	**0.033**	**0.016**	**10.2**
Manganese	7439-96-5	0.001	mg/L		<0.001	**0.199**	**0.001**	**0.002**	**2.91**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.68**	**0.26**	**0.48**	**3.95**	**0.52**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	**0.001**	**0.004**	**0.002**
Cadmium	7440-43-9	0.0001	mg/L		**0.0003**	**0.0006**	**0.0043**	**0.0006**	**0.0404**
Chromium	7440-47-3	0.001	mg/L		**0.002**	**0.003**	**0.004**	**0.015**	**0.003**
Copper	7440-50-8	0.001	mg/L		**0.012**	**0.013**	**0.014**	**0.028**	**0.110**
Nickel	7440-02-0	0.001	mg/L		**0.005**	**0.028**	**0.004**	**0.003**	**0.184**
Lead	7439-92-1	0.001	mg/L		**0.004**	**0.007**	**0.006**	**0.015**	**0.032**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.083**	**0.044**	**0.117**	**0.070**	**10.0**
Manganese	7439-96-5	0.001	mg/L		**0.032**	**0.276**	**0.024**	**0.021**	**3.08**
Iron	7439-89-6	0.05	mg/L		**1.32**	**0.83**	**1.18**	**4.74**	**2.01**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	**0.0001**	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0007**	**0.0003**	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**4.19**	**1.18**	**20.2**	**8.36**	**2.53**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**4.19**	**1.18**	**20.2**	**8.36**	**2.53**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.4**	**0.1**	**2.3**	**0.7**	**0.2**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB56	IB19	SB16B	SB81	IB32
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-016	EP2505344-017	EP2505344-018	EP2505344-019	EP2505344-020
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**4.6**	**1.3**	**22.5**	**9.1**	**2.7**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SB82	IB45	SB35B	ROM9	SB77
			Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505344-021	EP2505344-022	EP2505344-023	EP2505344-024	EP2505344-025
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.63**	**5.78**	**5.88**	**6.53**	**6.77**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**12300**	**11900**	**11600**	**21200**	**10900**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**7440**	**8080**	**7710**	**14800**	**8720**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**953**	**2490**	**2340**	**5620**	**2530**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**16**	**44**	**36**	**29**	**30**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**1120**	**1780**	**1740**	**2170**	**1750**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**3240**	**3160**	**3070**	**6670**	**3150**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**149**	**637**	**641**	**1070**	**853**
Magnesium	7439-95-4	1	mg/L	**141**	**218**	**181**	**716**	**98**
Sodium	7440-23-5	1	mg/L	**2380**	**1650**	**1650**	**3020**	**1670**
Potassium	7440-09-7	1	mg/L	**53**	**97**	**81**	**135**	**52**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	**0.06**	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	**0.001**	**0.004**	**0.005**	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	**0.0003**	**0.0005**	**0.0004**	**0.150**	**0.0003**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.002**	**0.004**	**0.005**	**0.115**	**0.002**
Nickel	7440-02-0	0.001	mg/L	**0.001**	**0.216**	**0.194**	**0.230**	**0.025**
Lead	7439-92-1	0.001	mg/L	<0.001	**0.002**	**0.005**	**0.002**	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB82	IB45	SB35B	ROM9	SB77
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-021	EP2505344-022	EP2505344-023	EP2505344-024	EP2505344-025
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.022**	**0.035**	**0.069**	**9.06**	**0.051**
Manganese	7439-96-5	0.001	mg/L		**0.003**	**4.91**	**5.75**	**12.3**	**3.10**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	**1.26**
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.48**	**0.08**	**0.70**	**0.07**	**2.64**
Arsenic	7440-38-2	0.001	mg/L		**0.002**	**0.004**	**0.006**	**0.001**	**0.006**
Cadmium	7440-43-9	0.0001	mg/L		**0.0006**	**0.0005**	**0.0005**	**0.160**	**0.0008**
Chromium	7440-47-3	0.001	mg/L		**0.003**	**0.002**	**0.003**	<0.001	**0.014**
Copper	7440-50-8	0.001	mg/L		**0.010**	**0.005**	**0.008**	**0.124**	**0.078**
Nickel	7440-02-0	0.001	mg/L		**0.002**	**0.220**	**0.197**	**0.230**	**0.029**
Lead	7439-92-1	0.001	mg/L		**0.005**	**0.003**	**0.005**	**0.004**	**0.026**
Selenium	7782-49-2	0.01	mg/L		**0.01**	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.070**	**0.043**	**0.062**	**9.16**	**0.098**
Manganese	7439-96-5	0.001	mg/L		**0.010**	**5.07**	**6.10**	**12.8**	**3.25**
Iron	7439-89-6	0.05	mg/L		**1.27**	**0.23**	**0.92**	**0.29**	**11.5**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	**0.0001**	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	**0.0001**	**0.0001**	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**0.01**	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**17.5**	<0.01	<0.01	**1.13**	**0.23**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**17.5**	<0.01	<0.01	**1.13**	**0.23**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.2**	<0.1	**0.4**	**0.6**	**1.4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB82	IB45	SB35B	ROM9	SB77
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-021	EP2505344-022	EP2505344-023	EP2505344-024	EP2505344-025
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**18.7**	<0.1	**0.4**	**1.7**	**1.6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB36B	SB34B	MB18	MB45	SB45
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-026	EP2505344-027	EP2505344-028	EP2505344-029	EP2505344-030
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		7.41	6.73	6.82	6.33	5.78
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		12400	11800	7710	12000	11000
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		8840	8990	5520	9300	8000
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		1820	2700	2530	4040	2490
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		16	52	10	32	23
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		1560	1850	630	1820	1840
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		3630	3220	2530	3630	3080
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		225	809	213	320	649
Magnesium	7439-95-4	1	mg/L		306	166	486	786	212
Sodium	7440-23-5	1	mg/L		2350	1800	762	1350	1660
Potassium	7440-09-7	1	mg/L		102	50	59	92	90
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		0.001	<0.001	<0.001	<0.001	0.003
Cadmium	7440-43-9	0.0001	mg/L		0.0010	0.0103	0.0001	0.0008	0.0012
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	0.001
Copper	7440-50-8	0.001	mg/L		0.003	0.002	<0.001	0.004	0.011
Nickel	7440-02-0	0.001	mg/L		0.005	0.033	0.015	0.065	0.201
Lead	7439-92-1	0.001	mg/L		0.001	<0.001	<0.001	<0.001	0.005
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB36B	SB34B	MB18	MB45	SB45
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-026	EP2505344-027	EP2505344-028	EP2505344-029	EP2505344-030
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.164**	**4.20**	**0.011**	**0.016**	**0.130**
Manganese	7439-96-5	0.001	mg/L		**0.012**	**7.29**	**0.007**	**0.314**	**5.04**
Iron	7439-89-6	0.05	mg/L		<0.05	**2.77**	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.26**	**0.29**	**0.20**	**2.65**	**0.27**
Arsenic	7440-38-2	0.001	mg/L		**0.002**	**0.001**	<0.001	<0.001	**0.003**
Cadmium	7440-43-9	0.0001	mg/L		**0.0016**	**0.0111**	**0.0001**	**0.0009**	**0.0014**
Chromium	7440-47-3	0.001	mg/L		**0.002**	**0.003**	**0.005**	**0.049**	**0.003**
Copper	7440-50-8	0.001	mg/L		**0.041**	**0.014**	**0.004**	**0.019**	**0.020**
Nickel	7440-02-0	0.001	mg/L		**0.005**	**0.033**	**0.018**	**0.083**	**0.212**
Lead	7439-92-1	0.001	mg/L		**0.018**	**0.005**	**0.001**	**0.002**	**0.008**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.451**	**4.25**	**0.018**	**0.031**	**0.155**
Manganese	7439-96-5	0.001	mg/L		**0.012**	**7.78**	**0.028**	**0.350**	**5.21**
Iron	7439-89-6	0.05	mg/L		**0.96**	**9.62**	**0.66**	**6.42**	**0.76**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0004**	**0.0004**	**0.0001**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0015**	**0.0004**	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**3.67**	**0.01**	**6.03**	**0.14**	<0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**3.67**	**0.01**	**6.03**	**0.14**	<0.01
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.2**	**1.4**	**0.4**	**0.1**	**0.2**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB36B	SB34B	MB18	MB45	SB45
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-026	EP2505344-027	EP2505344-028	EP2505344-029	EP2505344-030
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**3.9**	**1.4**	**6.4**	**0.2**	**0.2**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB35	SB14B1	IB31B	SB32B	IB34
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-031	EP2505344-032	EP2505344-033	EP2505344-034	EP2505344-035
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**5.88**	**7.23**	**3.35**	**6.47**	**6.94**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**11000**	**8940**	**10800**	**11500**	**11200**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**7930**	**6090**	**7750**	**8780**	**8320**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**2390**	**1450**	**2410**	**3410**	**2500**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**21**	**10**	**59**	**66**	**20**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**1760**	**1010**	**1880**	**2840**	**1800**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**3130**	**2640**	**3060**	**2780**	**3080**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**587**	**204**	**701**	**546**	**858**
Magnesium	7439-95-4	1	mg/L		**225**	**229**	**161**	**497**	**88**
Sodium	7440-23-5	1	mg/L		**1660**	**1470**	**1610**	**1570**	**1640**
Potassium	7440-09-7	1	mg/L		**90**	**124**	**55**	**131**	**52**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	**0.30**	**0.01**	<0.01
Arsenic	7440-38-2	0.001	mg/L		**0.003**	**0.002**	**0.002**	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0018**	**0.0002**	**0.0060**	**0.0951**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	**0.002**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.051**	**0.002**	**0.057**	**0.054**	**0.003**
Nickel	7440-02-0	0.001	mg/L		**0.290**	**0.013**	**0.155**	**0.353**	**0.017**
Lead	7439-92-1	0.001	mg/L		**0.048**	<0.001	**0.025**	**0.001**	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB35	SB14B1	IB31B	SB32B	IB34
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-031	EP2505344-032	EP2505344-033	EP2505344-034	EP2505344-035
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.288**	**0.064**	**5.30**	**22.6**	**0.050**
Manganese	7439-96-5	0.001	mg/L		**6.13**	**0.056**	**10.4**	**8.67**	**2.25**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	**0.20**	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.14**	**1.28**	**0.43**	**0.73**	**0.08**
Arsenic	7440-38-2	0.001	mg/L		**0.003**	**0.003**	**0.002**	**0.001**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0022**	**0.0006**	**0.0061**	**0.103**	**0.0003**
Chromium	7440-47-3	0.001	mg/L		**0.001**	**0.005**	**0.003**	**0.002**	<0.001
Copper	7440-50-8	0.001	mg/L		**0.064**	**0.018**	**0.066**	**0.083**	**0.007**
Nickel	7440-02-0	0.001	mg/L		**0.304**	**0.015**	**0.163**	**0.367**	**0.017**
Lead	7439-92-1	0.001	mg/L		**0.056**	**0.006**	**0.027**	**0.007**	**0.003**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.328**	**0.081**	**5.45**	**23.3**	**0.051**
Manganese	7439-96-5	0.001	mg/L		**6.56**	**0.052**	**11.0**	**9.33**	**2.43**
Iron	7439-89-6	0.05	mg/L		**0.38**	**1.54**	**0.70**	**1.77**	**0.85**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0004**	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0004**	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	**0.01**	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.21**	**47.2**	**0.14**	**2.15**	**0.50**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.21**	**47.2**	**0.14**	**2.16**	**0.50**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.1**	**3.6**	**1.2**	**0.2**	**0.6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB35	SB14B1	IB31B	SB32B	IB34
				Sampling date / time	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00	04-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-031	EP2505344-032	EP2505344-033	EP2505344-034	EP2505344-035
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**0.3**	**50.8**	**1.3**	**2.4**	**1.1**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	LDP	CKJJ	SMDP	EPC	GHDP
			Sampling date / time	04-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505344-036	EP2505344-037	EP2505344-038	EP2505344-039	EP2505344-040
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.64**	**9.53**	**9.64**	**7.89**	**6.65**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**11500**	**10100**	**10000**	**8830**	**12700**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**8270**	**7660**	**7510**	**6540**	**9600**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**2370**	**2210**	**2240**	**2160**	**2800**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**5**	<1	<1	**7**	**208**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**1780**	**1670**	**1740**	**1580**	**2140**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**3120**	**2770**	**2760**	**2270**	**3320**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**798**	**771**	**784**	**555**	**784**
Magnesium	7439-95-4	1	mg/L	**92**	**69**	**69**	**188**	**204**
Sodium	7440-23-5	1	mg/L	**1740**	**1420**	**1410**	**1210**	**1770**
Potassium	7440-09-7	1	mg/L	**67**	**51**	**51**	**49**	**70**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	**0.002**
Cadmium	7440-43-9	0.0001	mg/L	**0.0019**	**0.0028**	**0.0028**	**0.0358**	**0.688**
Chromium	7440-47-3	0.001	mg/L	<0.001	**0.004**	**0.004**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.004**	**0.005**	**0.005**	**0.023**	**0.291**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	**0.004**	**0.056**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	**0.002**	**0.098**
Selenium	7782-49-2	0.01	mg/L	**0.01**	**0.01**	**0.01**	<0.01	**0.02**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	LDP	CKJJ	SMDP	EPC	GHDP
				Sampling date / time	04-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-036	EP2505344-037	EP2505344-038	EP2505344-039	EP2505344-040
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.365**	**0.047**	**0.049**	**5.34**	**140**
Manganese	7439-96-5	0.001	mg/L		**0.339**	**0.001**	**0.001**	**1.70**	**8.71**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	**0.07**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.04**	**0.06**	**0.09**	**0.08**	**17.8**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	**0.001**	**0.012**
Cadmium	7440-43-9	0.0001	mg/L		**0.0020**	**0.0042**	**0.0043**	**0.0315**	**0.723**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.004**	**0.004**	<0.001	**0.017**
Copper	7440-50-8	0.001	mg/L		**0.012**	**0.014**	**0.019**	**0.051**	**2.25**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	**0.004**	**0.069**
Lead	7439-92-1	0.001	mg/L		**0.002**	**0.004**	**0.006**	**0.018**	**0.460**
Selenium	7782-49-2	0.01	mg/L		**0.02**	**0.02**	**0.02**	<0.01	**0.02**
Zinc	7440-66-6	0.005	mg/L		**0.343**	**0.383**	**0.548**	**4.54**	**158**
Manganese	7439-96-5	0.001	mg/L		**0.364**	**0.032**	**0.044**	**1.68**	**8.81**
Iron	7439-89-6	0.05	mg/L		**0.18**	**0.17**	**0.26**	**1.48**	**33.9**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**1.36**	**0.97**	**0.97**	**0.23**	**0.12**
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**3.90**	**7.00**	**7.35**	**4.73**	**11.9**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**5.26**	**7.97**	**8.32**	**4.96**	**12.0**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.0**	**5.5**	**5.3**	**0.9**	**12.8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	LDP	CKJJ	SMDP	EPC	GHDP
				Sampling date / time	04-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-036	EP2505344-037	EP2505344-038	EP2505344-039	EP2505344-040
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**6.3**	**13.5**	**13.6**	**5.9**	**24.8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SCUDDLES U/G RAW	VILLAGE KITCHEN	TSF3 DRAIN	TSF2 SUMP	GGW67P
				Sampling date / time	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-041	EP2505344-042	EP2505344-043	EP2505344-044	EP2505344-045
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		6.39	7.78	6.62	7.36	7.85
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		12000	647	19600	4430	2480
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		8980	359	13900	2740	1520
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		2830	2	3390	813	564
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		186	<1	27	6	1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		1910	22	2870	487	332
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		3280	189	4800	1090	610
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		768	1	840	136	69
Magnesium	7439-95-4	1	mg/L		222	<1	315	115	95
Sodium	7440-23-5	1	mg/L		1650	131	3070	564	261
Potassium	7440-09-7	1	mg/L		54	4	147	22	14
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.01	<0.01	0.02	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	0.004	<0.001	0.001
Cadmium	7440-43-9	0.0001	mg/L		0.166	<0.0001	0.0008	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		0.069	0.020	0.194	0.005	<0.001
Nickel	7440-02-0	0.001	mg/L		0.077	<0.001	0.002	0.005	0.002
Lead	7439-92-1	0.001	mg/L		0.010	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SCUDDLES U/G RAW	VILLAGE KITCHEN	TSF3 DRAIN	TSF2 SUMP	GGW67P
				Sampling date / time	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-041	EP2505344-042	EP2505344-043	EP2505344-044	EP2505344-045
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		130	0.038	0.716	0.054	0.157
Manganese	7439-96-5	0.001	mg/L		16.6	0.005	3.01	0.201	1.74
Iron	7439-89-6	0.05	mg/L		2.71	<0.05	27.2	0.43	0.32
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		16.3	0.02	0.08	0.02	0.01
Arsenic	7440-38-2	0.001	mg/L		0.039	<0.001	0.005	<0.001	0.001
Cadmium	7440-43-9	0.0001	mg/L		0.180	0.0003	0.0009	0.0002	<0.0001
Chromium	7440-47-3	0.001	mg/L		0.024	<0.001	0.002	0.003	<0.001
Copper	7440-50-8	0.001	mg/L		2.38	0.024	0.244	0.007	0.001
Nickel	7440-02-0	0.001	mg/L		0.094	<0.001	0.003	0.006	0.002
Lead	7439-92-1	0.001	mg/L		0.632	0.001	0.010	0.002	<0.001
Selenium	7782-49-2	0.01	mg/L		0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		140	0.047	0.825	0.070	0.241
Manganese	7439-96-5	0.001	mg/L		17.2	0.010	3.06	0.210	1.71
Iron	7439-89-6	0.05	mg/L		53.6	0.06	26.9	0.97	0.59
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		0.30	<0.01	<0.01	0.02	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		4.11	1.78	0.02	5.45	0.04
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		4.41	1.78	0.02	5.47	0.04
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		10.0	0.2	9.1	1.2	<0.1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SCUDDLES U/G RAW	VILLAGE KITCHEN	TSF3 DRAIN	TSF2 SUMP	GGW67P
				Sampling date / time	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-041	EP2505344-042	EP2505344-043	EP2505344-044	EP2505344-045
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**14.4**	**2.0**	**9.1**	**6.7**	<0.1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GGW53P	GGW93P	RMB4	RO TANK	LAKE
			Sampling date / time	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	06-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505344-046	EP2505344-047	EP2505344-048	EP2505344-049	EP2505344-050
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.62**	**7.41**	**7.39**	**8.27**	**7.45**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**1060**	**694**	**739**	**636**	**11600**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**788**	**385**	**436**	**354**	**8060**
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	**----**	**----**	**----**	**----**	**5**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**140**	**108**	**110**	**61**	**----**
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	**----**	**----**	**----**	**----**	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	**----**	**----**	**----**	**----**	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**----**	**----**	**----**	**----**	**70**
Total Alkalinity as CaCO3	----	1	mg/L	**----**	**----**	**----**	**----**	**70**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**4**	**2**	**2**	<1	**4**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**42**	**50**	**56**	**21**	**1620**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**275**	**183**	**195**	**180**	**----**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**23**	**12**	**11**	**8**	**----**
Magnesium	7439-95-4	1	mg/L	**20**	**19**	**20**	**10**	**----**
Sodium	7440-23-5	1	mg/L	**146**	**87**	**92**	**97**	**----**
Potassium	7440-09-7	1	mg/L	**12**	**6**	**8**	**4**	**----**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	**0.004**	<0.001	**0.110**	<0.001	<0.001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	GGW53P	GGW93P	RMB4	RO TANK	LAKE
				Sampling date / time	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	06-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-046	EP2505344-047	EP2505344-048	EP2505344-049	EP2505344-050
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Cadmium	7440-43-9	0.0001	mg/L		**0.0004**	<0.0001	<0.0001	<0.0001	**0.0010**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.002**	**0.001**	<0.001	<0.001	**0.005**
Nickel	7440-02-0	0.001	mg/L		**0.034**	**0.016**	**0.014**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	**0.01**
Zinc	7440-66-6	0.005	mg/L		**0.285**	**0.033**	**0.030**	**0.014**	**0.064**
Manganese	7439-96-5	0.001	mg/L		**1.12**	**0.422**	**0.066**	**0.001**	**0.018**
Iron	7439-89-6	0.05	mg/L		**2.53**	**0.30**	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.23**	<0.01	**0.01**	<0.01	**0.13**
Arsenic	7440-38-2	0.001	mg/L		**0.008**	<0.001	**0.120**	<0.001	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		**0.0005**	<0.0001	<0.0001	<0.0001	**0.0011**
Chromium	7440-47-3	0.001	mg/L		**0.008**	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.038**	<0.001	**0.001**	**0.001**	**0.010**
Nickel	7440-02-0	0.001	mg/L		**0.050**	**0.016**	**0.015**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		**0.010**	<0.001	<0.001	<0.001	**0.003**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	**0.01**
Zinc	7440-66-6	0.005	mg/L		**0.446**	**0.039**	**0.035**	**0.019**	**0.102**
Manganese	7439-96-5	0.001	mg/L		**1.10**	**0.426**	**0.079**	**0.001**	**0.030**
Iron	7439-89-6	0.05	mg/L		**8.67**	**0.41**	**0.20**	<0.05	**0.27**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		----	----	----	----	**0.03**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GGW53P	GGW93P	RMB4	RO TANK	LAKE
			Sampling date / time	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	06-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505344-046	EP2505344-047	EP2505344-048	EP2505344-049	EP2505344-050
				Result	Result	Result	Result	Result
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	**0.01**
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**0.07**	**0.48**	**2.27**	**1.41**	**6.10**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**0.07**	**0.48**	**2.27**	**1.41**	**6.11**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**1.8**	<0.1	**0.3**	**0.2**	**0.6**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ **Total Nitrogen as N**	----	0.1	mg/L	**1.9**	**0.5**	**2.6**	**1.6**	**6.7**
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	----	----	----	----	**0.16**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	----	----	----	----	<20
C10 - C14 Fraction	----	50	µg/L	----	----	----	----	<50
C15 - C28 Fraction	----	100	µg/L	----	----	----	----	<100
C29 - C36 Fraction	----	50	µg/L	----	----	----	----	<50
^ **C10 - C36 Fraction (sum)**	----	50	µg/L	----	----	----	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	----	----	----	----	<20
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L	----	----	----	----	<20
>C10 - C16 Fraction	----	100	µg/L	----	----	----	----	<100
>C16 - C34 Fraction	----	100	µg/L	----	----	----	----	<100
>C34 - C40 Fraction	----	100	µg/L	----	----	----	----	<100
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L	----	----	----	----	<100
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L	----	----	----	----	<100
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	----	----	----	----	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	GGW53P	GGW93P	RMB4	RO TANK	LAKE
				Sampling date / time	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	05-Apr-2025 00:00	06-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EP2505344-046	EP2505344-047	EP2505344-048	EP2505344-049	EP2505344-050
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
Toluene	108-88-3	2	µg/L		----	----	----	----	<2
Ethylbenzene	100-41-4	2	µg/L		----	----	----	----	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		----	----	----	----	<2
ortho-Xylene	95-47-6	2	µg/L		----	----	----	----	<2
^ **Total Xylenes**	----	2	µg/L		----	----	----	----	<2
^ **Sum of BTEX**	----	1	µg/L		----	----	----	----	<1
Naphthalene	91-20-3	5	µg/L		----	----	----	----	<5
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		----	----	----	----	**116**
Toluene-D8	2037-26-5	2	%		----	----	----	----	**95.8**
4-Bromofluorobenzene	460-00-4	2	%		----	----	----	----	**88.4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SEWAGE	VILLAGE COOLER	VILLAGE KITCHEN	VILLAGE POOL	RDH COOLER
			Sampling date / time	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505344-056	EP2505344-057	EP2505344-058	EP2505344-059	EP2505344-060
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	7.61	7.68	8.04	7.35	7.71
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	704	324	336	6080	337
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	<5	----	----	----	----
EA041: Colour (True)								
Colour (True)	----	1	Hazen Unit	----	<1	1	<1	1
pH Colour	----	0.01	pH Unit	----	7.48	8.42	7.38	7.90
EA045: Turbidity								
Turbidity	----	0.1	NTU	----	<0.1	0.1	0.1	0.1
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	----	59	<1	130	61
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	7.20	----	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	16.4	----	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	23.6	----	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	7.18	----	----	----	----
EP025: Oxygen - Dissolved (DO)								
Dissolved Oxygen	----	0.1	mg/L	----	6.2	9.2	9.2	6.8
EP030: Biochemical Oxygen Demand (BOD)								
Biochemical Oxygen Demand	----	2	mg/L	4	----	----	----	----
MM684: Thermotolerant Amoeba by Culture								
Thermophilic Amoeba	----	1	-	----	Detected	Not Detected	Not Detected	Detected
Volume Analysed	----	0.01	L	----	0.5	0.5	0.5	0.5
MM699: Thermotolerant Amoeba Speciation by PCR								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SEWAGE	VILLAGE COOLER	VILLAGE KITCHEN	VILLAGE POOL	RDH COOLER
			Sampling date / time	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505344-056	EP2505344-057	EP2505344-058	EP2505344-059	EP2505344-060
				Result	Result	Result	Result	Result
MM699: Thermotolerant Amoeba Speciation by PCR - Continued								
Naegleria fowleri	----	-	-	----	Not Detected	----	----	Not Detected
Naegleria spp.	----	-	-	----	Not Detected	----	----	Not Detected
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	----	840	<1	<1	42
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	----	1000	<1	<1	360
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	----	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL	----	<1	<1	<1	<1
MW006: Thermotolerant Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	2200	----	----	----	----
Escherichia coli	----	1	CFU/100mL	18	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	RO PLANT	ORICA KITCHEN	GH COOLER	BYRNECUT COOLER	BACKFILL COOLER
			Sampling date / time	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505344-061	EP2505344-062	EP2505344-063	EP2505344-064	EP2505344-065
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.42**	**7.53**	**7.30**	**7.66**	**7.24**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**292**	**334**	**312**	**336**	**344**
EA041: Colour (True)								
Colour (True)	----	1	Hazen Unit	**1**	**2**	<1	<1	<1
pH Colour	----	0.01	pH Unit	**7.37**	**7.43**	**7.21**	**7.65**	**7.25**
EA045: Turbidity								
Turbidity	----	0.1	NTU	<0.1	**0.1**	**0.1**	<0.1	**0.1**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**54**	**59**	**61**	**61**	**61**
EP025: Oxygen - Dissolved (DO)								
Dissolved Oxygen	----	0.1	mg/L	**9.2**	**8.7**	**8.4**	**8.2**	**6.6**
MM684: Thermotolerant Amoeba by Culture								
Thermophilic Amoeba	----	1	-	**Not Detected**	**Not Detected**	**Detected**	**Detected**	**Detected**
Volume Analysed	----	0.01	L	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
MM699: Thermotolerant Amoeba Speciation by PCR								
Naegleria fowleri	----	-	-	**----**	**----**	**Not Detected**	**Not Detected**	**Not Detected**
Naegleria spp.	----	-	-	**----**	**----**	**Not Detected**	**Not Detected**	**Not Detected**
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	<1	**~3300**	**48**	<1
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	<1	<1	**~4200**	**71**	**22**
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	ADMIN COOLER	ADMIN ICE	GH ICE A	GH ICE B	LAB ICE
			Sampling date / time	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EP2505344-066	EP2505344-067	EP2505344-068	EP2505344-069	EP2505344-070
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.51**	----	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**317**	----	----	----	----
EA041: Colour (True)								
Colour (True)	----	1	Hazen Unit	**1**	----	----	----	----
pH Colour	----	0.01	pH Unit	**7.47**	----	----	----	----
EA045: Turbidity								
Turbidity	----	0.1	NTU	<0.1	----	----	----	----
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**61**	----	----	----	----
EP025: Oxygen - Dissolved (DO)								
Dissolved Oxygen	----	0.1	mg/L	**8.6**	----	----	----	----
MM684: Thermotolerant Amoeba by Culture								
Thermophilic Amoeba	----	1	-	**Detected**	----	----	----	----
Volume Analysed	----	0.01	L	**0.5**	----	----	----	----
MM699: Thermotolerant Amoeba Speciation by PCR								
Naegleria fowleri	----	-	-	**Not Detected**	----	----	----	----
Naegleria spp.	----	-	-	**Not Detected**	----	----	----	----
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	**49**	**14**	**36**	**61**	<1
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	**220**	**20**	**40**	**91**	<1
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	**~6**	<1
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	29M WS ICE	BYRNECUT ICE	VILLAGE ICE	----	----
			Sampling date / time	07-Apr-2025 00:00	07-Apr-2025 00:00	07-Apr-2025 00:00	----	----
Compound	CAS Number	LOR	Unit	EP2505344-071	EP2505344-072	EP2505344-073	--------	--------
				Result	Result	Result	----	----
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	**100**	**110**	**----**	**----**
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	<1	**120**	**130**	**----**	**----**
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	**~5**	<1	**----**	**----**
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	**----**	**----**

Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	61	141
Toluene-D8	2037-26-5	73	126
4-Bromofluorobenzene	460-00-4	60	125

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry / Biology).

(SOIL) EP003: Total Organic Carbon (TOC) in Soil

CERTIFICATE OF ANALYSIS

Work Order	: **EP2507942**	Page	: 1 of 22
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Customer Services EP
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61 8 9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 20-May-2025 12:40
Order number	: 2049366	Date Analysis Commenced	: 20-May-2025
C-O-C number	: ----	Issue Date	: 28-May-2025 15:29
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 37		
No. of samples analysed	: 37		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
	Inorganics Analyst	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Lab Technician	Perth Microbiology, Wangara, WA
	Organic Supervisor	Perth Organics, Wangara, WA
	Senior Microbiologist	Perth Microbiology, Wangara, WA

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- CFU = colony forming unit
- MF = membrane filtration
- Microbiological Comment: HPC results are reported an approximate (~) when the count of colonies on the plate is outside the range of 10 - 300cfu, in accordance with ALS work instruction QWI-MIC/MW002.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- MW006 is ALS's internal code and is equivalent to AS4276.5.
- EG020: Metals LOR for samples EP2507942 -028 and -036 raised due to high TDS content.
- MW002, MM684 and MW006:Analysis Commenced:Date:20/05/2025.Time:4:00PM.
- MM699:Analysis Commenced:Date:23/05/2025.Time:3:00PM.
- EK057G, EK058G (Nitrite as N, Nitrate as N): LOR raised for sample EP2507942-023 due to possible sample matrix interference.
- EG020: It is recognised that total Cd, Mn and Zn concentration is less than dissolved for sample EP2507942 -023 to -028, -031 to -034 and -036 to -037. However, the difference is within experimental variation of the methods.
- EG020: It has been confirmed by re-preparation and re-analysis that total Cd, Zn concentrations are less than dissolved for sample EP2507942-032.
- Microbiological Comment: In accordance with ALS work instruction QWI-MIC/04, membrane filtration result is reported an approximate (~) when the count of colonies on the filtered membrane is outside the range of 10 - 100cfu.
- MW002 is ALS's internal code and is equivalent to AS4276.3.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SCUDDLES ADMIN	CENTRALS COOLER	ORICA KITCHEN	RO PLANT	BYRNECUT COOLER
			Sampling date / time	19-May-2025 00:00	19-May-2025 00:00	19-May-2025 00:00	19-May-2025 00:00	19-May-2025 00:00
Compound	CAS Number	LOR	Unit	EP2507942-001	EP2507942-002	EP2507942-003	EP2507942-004	EP2507942-005
				Result	Result	Result	Result	Result
MM684: Thermotolerant Amoeba by Culture								
Thermophilic Amoeba	----	1	-	**Detected**	**Detected**	**Not Detected**	**Not Detected**	**Not Detected**
Volume Analysed	----	0.01	L	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
MM699: Thermotolerant Amoeba Speciation by PCR								
Naegleria fowleri	----	-	-	**Not Detected**	**Not Detected**	**----**	**----**	**----**
Naegleria spp.	----	-	-	**Not Detected**	**Not Detected**	**----**	**----**	**----**
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	**13**	**28**	<1	<1	<1
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	**82**	**100**	**~5**	<1	**130**
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	BACKFILL COOLER	GOSSAN HILL COOLER	VILLAGE COOLER	SWIMMING POOL	VILLAGE KITCHEN
			Sampling date / time	19-May-2025 00:00	19-May-2025 00:00	19-May-2025 00:00	19-May-2025 00:00	19-May-2025 00:00
Compound	CAS Number	LOR	Unit	EP2507942-006	EP2507942-007	EP2507942-008	EP2507942-009	EP2507942-010
				Result	Result	Result	Result	Result
MM684: Thermotolerant Amoeba by Culture								
Thermophilic Amoeba	----	1	-	**Detected**	**Detected**	**Detected**	**Not Detected**	**Not Detected**
Volume Analysed	----	0.01	L	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
MM699: Thermotolerant Amoeba Speciation by PCR								
Naegleria fowleri	----	-	-	**Not Detected**	**Not Detected**	**Not Detected**	**----**	**----**
Naegleria spp.	----	-	-	**Not Detected**	**Not Detected**	**Not Detected**	**----**	**----**
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	**280**	**~3700**	<1	<1
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	<1	**600**	**~6600**	<1	<1
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	VILLAGE ICE	GOSSAN HILL B	GOSSAN HILL A	BYRNCUT MAINT'	LAB ICE
				Sampling date / time	19-May-2025 00:00	19-May-2025 00:00	19-May-2025 00:00	19-May-2025 00:00	19-May-2025 00:00
Compound	CAS Number	LOR	Unit		EP2507942-011	EP2507942-012	EP2507942-013	EP2507942-014	EP2507942-015
					Result	Result	Result	Result	Result
MW002: Heterotrophic Plate Count									
Heterotrophic Plate Count (22°C)	----	1	CFU/mL		**180**	**24**	**160**	**25**	**19**
Heterotrophic Plate Count (36°C)	----	1	CFU/mL		**200**	**27**	**180**	**28**	**21**
MW006: Faecal Coliforms & E.coli by MF									
Thermotolerant Coliforms	----	1	CFU/100mL		<1	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL		<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	WORKSHOP ICE	SCUDDLES ADMIN	LDP	MB31	SMDP
				Sampling date / time	19-May-2025 00:00	19-May-2025 00:00	15-May-2025 00:00	16-May-2025 00:00	15-May-2025 00:00
Compound	CAS Number	LOR	Unit		EP2507942-016	EP2507942-017	EP2507942-018	EP2507942-019	EP2507942-020
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		----	----	6.82	3.37	9.75
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		----	----	14400	12000	13200
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		----	----	9650	7640	9060
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		----	----	2950	2580	2850
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		----	----	13	72	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		----	----	2390	1880	2020
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		----	----	3890	3210	3710
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		----	----	961	771	1070
Magnesium	7439-95-4	1	mg/L		----	----	133	160	44
Sodium	7440-23-5	1	mg/L		----	----	1990	1570	1840
Potassium	7440-09-7	1	mg/L		----	----	89	55	71
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		----	----	<0.01	0.31	<0.01
Arsenic	7440-38-2	0.001	mg/L		----	----	<0.001	0.002	<0.001
Cadmium	7440-43-9	0.0001	mg/L		----	----	0.0070	0.0062	0.0011
Chromium	7440-47-3	0.001	mg/L		----	----	<0.001	0.002	0.002
Copper	7440-50-8	0.001	mg/L		----	----	0.028	0.056	0.014
Nickel	7440-02-0	0.001	mg/L		----	----	0.002	0.148	<0.001
Lead	7439-92-1	0.001	mg/L		----	----	<0.001	0.027	0.001
Selenium	7782-49-2	0.01	mg/L		----	----	0.06	<0.01	0.08

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	WORKSHOP ICE	SCUDDLES ADMIN	LDP	MB31	SMDP
				Sampling date / time	19-May-2025 00:00	19-May-2025 00:00	15-May-2025 00:00	16-May-2025 00:00	15-May-2025 00:00
Compound	CAS Number	LOR	Unit		EP2507942-016	EP2507942-017	EP2507942-018	EP2507942-019	EP2507942-020
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		----	----	**1.61**	**5.08**	**0.010**
Manganese	7439-96-5	0.001	mg/L		----	----	**1.31**	**9.37**	**0.004**
Iron	7439-89-6	0.05	mg/L		----	----	**0.10**	**0.35**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		----	----	**0.04**	**0.39**	**0.10**
Arsenic	7440-38-2	0.001	mg/L		----	----	<0.001	**0.002**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		----	----	**0.0075**	**0.0064**	**0.0020**
Chromium	7440-47-3	0.001	mg/L		----	----	**0.005**	**0.003**	**0.002**
Copper	7440-50-8	0.001	mg/L		----	----	**0.047**	**0.059**	**0.049**
Nickel	7440-02-0	0.001	mg/L		----	----	**0.006**	**0.148**	<0.001
Lead	7439-92-1	0.001	mg/L		----	----	**0.004**	**0.027**	**0.006**
Selenium	7782-49-2	0.01	mg/L		----	----	**0.06**	<0.01	**0.08**
Zinc	7440-66-6	0.005	mg/L		----	----	**2.36**	**5.12**	**0.369**
Manganese	7439-96-5	0.001	mg/L		----	----	**1.49**	**9.48**	**0.029**
Iron	7439-89-6	0.05	mg/L		----	----	**2.66**	**0.67**	**0.21**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		----	----	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		----	----	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		----	----	**0.86**	<0.01	**1.04**
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		----	----	**3.37**	**0.13**	**8.60**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		----	----	**4.23**	**0.13**	**9.64**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		----	----	**5.8**	**1.5**	**13.5**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	WORKSHOP ICE	SCUDDLES ADMIN	LDP	MB31	SMDP
			Sampling date / time	19-May-2025 00:00	19-May-2025 00:00	15-May-2025 00:00	16-May-2025 00:00	15-May-2025 00:00
Compound	CAS Number	LOR	Unit	EP2507942-016	EP2507942-017	EP2507942-018	EP2507942-019	EP2507942-020
				Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ **Total Nitrogen as N**	----	0.1	mg/L	**----**	**----**	**10.0**	**1.6**	**23.1**
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	**64**	<1	**----**	**----**	**----**
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	**93**	<1	**----**	**----**	**----**
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	**----**	**----**	**----**
Escherichia coli	----	1	CFU/100mL	<1	<1	**----**	**----**	**----**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GVW007P	GHDP	TSF1 UNDERDRAIN	TSF3 DRAIN	EPC
			Sampling date / time	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00
Compound	CAS Number	LOR	Unit	EP2507942-021	EP2507942-022	EP2507942-023	EP2507942-024	EP2507942-025
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.92**	**6.21**	**3.65**	**7.08**	**7.47**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**2970**	**13500**	**25800**	**20600**	**10100**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**1670**	**8970**	**29100**	**14300**	**6580**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**226**	**2660**	**14500**	**4060**	**2260**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**8**	**145**	**1080**	**30**	**12**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**156**	**2140**	**14400**	**3750**	**1710**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**762**	**3820**	**4480**	**5630**	**2750**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**28**	**785**	**626**	**834**	**622**
Magnesium	7439-95-4	1	mg/L	**38**	**170**	**3140**	**480**	**171**
Sodium	7440-23-5	1	mg/L	**509**	**1940**	**2620**	**3450**	**1380**
Potassium	7440-09-7	1	mg/L	**26**	**83**	**118**	**162**	**58**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	**0.04**	**0.51**	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	**0.002**	**0.001**	**0.002**	<0.001
Cadmium	7440-43-9	0.0001	mg/L	**0.0004**	**0.221**	**0.0010**	**0.0002**	**0.0311**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.001**	**3.88**	**0.076**	**0.002**	**0.184**
Nickel	7440-02-0	0.001	mg/L	<0.001	**0.052**	**0.004**	<0.001	**0.005**
Lead	7439-92-1	0.001	mg/L	<0.001	**0.078**	**0.029**	<0.001	**0.008**
Selenium	7782-49-2	0.01	mg/L	<0.01	**0.09**	<0.01	<0.01	**0.02**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GVW007P	GHDP	TSF1 UNDERDRAIN	TSF3 DRAIN	EPC
			Sampling date / time	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00
Compound	CAS Number	LOR	Unit	EP2507942-021	EP2507942-022	EP2507942-023	EP2507942-024	EP2507942-025
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Zinc	7440-66-6	0.005	mg/L	**0.058**	**87.5**	**5.48**	**0.860**	**6.53**
Manganese	7439-96-5	0.001	mg/L	**0.013**	**4.95**	**22.4**	**2.00**	**1.87**
Iron	7439-89-6	0.05	mg/L	<0.05	**0.12**	**474**	**15.2**	<0.05
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	**26.3**	**0.74**	**0.34**	**0.61**
Arsenic	7440-38-2	0.001	mg/L	<0.001	**0.021**	**0.002**	**0.012**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L	**0.0005**	**0.240**	**0.0013**	**0.0013**	**0.0324**
Chromium	7440-47-3	0.001	mg/L	**0.002**	**0.034**	**0.002**	**0.002**	<0.001
Copper	7440-50-8	0.001	mg/L	**0.007**	**9.90**	**0.130**	**0.105**	**0.489**
Nickel	7440-02-0	0.001	mg/L	<0.001	**0.070**	**0.004**	**0.002**	**0.006**
Lead	7439-92-1	0.001	mg/L	<0.001	**1.16**	**0.034**	**0.030**	**0.081**
Selenium	7782-49-2	0.01	mg/L	<0.01	**0.11**	<0.01	<0.01	**0.02**
Zinc	7440-66-6	0.005	mg/L	**0.072**	**99.3**	**5.54**	**3.89**	**7.09**
Manganese	7439-96-5	0.001	mg/L	**0.013**	**5.11**	**21.9**	**1.93**	**1.73**
Iron	7439-89-6	0.05	mg/L	**1.87**	**64.1**	**479**	**58.8**	**1.81**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	**0.70**	<0.20	**0.01**	**0.32**
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**4.84**	**6.43**	<0.20	**0.01**	**3.67**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**4.84**	**7.13**	<0.01	**0.02**	**3.99**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**0.7**	**9.4**	**22.6**	**8.3**	**1.7**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	GVW007P	GHDP	TSF1 UNDERDRAIN	TSF3 DRAIN	EPC
				Sampling date / time	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00
Compound	CAS Number	LOR	Unit		EP2507942-021	EP2507942-022	EP2507942-023	EP2507942-024	EP2507942-025
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**5.5**	**16.5**	**22.6**	**8.3**	**5.7**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RO TANK	MB34	EPA DRAIN	GGW67P	VILLAGE KITCHEN
				Sampling date / time	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00	15-May-2025 00:00	16-May-2025 00:00
Compound	CAS Number	LOR	Unit		EP2507942-026	EP2507942-027	EP2507942-028	EP2507942-029	EP2507942-030
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.46**	**7.05**	**7.66**	**7.91**	**7.67**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**571**	**11400**	**33400**	**2530**	**594**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**298**	**7870**	**24100**	**1460**	**320**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**78**	**2360**	**7720**	**608**	<1
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**6**	**27**	**20**	**4**	**2**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**26**	**1850**	**4830**	**328**	**27**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**143**	**3130**	**11400**	**594**	**151**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**10**	**810**	**1260**	**72**	<1
Magnesium	7439-95-4	1	mg/L		**13**	**81**	**1110**	**104**	<1
Sodium	7440-23-5	1	mg/L		**86**	**1640**	**5760**	**277**	**117**
Potassium	7440-09-7	1	mg/L		**5**	**51**	**138**	**14**	**6**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.05	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.005	**0.001**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	**0.0003**	**0.0562**	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.005	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	**0.002**	**0.053**	<0.001	**0.051**
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.015**	**0.035**	**0.002**	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.005	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.05	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RO TANK	MB34	EPA DRAIN	GGW67P	VILLAGE KITCHEN
				Sampling date / time	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00	15-May-2025 00:00	16-May-2025 00:00
Compound	CAS Number	LOR	Unit		EP2507942-026	EP2507942-027	EP2507942-028	EP2507942-029	EP2507942-030
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.014**	**0.095**	**2.66**	**0.213**	**0.022**
Manganese	7439-96-5	0.001	mg/L		**0.003**	**1.92**	**1.48**	**1.67**	<0.001
Iron	7439-89-6	0.05	mg/L		<0.05	**0.06**	<0.25	**0.38**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	**0.03**	<0.05	**0.16**	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.005	**0.002**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0001**	**0.0002**	**0.0592**	**0.0002**	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.005	**0.001**	<0.001
Copper	7440-50-8	0.001	mg/L		**0.007**	**0.003**	**0.085**	**0.012**	**0.054**
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.015**	**0.038**	**0.003**	<0.001
Lead	7439-92-1	0.001	mg/L		**0.001**	<0.001	**0.007**	**0.004**	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.05	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.034**	**0.079**	**3.14**	**1.34**	**0.027**
Manganese	7439-96-5	0.001	mg/L		**0.002**	**1.93**	**1.42**	**1.70**	<0.001
Iron	7439-89-6	0.05	mg/L		**0.07**	**0.68**	**2.69**	**1.48**	<0.05
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**1.77**	**0.34**	**1.51**	**0.02**	**1.80**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**1.77**	**0.34**	**1.51**	**0.02**	**1.80**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.4**	**1.0**	**2.1**	**0.4**	**0.5**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RO TANK	MB34	EPA DRAIN	GGW67P	VILLAGE KITCHEN
				Sampling date / time	16-May-2025 00:00	16-May-2025 00:00	16-May-2025 00:00	15-May-2025 00:00	16-May-2025 00:00
Compound	CAS Number	LOR	Unit		EP2507942-026	EP2507942-027	EP2507942-028	EP2507942-029	EP2507942-030
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**2.2**	**1.3**	**3.6**	**0.4**	**2.3**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SB17B	GGW53P	SCCDDLES UG RAW	GGW93P	SMDP2
			Sampling date / time	16-May-2025 00:00	15-May-2025 00:00	15-May-2025 00:00	15-May-2025 00:00	15-May-2025 00:00
Compound	CAS Number	LOR	Unit	EP2507942-031	EP2507942-032	EP2507942-033	EP2507942-034	EP2507942-035
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**6.42**	**7.50**	**5.64**	**7.27**	**9.75**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**11600**	**1000**	**13600**	**679**	**13200**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**7610**	**558**	**9110**	**384**	**9570**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**2420**	**168**	**3130**	**106**	**2840**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**24**	**12**	**200**	**6**	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**1760**	**38**	**2140**	**47**	**1950**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**3300**	**251**	**4020**	**162**	**3910**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**676**	**26**	**855**	**11**	**1060**
Magnesium	7439-95-4	1	mg/L	**177**	**25**	**241**	**19**	**46**
Sodium	7440-23-5	1	mg/L	**1670**	**168**	**1830**	**89**	**1920**
Potassium	7440-09-7	1	mg/L	**65**	**15**	**56**	**7**	**72**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	**0.20**	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	**0.002**	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	**0.0018**	**0.0016**	**0.135**	<0.0001	**0.0010**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	**0.002**
Copper	7440-50-8	0.001	mg/L	**0.039**	**0.003**	**0.200**	<0.001	**0.015**
Nickel	7440-02-0	0.001	mg/L	**0.114**	**0.066**	**0.084**	**0.014**	<0.001
Lead	7439-92-1	0.001	mg/L	**0.002**	<0.001	**0.029**	<0.001	**0.001**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	**0.02**	<0.01	**0.08**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB17B	GGW53P	SCCDDLES UG RAW	GGW93P	SMDP2
				Sampling date / time	16-May-2025 00:00	15-May-2025 00:00	15-May-2025 00:00	15-May-2025 00:00	15-May-2025 00:00
Compound	CAS Number	LOR	Unit		EP2507942-031	EP2507942-032	EP2507942-033	EP2507942-034	EP2507942-035
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.539**	**1.38**	**126**	**0.046**	**0.009**
Manganese	7439-96-5	0.001	mg/L		**4.28**	**1.58**	**14.3**	**0.385**	<0.001
Iron	7439-89-6	0.05	mg/L		<0.05	**6.38**	**3.22**	**0.29**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.04**	<0.01	**8.40**	<0.01	**0.09**
Arsenic	7440-38-2	0.001	mg/L		**0.002**	<0.001	**0.015**	**0.001**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0018**	<0.0001	**0.141**	<0.0001	**0.0021**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	**0.014**	<0.001	**0.003**
Copper	7440-50-8	0.001	mg/L		**0.041**	**0.010**	**1.14**	<0.001	**0.048**
Nickel	7440-02-0	0.001	mg/L		**0.114**	**0.076**	**0.090**	**0.016**	<0.001
Lead	7439-92-1	0.001	mg/L		**0.003**	<0.001	**0.536**	<0.001	**0.006**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	**0.02**	<0.01	**0.08**
Zinc	7440-66-6	0.005	mg/L		**0.540**	**0.064**	**132**	**0.039**	**0.355**
Manganese	7439-96-5	0.001	mg/L		**4.24**	**1.38**	**14.1**	**0.388**	**0.031**
Iron	7439-89-6	0.05	mg/L		**0.97**	**13.3**	**28.6**	**0.60**	**0.23**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	**0.08**	**0.26**	<0.01	**1.03**
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.31**	**0.19**	**3.39**	**0.76**	**8.02**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.31**	**0.27**	**3.65**	**0.76**	**9.05**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.5**	**1.6**	**9.3**	**0.2**	**12.6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB17B	GGW53P	SCCDDLES UG RAW	GGW93P	SMDP2
				Sampling date / time	16-May-2025 00:00	15-May-2025 00:00	15-May-2025 00:00	15-May-2025 00:00	15-May-2025 00:00
Compound		CAS Number	LOR	Unit	EP2507942-031	EP2507942-032	EP2507942-033	EP2507942-034	EP2507942-035
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^	**Total Nitrogen as N**	----	0.1	mg/L	**0.8**	**1.9**	**13.0**	**1.0**	**21.6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	COFFER DAM 2	LAKE	----	----	----
			Sampling date / time	16-May-2025 00:00	17-May-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EP2507942-036	EP2507942-037	--------	--------	--------
				Result	Result	----	----	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.79**	**6.42**	----	----	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**32700**	**14500**	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**22900**	**9070**	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	----	<5	----	----	----
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**5750**	----	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	----	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	----	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	----	**10**	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	----	**10**	----	----	----
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**32**	**14**	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**3690**	**2300**	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**10700**	----	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**1730**	----	----	----	----
Magnesium	7439-95-4	1	mg/L	**347**	----	----	----	----
Sodium	7440-23-5	1	mg/L	**5770**	----	----	----	----
Potassium	7440-09-7	1	mg/L	**220**	----	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.05	<0.01	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<0.005	<0.001	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	COFFER DAM 2	LAKE	----	----	----
				Sampling date / time	16-May-2025 00:00	17-May-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2507942-036	EP2507942-037	--------	--------	--------
					Result	Result	----	----	----
EG020F: Dissolved Metals by ICP-MS - Continued									
Cadmium	7440-43-9	0.0001	mg/L		**0.0006**	**0.0068**	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.005	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L		**0.019**	**0.036**	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.010**	**0.002**	----	----	----
Lead	7439-92-1	0.001	mg/L		**0.011**	<0.001	----	----	----
Selenium	7782-49-2	0.01	mg/L		<0.05	**0.05**	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.230**	**1.69**	----	----	----
Manganese	7439-96-5	0.001	mg/L		**2.70**	**1.56**	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.66**	<0.05	----	----	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.27**	**0.03**	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.005	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0087**	**0.0070**	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.005	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L		**0.087**	**0.042**	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.012**	**0.002**	----	----	----
Lead	7439-92-1	0.001	mg/L		**0.056**	**0.002**	----	----	----
Selenium	7782-49-2	0.01	mg/L		<0.05	**0.06**	----	----	----
Zinc	7440-66-6	0.005	mg/L		**1.40**	**1.72**	----	----	----
Manganese	7439-96-5	0.001	mg/L		**2.68**	**1.54**	----	----	----
Iron	7439-89-6	0.05	mg/L		**1.74**	**0.18**	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		----	**3.70**	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	COFFER DAM 2	LAKE	----	----	----
			Sampling date / time	16-May-2025 00:00	17-May-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EP2507942-036	EP2507942-037	--------	--------	--------
				Result	Result	----	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	**0.37**	**0.37**	----	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**0.35**	**4.55**	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**0.72**	**4.92**	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**27.2**	**4.6**	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ **Total Nitrogen as N**	----	0.1	mg/L	**27.9**	**9.5**	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	----	**0.10**	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	----	<20	----	----	----
C10 - C14 Fraction	----	50	µg/L	----	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L	----	**170**	----	----	----
C29 - C36 Fraction	----	50	µg/L	----	**90**	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L	----	**260**	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	----	<20	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L	----	<20	----	----	----
>C10 - C16 Fraction	----	100	µg/L	----	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L	----	**220**	----	----	----
>C34 - C40 Fraction	----	100	µg/L	----	<100	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L	----	**220**	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L	----	<100	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	----	<1	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	COFFER DAM 2	LAKE	----	----	----
				Sampling date / time	16-May-2025 00:00	17-May-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2507942-036	EP2507942-037	--------	--------	--------
					Result	Result	----	----	----
EP080: BTEXN - Continued									
Toluene	108-88-3	2	µg/L		----	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L		----	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		----	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L		----	<2	----	----	----
^ **Total Xylenes**	----	2	µg/L		----	<2	----	----	----
^ **Sum of BTEX**	----	1	µg/L		----	<1	----	----	----
Naphthalene	91-20-3	5	µg/L		----	<5	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		----	**100**	----	----	----
Toluene-D8	2037-26-5	2	%		----	**90.2**	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		----	**110**	----	----	----

Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	61	141
Toluene-D8	2037-26-5	73	126
4-Bromofluorobenzene	460-00-4	60	125

CERTIFICATE OF ANALYSIS

Work Order	: **EP2509674**	Page	: 1 of 23
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Customer Services EP
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61 8 9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 18-Jun-2025 12:00
Order number	: 2049366	Date Analysis Commenced	: 18-Jun-2025
C-O-C number	: ----	Issue Date	: 25-Jun-2025 17:56
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 35		
No. of samples analysed	: 35		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
	Inorganics Analyst	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Inorganic Chemist	Perth Inorganics, Wangara, WA

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EG035: Poor matrix spike recovery obtained for Mercury on sample EP2509625- 001 due to possible matrix interference. Results have been confirmed by re-preparation and re-analysis.
- EG035: Positive Mercury on various samples confirmed by re-preparation and re-analysis.
- EG020: It is recognised that total concentration is less than dissolved for Ni on sample EP2509762-005. However, the differences are within experimental variation of the methods.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB82	SB81	SB79	MB16B	IB36
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-001	EP2509674-002	EP2509674-003	EP2509674-004	EP2509674-005
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.62**	**7.24**	**7.52**	**7.88**	**7.43**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**11100**	**3000**	**10500**	**1680**	**8690**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**6430**	**1710**	**6420**	**923**	**5340**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**846**	**131**	**2110**	**110**	**1110**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**25**	**7**	**30**	**3**	**9**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**975**	**194**	**1230**	**70**	**802**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**3190**	**813**	**2930**	**422**	**2580**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**141**	**21**	**308**	**11**	**167**
Magnesium	7439-95-4	1	mg/L		**120**	**19**	**326**	**20**	**168**
Sodium	7440-23-5	1	mg/L		**2100**	**555**	**1390**	**288**	**1480**
Potassium	7440-09-7	1	mg/L		**46**	**23**	**84**	**15**	**69**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.001**	<0.001	**0.003**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0004**	**0.0008**	**0.0007**	<0.0001	**0.0009**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	**0.003**	<0.001
Copper	7440-50-8	0.001	mg/L		**0.001**	**0.003**	**0.004**	<0.001	**0.004**
Nickel	7440-02-0	0.001	mg/L		**0.001**	<0.001	**0.003**	<0.001	**0.001**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	**0.001**	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB82	SB81	SB79	MB16B	IB36
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-001	EP2509674-002	EP2509674-003	EP2509674-004	EP2509674-005
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.022**	**0.031**	**0.038**	**0.008**	**0.102**
Manganese	7439-96-5	0.001	mg/L		**0.002**	**0.001**	**0.002**	<0.001	**0.002**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.31**	**2.43**	**0.64**	**1.70**	**0.09**
Arsenic	7440-38-2	0.001	mg/L		**0.002**	**0.003**	**0.002**	**0.004**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0005**	**0.0010**	**0.0009**	**0.0002**	**0.0013**
Chromium	7440-47-3	0.001	mg/L		**0.002**	**0.009**	**0.004**	**0.016**	**0.002**
Copper	7440-50-8	0.001	mg/L		**0.008**	**0.017**	**0.028**	**0.014**	**0.008**
Nickel	7440-02-0	0.001	mg/L		**0.002**	**0.001**	**0.004**	**0.010**	<0.001
Lead	7439-92-1	0.001	mg/L		**0.002**	**0.010**	**0.024**	**0.002**	**0.003**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.045**	**0.069**	**0.081**	**0.031**	**0.124**
Manganese	7439-96-5	0.001	mg/L		**0.004**	**0.014**	**0.013**	**0.065**	**0.002**
Iron	7439-89-6	0.05	mg/L		**0.68**	**3.22**	**1.72**	**4.38**	**0.21**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**16.2**	**8.69**	**5.26**	**8.02**	**12.3**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**16.2**	**8.69**	**5.26**	**8.02**	**12.3**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.4**	**1.4**	**0.6**	**1.0**	**1.4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB82	SB81	SB79	MB16B	IB36
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-001	EP2509674-002	EP2509674-003	EP2509674-004	EP2509674-005
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**17.6**	**10.1**	**5.9**	**9.0**	**13.7**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB35B	SB83	SB16B	MB16	SB15B
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-006	EP2509674-007	EP2509674-008	EP2509674-009	EP2509674-010
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**5.87**	**6.66**	**7.42**	**6.91**	**7.06**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**11400**	**6970**	**11000**	**6290**	**26000**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**7700**	**4000**	**6870**	**3760**	**18100**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**2360**	**592**	**2010**	**1180**	**4600**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**47**	**13**	**12**	**52**	**73**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**1760**	**485**	**1110**	**615**	**2940**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**3290**	**2100**	**3420**	**1650**	**7900**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**625**	**82**	**309**	**108**	**874**
Magnesium	7439-95-4	1	mg/L		**193**	**94**	**300**	**221**	**588**
Sodium	7440-23-5	1	mg/L		**1600**	**1230**	**1660**	**864**	**4450**
Potassium	7440-09-7	1	mg/L		**84**	**34**	**87**	**48**	**147**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.05**	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		**0.004**	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0008**	**0.0003**	**0.0003**	**0.0001**	**0.0009**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.001**	<0.001	**0.006**	<0.001
Copper	7440-50-8	0.001	mg/L		**0.003**	**0.001**	**0.001**	<0.001	**0.004**
Nickel	7440-02-0	0.001	mg/L		**0.207**	**0.009**	**0.003**	**0.017**	**0.007**
Lead	7439-92-1	0.001	mg/L		**0.002**	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB35B	SB83	SB16B	MB16	SB15B
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-006	EP2509674-007	EP2509674-008	EP2509674-009	EP2509674-010
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.056**	**0.027**	**0.026**	**0.009**	**0.388**
Manganese	7439-96-5	0.001	mg/L		**5.30**	**0.004**	<0.001	**0.001**	**0.067**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	**0.13**
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.11**	**0.06**	**0.21**	**0.22**	**1.29**
Arsenic	7440-38-2	0.001	mg/L		**0.004**	<0.001	<0.001	<0.001	**0.003**
Cadmium	7440-43-9	0.0001	mg/L		**0.0009**	**0.0004**	**0.0004**	**0.0002**	**0.0014**
Chromium	7440-47-3	0.001	mg/L		**0.003**	**0.003**	**0.002**	**0.008**	**0.010**
Copper	7440-50-8	0.001	mg/L		**0.006**	**0.004**	**0.005**	**0.003**	**0.038**
Nickel	7440-02-0	0.001	mg/L		**0.218**	**0.011**	**0.003**	**0.017**	**0.009**
Lead	7439-92-1	0.001	mg/L		**0.003**	**0.002**	**0.001**	**0.001**	**0.006**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.074**	**0.040**	**0.045**	**0.016**	**0.475**
Manganese	7439-96-5	0.001	mg/L		**5.64**	**0.005**	**0.006**	**0.005**	**0.084**
Iron	7439-89-6	0.05	mg/L		**0.17**	**0.20**	**0.60**	**0.61**	**3.23**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0002**	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0003**	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	**0.04**
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.02**	**13.4**	**17.5**	**4.24**	**0.42**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.02**	**13.4**	**17.5**	**4.24**	**0.46**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.8**	**2.1**	**1.7**	**0.6**	**0.7**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB35B	SB83	SB16B	MB16	SB15B
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-006	EP2509674-007	EP2509674-008	EP2509674-009	EP2509674-010
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**0.8**	**15.5**	**19.2**	**4.8**	**1.2**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB35	MB18B	MB15B	SB36B	SB45
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-011	EP2509674-012	EP2509674-013	EP2509674-014	EP2509674-015
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**6.16**	**7.60**	**7.77**	**7.68**	**6.08**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**11500**	**7170**	**2860**	**12900**	**11900**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**7900**	**4020**	**1610**	**8410**	**7770**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**2450**	**1800**	**219**	**1760**	**2530**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**69**	**15**	**5**	**24**	**67**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**1800**	**560**	**180**	**1590**	**1820**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**3310**	**2200**	**761**	**3740**	**3350**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**623**	**198**	**20**	**222**	**684**
Magnesium	7439-95-4	1	mg/L		**218**	**318**	**41**	**292**	**199**
Sodium	7440-23-5	1	mg/L		**1670**	**757**	**497**	**2280**	**1650**
Potassium	7440-09-7	1	mg/L		**91**	**55**	**24**	**94**	**91**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		**0.003**	<0.001	**0.002**	**0.001**	**0.003**
Cadmium	7440-43-9	0.0001	mg/L		**0.0013**	**0.0004**	<0.0001	**0.0014**	**0.0006**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.004**	**0.009**	**0.005**	<0.001
Copper	7440-50-8	0.001	mg/L		**0.007**	<0.001	<0.001	**0.005**	**0.004**
Nickel	7440-02-0	0.001	mg/L		**0.264**	**0.326**	**0.001**	**0.010**	**0.188**
Lead	7439-92-1	0.001	mg/L		**0.006**	<0.001	<0.001	<0.001	**0.001**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB35	MB18B	MB15B	SB36B	SB45
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-011	EP2509674-012	EP2509674-013	EP2509674-014	EP2509674-015
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.072**	**0.029**	**0.006**	**0.158**	**0.030**
Manganese	7439-96-5	0.001	mg/L		**5.77**	**0.004**	<0.001	**0.004**	**4.57**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.28**	**0.06**	**1.71**	**0.55**	**0.07**
Arsenic	7440-38-2	0.001	mg/L		**0.004**	**0.001**	**0.003**	**0.003**	**0.003**
Cadmium	7440-43-9	0.0001	mg/L		**0.0015**	**0.0005**	<0.0001	**0.0020**	**0.0007**
Chromium	7440-47-3	0.001	mg/L		**0.003**	**0.164**	**0.033**	**0.014**	**0.001**
Copper	7440-50-8	0.001	mg/L		**0.017**	**0.007**	**0.018**	**0.030**	**0.009**
Nickel	7440-02-0	0.001	mg/L		**0.287**	**0.365**	**0.015**	**0.012**	**0.191**
Lead	7439-92-1	0.001	mg/L		**0.014**	**0.002**	<0.001	**0.011**	**0.003**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.094**	**0.054**	**0.021**	**0.269**	**0.066**
Manganese	7439-96-5	0.001	mg/L		**6.11**	**0.110**	**0.074**	**0.023**	**4.81**
Iron	7439-89-6	0.05	mg/L		**0.76**	**0.84**	**5.17**	**1.46**	**0.24**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0002**	<0.0001	<0.0001	<0.0001	**0.0001**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0002**	<0.0001	<0.0001	<0.0001	**0.0001**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.02**	**4.59**	**13.4**	**3.83**	<0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.02**	**4.59**	**13.4**	**3.83**	<0.01
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.1**	**0.9**	**1.4**	**0.6**	**0.4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB35	MB18B	MB15B	SB36B	SB45
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-011	EP2509674-012	EP2509674-013	EP2509674-014	EP2509674-015
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**1.1**	**5.5**	**14.8**	**4.4**	**0.4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB17B	MB44B	MB18	IB34	SB34B
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-016	EP2509674-017	EP2509674-018	EP2509674-019	EP2509674-020
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**6.24**	**6.69**	**7.17**	**7.40**	**7.14**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**11500**	**11800**	**9100**	**10900**	**12500**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**7780**	**7920**	**5140**	**7640**	**8720**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**2760**	**2600**	**2600**	**2270**	**2710**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**33**	**76**	**14**	**30**	**78**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**1760**	**1840**	**776**	**1750**	**1880**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**3370**	**3370**	**2920**	**3110**	**3350**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**520**	**689**	**221**	**785**	**945**
Magnesium	7439-95-4	1	mg/L		**356**	**215**	**497**	**75**	**86**
Sodium	7440-23-5	1	mg/L		**1540**	**1660**	**762**	**1620**	**1780**
Potassium	7440-09-7	1	mg/L		**85**	**83**	**59**	**50**	**45**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.001**	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0019**	<0.0001	**0.0002**	**0.0002**	**0.0029**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.003**	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.015**	<0.001	<0.001	**0.002**	**0.002**
Nickel	7440-02-0	0.001	mg/L		**0.152**	**0.016**	**0.022**	**0.015**	**0.018**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB17B	MB44B	MB18	IB34	SB34B
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-016	EP2509674-017	EP2509674-018	EP2509674-019	EP2509674-020
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.112**	**0.011**	**0.008**	**0.024**	**3.63**
Manganese	7439-96-5	0.001	mg/L		**4.38**	**4.17**	**0.028**	**1.85**	**3.70**
Iron	7439-89-6	0.05	mg/L		**0.10**	**0.18**	<0.05	<0.05	**6.40**
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.13**	**0.26**	**0.16**	**0.15**	**0.07**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	**0.002**	<0.001	<0.001	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		**0.0020**	**0.0002**	**0.0003**	**0.0003**	**0.0033**
Chromium	7440-47-3	0.001	mg/L		**0.002**	**0.006**	**0.013**	**0.002**	**0.001**
Copper	7440-50-8	0.001	mg/L		**0.020**	**0.008**	**0.006**	**0.007**	**0.006**
Nickel	7440-02-0	0.001	mg/L		**0.163**	**0.054**	**0.024**	**0.015**	**0.019**
Lead	7439-92-1	0.001	mg/L		**0.002**	**0.006**	**0.004**	**0.003**	**0.002**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.129**	**0.056**	**0.069**	**0.031**	**4.12**
Manganese	7439-96-5	0.001	mg/L		**4.52**	**4.32**	**0.032**	**1.91**	**3.83**
Iron	7439-89-6	0.05	mg/L		**0.51**	**1.67**	**0.60**	**1.28**	**21.3**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0011**	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0027**	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.71**	**0.02**	**4.88**	**0.70**	<0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.71**	**0.02**	**4.88**	**0.70**	<0.01
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.3**	**0.8**	**0.9**	**0.9**	**2.0**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB17B	MB44B	MB18	IB34	SB34B
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-016	EP2509674-017	EP2509674-018	EP2509674-019	EP2509674-020
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**2.0**	**0.8**	**5.8**	**1.6**	**2.0**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB45	IB17	MB44	SB77	IB31B
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-021	EP2509674-022	EP2509674-023	EP2509674-024	EP2509674-025
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		6.54	6.25	5.51	6.87	3.37
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		13200	11400	12500	11800	11500
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		8790	7640	8360	8100	7800
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		4130	2400	2810	2460	2500
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		51	22	94	43	65
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		1800	1680	1880	1750	1890
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		3860	3260	3540	3200	3160
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		324	671	612	827	736
Magnesium	7439-95-4	1	mg/L		807	177	312	96	160
Sodium	7440-23-5	1	mg/L		1360	1670	1710	1650	1650
Potassium	7440-09-7	1	mg/L		92	64	96	50	55
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	0.08	<0.01	0.32
Arsenic	7440-38-2	0.001	mg/L		<0.001	0.002	0.001	<0.001	0.002
Cadmium	7440-43-9	0.0001	mg/L		0.0009	0.0021	0.0008	0.0005	0.0067
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	0.002
Copper	7440-50-8	0.001	mg/L		0.005	0.038	0.003	0.001	0.063
Nickel	7440-02-0	0.001	mg/L		0.063	0.110	0.212	0.025	0.150
Lead	7439-92-1	0.001	mg/L		<0.001	0.001	0.001	<0.001	0.033
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB45	IB17	MB44	SB77	IB31B
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-021	EP2509674-022	EP2509674-023	EP2509674-024	EP2509674-025
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.015**	**0.541**	**0.045**	**0.056**	**4.85**
Manganese	7439-96-5	0.001	mg/L		**0.351**	**4.31**	**4.17**	**2.83**	**9.48**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	**0.32**	**1.84**	**0.25**
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**2.23**	**0.07**	**2.67**	**3.44**	**0.40**
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.002**	**0.002**	**0.016**	**0.003**
Cadmium	7440-43-9	0.0001	mg/L		**0.0010**	**0.0024**	**0.0009**	**0.0012**	**0.0074**
Chromium	7440-47-3	0.001	mg/L		**0.042**	<0.001	**0.006**	**0.021**	**0.003**
Copper	7440-50-8	0.001	mg/L		**0.017**	**0.042**	**0.011**	**0.110**	**0.068**
Nickel	7440-02-0	0.001	mg/L		**0.080**	**0.117**	**0.231**	**0.032**	**0.157**
Lead	7439-92-1	0.001	mg/L		**0.002**	**0.003**	**0.002**	**0.059**	**0.036**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.030**	**0.596**	**0.057**	**0.206**	**5.23**
Manganese	7439-96-5	0.001	mg/L		**0.392**	**4.52**	**4.45**	**3.07**	**10.1**
Iron	7439-89-6	0.05	mg/L		**5.84**	**0.30**	**1.61**	**31.2**	**0.54**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0004**	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0005**	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	**0.02**	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.13**	**0.45**	<0.01	**0.01**	**0.13**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.13**	**0.45**	<0.01	**0.03**	**0.13**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.8**	**0.7**	**0.6**	**1.9**	**1.4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB45	IB17	MB44	SB77	IB31B
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00	16-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-021	EP2509674-022	EP2509674-023	EP2509674-024	EP2509674-025
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**0.9**	**1.2**	**0.6**	**1.9**	**1.5**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB45	SB14B1	MB41	MB59	MB64
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-026	EP2509674-027	EP2509674-028	EP2509674-029	EP2509674-030
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**6.20**	**7.28**	**7.65**	**7.48**	**7.66**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**12000**	**9830**	**3900**	**2860**	**2250**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**8010**	**6050**	**2300**	**1530**	**1190**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**2550**	**1500**	**709**	**347**	**214**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**25**	**9**	**6**	**10**	**6**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**1820**	**1000**	**407**	**223**	**119**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**3350**	**2680**	**969**	**798**	**581**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**658**	**209**	**101**	**40**	**33**
Magnesium	7439-95-4	1	mg/L		**221**	**238**	**111**	**60**	**32**
Sodium	7440-23-5	1	mg/L		**1690**	**1500**	**517**	**420**	**353**
Potassium	7440-09-7	1	mg/L		**97**	**123**	**17**	**13**	**12**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		**0.003**	**0.002**	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0011**	**0.0005**	<0.0001	**0.0001**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.004**	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.005**	**0.003**	<0.001	**0.002**	**0.004**
Nickel	7440-02-0	0.001	mg/L		**0.199**	**0.016**	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		**0.002**	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB45	SB14B1	MB41	MB59	MB64
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-026	EP2509674-027	EP2509674-028	EP2509674-029	EP2509674-030
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.045**	**0.053**	**0.019**	**0.040**	**0.054**
Manganese	7439-96-5	0.001	mg/L		**4.64**	**0.027**	**0.003**	**0.002**	**0.033**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.10**	**0.22**	**0.07**	**0.56**	**0.82**
Arsenic	7440-38-2	0.001	mg/L		**0.004**	**0.002**	<0.001	<0.001	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		**0.0014**	**0.0007**	**0.0002**	**0.0002**	**0.0004**
Chromium	7440-47-3	0.001	mg/L		**0.002**	**0.007**	**0.001**	**0.001**	**0.004**
Copper	7440-50-8	0.001	mg/L		**0.010**	**0.013**	**0.008**	**0.009**	**0.031**
Nickel	7440-02-0	0.001	mg/L		**0.240**	**0.019**	**0.005**	**0.003**	**0.004**
Lead	7439-92-1	0.001	mg/L		**0.005**	**0.003**	**0.004**	**0.004**	**0.014**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.094**	**0.075**	**0.055**	**0.060**	**0.132**
Manganese	7439-96-5	0.001	mg/L		**4.85**	**0.045**	**0.005**	**0.012**	**0.062**
Iron	7439-89-6	0.05	mg/L		**0.27**	**0.56**	**0.38**	**1.07**	**1.22**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0002**	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0002**	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	**0.02**	<0.01	<0.01	**0.54**
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.01**	**45.7**	**6.64**	**0.58**	**1.51**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.01**	**45.7**	**6.64**	**0.58**	**2.05**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.7**	**4.8**	**0.6**	**0.4**	**0.6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB45	SB14B1	MB41	MB59	MB64
				Sampling date / time	16-Jun-2025 00:00	16-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-026	EP2509674-027	EP2509674-028	EP2509674-029	EP2509674-030
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**0.7**	**50.5**	**7.2**	**1.0**	**2.6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB58	MB65	RB4	MB74B	MB50
				Sampling date / time	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-031	EP2509674-032	EP2509674-033	EP2509674-034	EP2509674-035
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.16**	**7.55**	**7.60**	**7.47**	**6.48**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**604**	**3420**	**2720**	**597**	**2270**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**354**	**1850**	**1470**	**309**	**1350**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**125**	**304**	**462**	**59**	**638**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**4**	**12**	**6**	**10**	**11**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**31**	**193**	**222**	**23**	**288**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**132**	**894**	**698**	**114**	**571**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**9**	**46**	**50**	**7**	**69**
Magnesium	7439-95-4	1	mg/L		**25**	**46**	**82**	**10**	**113**
Sodium	7440-23-5	1	mg/L		**55**	**540**	**336**	**93**	**208**
Potassium	7440-09-7	1	mg/L		**7**	**16**	**11**	**5**	**12**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	**0.002**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	**0.0022**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	**0.001**	<0.001	**0.001**	**0.045**
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.004**	<0.001	<0.001	**0.033**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.002**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB58	MB65	RB4	MB74B	MB50
				Sampling date / time	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-031	EP2509674-032	EP2509674-033	EP2509674-034	EP2509674-035
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.009**	**0.006**	<0.005	**0.005**	**0.716**
Manganese	7439-96-5	0.001	mg/L		**0.020**	**0.197**	<0.001	**0.011**	**0.028**
Iron	7439-89-6	0.05	mg/L		<0.05	**0.14**	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**1.17**	**0.05**	**0.02**	**1.20**	**0.24**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	**0.002**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	**0.0022**
Chromium	7440-47-3	0.001	mg/L		**0.004**	<0.001	<0.001	**0.009**	**0.005**
Copper	7440-50-8	0.001	mg/L		**0.006**	**0.009**	**0.001**	**0.006**	**0.067**
Nickel	7440-02-0	0.001	mg/L		**0.004**	**0.004**	<0.001	**0.002**	**0.036**
Lead	7439-92-1	0.001	mg/L		**0.004**	**0.005**	<0.001	**0.001**	**0.017**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.025**	**0.037**	**0.010**	**0.021**	**0.761**
Manganese	7439-96-5	0.001	mg/L		**0.142**	**0.210**	<0.001	**0.091**	**0.053**
Iron	7439-89-6	0.05	mg/L		**1.98**	**0.30**	**0.07**	**1.65**	**0.76**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**5.77**	<0.01	**6.25**	**2.65**	**4.19**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**5.77**	<0.01	**6.25**	**2.65**	**4.19**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.9**	**0.7**	**0.8**	**0.7**	**0.8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB58	MB65	RB4	MB74B	MB50
				Sampling date / time	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509674-031	EP2509674-032	EP2509674-033	EP2509674-034	EP2509674-035
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**6.7**	**0.7**	**7.0**	**3.4**	**5.0**

CERTIFICATE OF ANALYSIS

Work Order	: **EP2509678**	Page	: 1 of 19
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Customer Services EP
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61 8 9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 18-Jun-2025 12:00
Order number	: 2049366	Date Analysis Commenced	: 18-Jun-2025
C-O-C number	: ----	Issue Date	: 30-Jun-2025 21:27
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 28		
No. of samples analysed	: 28		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
	Inorganics Analyst	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Senior Inorganic Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- ED037 (Alkalinity): NATA accreditation does not cover the performance of this service.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EG020: It is recognised that total Cd, Mn, Ni, and Zn concentration is less than dissolved for samples EP2509678 -006, -011, -014 to -017. However, the difference is within experimental variation of the methods.
- ED037-P (Alkalinity): EP2509678-24 has been noted as a failing duplicate, this has been attributed to sample heterogeneity which has been confirmed by visual inspection.
- EG035T-LL: Poor spike matrix recovery for mercury on samples EP2509678- 025 due to possible matrix inteference.
- EG035T: Positive Mercury on samples EP2509678- 001, 006, 010, 012, and 015 has been confirmed by re-preparation and re-analysis.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	LWR01	LWR02	LWR03	LWR04	LWR05
			Sampling date / time	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00
Compound	CAS Number	LOR	Unit	EP2509678-024	EP2509678-025	EP2509678-026	EP2509678-027	EP2509678-028
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	8.2	8.4	8.5	8.2	8.5
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	13900	8530	1760	2290	11800
EA014 Total Soluble Salts								
Total Soluble Salts	----	5	mg/kg	47200	29000	5990	7790	40000
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	13.0	18.8	5.0	4.7	14.9
ED037: Alkalinity								
ø Carbonate Alkalinity as CaCO3	3812-32-6	5	mg/kg	<5	<5	<5	<5	<5
ø Bicarbonate Alkalinity as CaCO3	71-52-3	5	mg/kg	156	74	106	77	124
ø Total Alkalinity as CaCO3	----	5	mg/kg	156	74	106	77	127
ED040S : Soluble Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	12900	13100	1520	7830	12400
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	23400	9850	2390	100	14200
ED093T: Total Major Cations								
Sodium	7440-23-5	50	mg/kg	12400	8420	1720	210	13500
Potassium	7440-09-7	50	mg/kg	1000	6570	3310	1720	1090
Calcium	7440-70-2	50	mg/kg	50100	174000	37400	29000	113000
Magnesium	7439-95-4	50	mg/kg	5970	11600	4770	3890	3830
EG005(ED093)-SD: Total Metals in Sediments by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	2760	4700	7480	3990	1950
Iron	7439-89-6	50	mg/kg	11900	6870	36700	14000	4150
EG020-SD: Total Metals in Sediments by ICPMS								
Arsenic	7440-38-2	1.00	mg/kg	1.69	1.18	3.38	2.37	<1.00
Cadmium	7440-43-9	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	7440-47-3	1.0	mg/kg	41.5	24.4	149	61.2	24.1
Copper	7440-50-8	1.0	mg/kg	3.8	6.0	12.8	6.0	2.9

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	LWR01	LWR02	LWR03	LWR04	LWR05
				Sampling date / time	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00	14-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-024	EP2509678-025	EP2509678-026	EP2509678-027	EP2509678-028
					Result	Result	Result	Result	Result
EG020-SD: Total Metals in Sediments by ICPMS - Continued									
Cobalt	7440-48-4	0.5	mg/kg		1.0	1.5	3.8	1.8	0.8
Lead	7439-92-1	1.0	mg/kg		2.1	1.3	8.0	1.8	<1.0
Manganese	7439-96-5	10	mg/kg		38	68	85	43	33
Nickel	7440-02-0	1.0	mg/kg		3.2	4.5	11.8	6.3	2.5
Selenium	7782-49-2	0.1	mg/kg		<0.1	0.2	<0.1	<0.1	<0.1
Silver	7440-22-4	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	7440-66-6	1.0	mg/kg		13.2	9.1	11.0	8.1	3.8
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.01	mg/kg		<0.01	<0.01	<0.01	<0.01	<0.01
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N (Sol.)	14797-55-8	0.1	mg/kg		7.0	1.0	3.0	1.4	1.0
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg		7.0	1.0	3.0	1.4	1.0
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	20	mg/kg		400	420	270	260	340
EK062: Total Nitrogen as N (TKN + NOx)									
^ Total Nitrogen as N	----	20	mg/kg		410	420	270	260	340
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	2	mg/kg		86	140	160	100	138
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%		0.26	0.29	0.17	0.22	0.24

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB56	MB52	MB67	MB21	MB57
				Sampling date / time	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-001	EP2509678-002	EP2509678-003	EP2509678-004	EP2509678-005
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.29**	**7.66**	**7.19**	**7.48**	**7.39**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**3650**	**3600**	**785**	**2040**	**10200**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**2350**	**2120**	**447**	**1080**	**7010**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**944**	**718**	**78**	**229**	**2830**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**5**	**7**	**5**	**6**	**12**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**522**	**419**	**37**	**81**	**1760**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**870**	**890**	**194**	**536**	**2520**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**96**	**106**	**8**	**24**	**342**
Magnesium	7439-95-4	1	mg/L		**171**	**110**	**14**	**41**	**479**
Sodium	7440-23-5	1	mg/L		**342**	**442**	**108**	**282**	**1040**
Potassium	7440-09-7	1	mg/L		**19**	**16**	**10**	**17**	**31**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	**0.0090**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	**0.007**	<0.001	**0.002**
Copper	7440-50-8	0.001	mg/L		<0.001	**0.001**	<0.001	**0.002**	**0.008**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.003**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.001**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB56	MB52	MB67	MB21	MB57
				Sampling date / time	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-001	EP2509678-002	EP2509678-003	EP2509678-004	EP2509678-005
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.011**	**0.008**	**0.008**	**0.017**	**0.553**
Manganese	7439-96-5	0.001	mg/L		**0.001**	<0.001	**0.004**	**0.002**	**0.002**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**1.02**	**0.30**	**4.25**	**0.32**	**0.26**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	**0.001**	<0.001	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	<0.0001	<0.0001	<0.0001	**0.0091**
Chromium	7440-47-3	0.001	mg/L		**0.003**	<0.001	**0.015**	<0.001	**0.007**
Copper	7440-50-8	0.001	mg/L		**0.017**	**0.004**	**0.008**	**0.008**	**0.023**
Nickel	7440-02-0	0.001	mg/L		**0.006**	<0.001	**0.011**	<0.001	**0.004**
Lead	7439-92-1	0.001	mg/L		**0.005**	**0.002**	**0.002**	**0.002**	**0.022**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.055**	**0.015**	**0.039**	**0.026**	**0.614**
Manganese	7439-96-5	0.001	mg/L		**0.050**	**0.025**	**0.107**	**0.011**	**0.038**
Iron	7439-89-6	0.05	mg/L		**1.78**	**0.46**	**6.98**	**0.68**	**0.89**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0007**	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**4.41**	**6.09**	**6.24**	**14.7**	**2.51**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**4.41**	**6.09**	**6.24**	**14.7**	**2.51**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.6**	**0.7**	**0.7**	**1.8**	**0.3**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB56	MB52	MB67	MB21	MB57
				Sampling date / time	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-001	EP2509678-002	EP2509678-003	EP2509678-004	EP2509678-005
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**5.0**	**6.8**	**6.9**	**16.5**	**2.8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB53	MB60	MB14	MB71A	MB14B
				Sampling date / time	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-006	EP2509678-007	EP2509678-008	EP2509678-009	EP2509678-010
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.13**	**7.67**	**7.50**	**7.40**	**7.68**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**6190**	**1830**	**1980**	**2730**	**2280**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**4170**	**1060**	**1150**	**1860**	**1310**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**1580**	**306**	**298**	**748**	**410**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**16**	**8**	**7**	**10**	**6**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**983**	**220**	**102**	**569**	**210**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**1640**	**451**	**556**	**559**	**617**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**116**	**37**	**32**	**90**	**52**
Magnesium	7439-95-4	1	mg/L		**314**	**52**	**53**	**127**	**68**
Sodium	7440-23-5	1	mg/L		**669**	**254**	**274**	**264**	**294**
Potassium	7440-09-7	1	mg/L		**23**	**11**	**17**	**25**	**18**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	<0.0001	**0.0001**	**0.0035**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		**0.002**	**0.005**	**0.007**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	**0.002**	**0.002**	<0.001
Nickel	7440-02-0	0.001	mg/L		**0.002**	<0.001	<0.001	**0.003**	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB53	MB60	MB14	MB71A	MB14B
				Sampling date / time	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-006	EP2509678-007	EP2509678-008	EP2509678-009	EP2509678-010
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.011**	**0.013**	**0.021**	**1.50**	**0.015**
Manganese	7439-96-5	0.001	mg/L		<0.001	<0.001	**0.002**	**0.024**	**0.002**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.10**	**0.08**	**0.17**	**1.84**	**2.72**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	**0.002**	**0.002**
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	<0.0001	**0.0002**	**0.0041**	**0.0003**
Chromium	7440-47-3	0.001	mg/L		**0.002**	**0.006**	**0.009**	**0.007**	**0.008**
Copper	7440-50-8	0.001	mg/L		**0.002**	**0.003**	**0.010**	**0.013**	**0.015**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	**0.009**	**0.003**
Lead	7439-92-1	0.001	mg/L		**0.001**	**0.002**	**0.004**	**0.006**	**0.008**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.017**	**0.015**	**0.044**	**1.92**	**0.028**
Manganese	7439-96-5	0.001	mg/L		**0.008**	**0.003**	**0.014**	**0.504**	**0.235**
Iron	7439-89-6	0.05	mg/L		**0.21**	**0.17**	**0.42**	**3.06**	**4.54**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0001**	<0.0001	<0.0001	<0.0001	**0.0001**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	**0.21**	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**3.79**	**5.24**	**9.88**	**7.99**	**8.42**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**3.79**	**5.24**	**9.88**	**8.20**	**8.42**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.6**	**0.8**	**1.8**	**0.9**	**1.2**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB53	MB60	MB14	MB71A	MB14B
				Sampling date / time	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-006	EP2509678-007	EP2509678-008	EP2509678-009	EP2509678-010
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**4.4**	**6.0**	**11.7**	**9.1**	**9.6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB70A	MB51	MB73A	IB19	Roma
				Sampling date / time	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-011	EP2509678-012	EP2509678-013	EP2509678-014	EP2509678-015
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.56**	**7.21**	**7.61**	**7.06**	**6.77**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**1280**	**4330**	**1440**	**9620**	**20600**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**695**	**2910**	**798**	**6950**	**15100**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**236**	**1150**	**223**	**2660**	**5470**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**14**	**7**	**4**	**9**	**40**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**100**	**620**	**78**	**1170**	**2370**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**316**	**1050**	**388**	**2820**	**6520**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**40**	**124**	**20**	**406**	**1040**
Magnesium	7439-95-4	1	mg/L		**33**	**205**	**42**	**399**	**698**
Sodium	7440-23-5	1	mg/L		**162**	**448**	**177**	**1030**	**2770**
Potassium	7440-09-7	1	mg/L		**9**	**16**	**15**	**97**	**131**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	**0.002**	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	**0.0007**	**0.0885**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.001**	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	**0.003**	**0.050**
Nickel	7440-02-0	0.001	mg/L		**0.002**	<0.001	<0.001	**0.025**	**0.157**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB70A	MB51	MB73A	IB19	Roma
				Sampling date / time	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-011	EP2509678-012	EP2509678-013	EP2509678-014	EP2509678-015
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.572**	**0.009**	**0.017**	**0.110**	**6.36**
Manganese	7439-96-5	0.001	mg/L		**0.137**	**0.002**	**2.28**	**0.148**	**12.1**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.11**	**3.72**	**0.12**	**0.01**	**1.67**
Arsenic	7440-38-2	0.001	mg/L		**0.002**	**0.002**	**0.002**	<0.001	**0.002**
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	**0.0007**	**0.0872**
Chromium	7440-47-3	0.001	mg/L		**0.001**	**0.019**	<0.001	<0.001	**0.006**
Copper	7440-50-8	0.001	mg/L		**0.004**	**0.013**	**0.004**	**0.003**	**0.096**
Nickel	7440-02-0	0.001	mg/L		**0.001**	**0.007**	<0.001	**0.022**	**0.155**
Lead	7439-92-1	0.001	mg/L		**0.003**	**0.008**	**0.001**	<0.001	**0.016**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.701**	**0.049**	**0.029**	**0.096**	**6.16**
Manganese	7439-96-5	0.001	mg/L		**0.233**	**0.179**	**2.28**	**0.153**	**10.6**
Iron	7439-89-6	0.05	mg/L		**1.33**	**6.67**	**0.30**	<0.05	**7.00**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	**0.0018**	<0.0001	<0.0001	**0.0001**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	**0.31**	<0.01	**0.03**
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.02**	**4.88**	**6.23**	**1.17**	**0.47**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.02**	**4.88**	**6.54**	**1.17**	**0.50**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.2**	**0.7**	**1.2**	**0.3**	**0.9**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB70A	MB51	MB73A	IB19	Roma
				Sampling date / time	15-Jun-2025 00:00	15-Jun-2025 00:00	15-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-011	EP2509678-012	EP2509678-013	EP2509678-014	EP2509678-015
					Result	Result	Result	Result	Result
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**0.2**	**5.6**	**7.7**	**1.5**	**1.4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB32B	IB32	GGW80	MB92	MB89
				Sampling date / time	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-016	EP2509678-017	EP2509678-018	EP2509678-019	EP2509678-020
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		6.81	7.26	7.61	7.42	7.42
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		8650	10100	1500	2190	1020
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		6280	6780	880	1220	533
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		2740	2330	271	----	----
Total Hardness as CaCO3	----	1	mg/L		----	----	----	288	178
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		----	----	----	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		----	----	----	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		----	----	----	122	56
Total Alkalinity as CaCO3	----	1	mg/L		----	----	----	122	56
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		75	29	11	19	6
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		1890	1510	82	168	56
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		1950	2690	397	572	271
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		446	332	49	46	22
Magnesium	7439-95-4	1	mg/L		396	364	36	42	30
Sodium	7440-23-5	1	mg/L		1290	1280	190	349	124
Potassium	7440-09-7	1	mg/L		115	112	13	22	10
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.01	<0.01	<0.01	<0.01	<0.01
Antimony	7440-36-0	0.001	mg/L		----	----	----	<0.001	<0.001
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	0.003	<0.001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB32B	IB32	GGW80	MB92	MB89
				Sampling date / time	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00
Compound	CAS Number	LOR	Unit		EP2509678-016	EP2509678-017	EP2509678-018	EP2509678-019	EP2509678-020
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Bismuth	7440-69-9	0.001	mg/L		----	----	----	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0865**	**0.0341**	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.002**	<0.001	**0.004**	<0.001
Copper	7440-50-8	0.001	mg/L		**0.042**	**0.011**	<0.001	**0.002**	<0.001
Nickel	7440-02-0	0.001	mg/L		**0.278**	**0.176**	<0.001	**0.001**	<0.001
Lead	7439-92-1	0.001	mg/L		**0.003**	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**22.9**	**10.1**	**0.008**	**0.030**	<0.005
Manganese	7439-96-5	0.001	mg/L		**6.76**	**3.03**	**0.002**	**0.014**	<0.001
Molybdenum	7439-98-7	0.001	mg/L		----	----	----	**0.002**	<0.001
Silver	7440-22-4	0.001	mg/L		----	----	----	<0.001	<0.001
Thallium	7440-28-0	0.001	mg/L		----	----	----	<0.001	<0.001
Uranium	7440-61-1	0.001	mg/L		----	----	----	<0.001	<0.001
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.08**	**0.02**	**0.04**	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0851**	**0.0346**	<0.0001	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.002**	<0.001	----	----
Copper	7440-50-8	0.001	mg/L		**0.046**	**0.013**	**0.002**	----	----
Nickel	7440-02-0	0.001	mg/L		**0.280**	**0.186**	<0.001	----	----
Lead	7439-92-1	0.001	mg/L		**0.004**	**0.002**	**0.002**	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Zinc	7440-66-6	0.005	mg/L		**20.4**	**9.74**	**0.019**	----	----
Manganese	7439-96-5	0.001	mg/L		**6.01**	**2.81**	**0.004**	----	----
Iron	7439-89-6	0.05	mg/L		**0.16**	**0.05**	**0.10**	----	----
EG035F: Dissolved Mercury by FIMS									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SB32B	IB32	GGW80	MB92	MB89
			Sampling date / time	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00
Compound	CAS Number	LOR	Unit	EP2509678-016	EP2509678-017	EP2509678-018	EP2509678-019	EP2509678-020
				Result	Result	Result	Result	Result
EG035F: Dissolved Mercury by FIMS - Continued								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----
EG052G: Silica by Discrete Analyser								
Reactive Silica	----	0.05	mg/L	----	----	----	38.7	24.4
Reactive Silica as Silicon	----	0.05	mg/L	----	----	----	18.1	11.4
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	----	----	----	0.03	0.02
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	4.24	2.67	6.21	0.24	4.85
Nitrate as NO3	14797-55-8	0.05	mg/L	----	----	----	1.06	21.5
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	4.24	2.67	6.21	0.25	4.85
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.7	0.4	0.8	0.6	0.7
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	4.9	3.1	7.0	0.8	5.6
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	----	----	----	0.02	0.02
Total Phosphate	----	0.10	mg/L	----	----	----	<0.10	<0.10
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	----	----	----	22.1	9.93
ø Total Cations	----	0.01	meq/L	----	----	----	21.5	9.22
ø Ionic Balance	----	0.01	%	----	----	----	1.32	3.72

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB90	MB93	RB6	----	----
				Sampling date / time	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		EP2509678-021	EP2509678-022	EP2509678-023	--------	--------
					Result	Result	Result	----	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.77**	**7.81**	**7.33**	**----**	**----**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**1930**	**1490**	**1290**	**----**	**----**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**1050**	**818**	**696**	**----**	**----**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**292**	**170**	**184**	**----**	**----**
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	**----**	**----**
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	**----**	**----**
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**133**	**187**	**96**	**----**	**----**
Total Alkalinity as CaCO3	----	1	mg/L		**133**	**187**	**96**	**----**	**----**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**7**	**10**	**11**	**----**	**----**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**126**	**97**	**70**	**----**	**----**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**493**	**327**	**318**	**----**	**----**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**46**	**27**	**31**	**----**	**----**
Magnesium	7439-95-4	1	mg/L		**43**	**25**	**26**	**----**	**----**
Sodium	7440-23-5	1	mg/L		**274**	**237**	**177**	**----**	**----**
Potassium	7440-09-7	1	mg/L		**13**	**17**	**14**	**----**	**----**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	**----**	**----**
Antimony	7440-36-0	0.001	mg/L		<0.001	<0.001	<0.001	**----**	**----**
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.010**	**0.007**	**----**	**----**
Bismuth	7440-69-9	0.001	mg/L		<0.001	<0.001	<0.001	**----**	**----**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB90	MB93	RB6	----	----
				Sampling date / time	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		EP2509678-021	EP2509678-022	EP2509678-023	--------	--------
					Result	Result	Result	----	----
EG020F: Dissolved Metals by ICP-MS - Continued									
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	**0.003**	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	----	----
Manganese	7439-96-5	0.001	mg/L		**1.30**	**0.374**	**1.26**	----	----
Molybdenum	7439-98-7	0.001	mg/L		**0.006**	**0.004**	**0.003**	----	----
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Thallium	7440-28-0	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Uranium	7440-61-1	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
EG052G: Silica by Discrete Analyser									
Reactive Silica	----	0.05	mg/L		**19.9**	**20.1**	**31.8**	----	----
Reactive Silica as Silicon	----	0.05	mg/L		**9.30**	**9.40**	**14.9**	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.05**	**0.04**	**0.09**	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**0.01**	**0.06**	<0.01	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.10**	**0.44**	**5.62**	----	----
Nitrate as NO3	14797-55-8	0.05	mg/L		**0.44**	**1.95**	**24.9**	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.11**	**0.50**	**5.62**	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB90	MB93	RB6	----	----
				Sampling date / time	17-Jun-2025 00:00	17-Jun-2025 00:00	17-Jun-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		EP2509678-021	EP2509678-022	EP2509678-023	--------	--------
					Result	Result	Result	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.2**	**0.2**	**1.4**	**----**	**----**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**0.3**	**0.7**	**7.0**	**----**	**----**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		**0.09**	**0.21**	**0.53**	**----**	**----**
Total Phosphate	----	0.10	mg/L		**0.27**	**0.64**	**1.64**	**----**	**----**
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**19.2**	**15.0**	**12.3**	**----**	**----**
ø Total Cations	----	0.01	meq/L		**18.1**	**14.1**	**11.7**	**----**	**----**
ø Ionic Balance	----	0.01	%		**2.96**	**2.85**	**2.50**	**----**	**----**

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry / Biology).

(SOIL) EP003: Total Organic Carbon (TOC) in Soil

CERTIFICATE OF ANALYSIS

Work Order	: **EP2512082**	Page	: 1 of 7
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Madison Forster
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 30-Jul-2025 09:00
Order number	: 2049366	Date Analysis Commenced	: 30-Jul-2025
C-O-C number	: ----	Issue Date	: 06-Aug-2025 23:12
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 2		
No. of samples analysed	: 2		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Inorganics Analyst	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Lab Technician	Perth Microbiology, Wangara, WA
	Organic Supervisor	Perth Organics, Wangara, WA
	Inorganic Chemist	Perth Inorganics, Wangara, WA
	Instrument Chemist	Perth Inorganics, Wangara, WA

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

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Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

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Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- MF = membrane filtration
- CFU = colony forming unit
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- MW006 is ALS's internal code and is equivalent to AS4276.5.
- MW006:Analysis Commenced:Date:30/07/2025.Time:12:00PM.
- Microbiological Comment: In accordance with ALS work instruction QWI-MIC/04, membrane filtration result is reported an approximate (~) when the count of colonies on the filtered membrane is outside the range of 10 - 100cfu.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	LAKE	WWTF	----	----	----
				Sampling date / time	29-Jul-2025 00:00	29-Jul-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2512082-001	EP2512082-002	--------	--------	--------
					Result	Result	----	----	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.50**	**7.92**	----	----	----
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**13100**	----	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**9160**	**346**	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	5	mg/L		<5	<5	----	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**53**	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**53**	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**2160**	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0016**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		**0.004**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.111**	----	----	----	----
Manganese	7439-96-5	0.001	mg/L		**0.211**	----	----	----	----
Selenium	7782-49-2	0.01	mg/L		**0.02**	----	----	----	----
Iron	7439-89-6	0.05	mg/L		<0.05	----	----	----	----
EG020T: Total Metals by ICP-MS									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	LAKE	WWTF	----	----	----
				Sampling date / time	29-Jul-2025 00:00	29-Jul-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2512082-001	EP2512082-002	--------	--------	--------
					Result	Result	----	----	----
EG020T: Total Metals by ICP-MS - Continued									
Aluminium	7429-90-5	0.01	mg/L		<0.01	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0018**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		**0.005**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.129**	----	----	----	----
Manganese	7439-96-5	0.001	mg/L		**0.257**	----	----	----	----
Selenium	7782-49-2	0.01	mg/L		**0.02**	----	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.06**	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.03**	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**0.72**	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**9.05**	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**9.77**	**2.95**	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**2.3**	**48.4**	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**12.1**	**51.4**	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	LAKE	WWTF	----	----	----
				Sampling date / time	29-Jul-2025 00:00	29-Jul-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2512082-001	EP2512082-002	--------	--------	--------
					Result	Result	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser - Continued									
Total Phosphorus as P	----	0.01	mg/L		**0.35**	**7.10**	----	----	----
EP030: Biochemical Oxygen Demand (BOD)									
Biochemical Oxygen Demand	----	2	mg/L		----	<2	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L		**60**	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L		**60**	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L		<100	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ Total Xylenes	----	2	µg/L		<2	----	----	----	----
^ Sum of BTEX	----	1	µg/L		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	LAKE	WWTF	----	----	----
				Sampling date / time	29-Jul-2025 00:00	29-Jul-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2512082-001	EP2512082-002	--------	--------	--------
					Result	Result	----	----	----
MW006: Thermotolerant Coliforms & E.coli by MF									
Thermotolerant Coliforms	----	1	CFU/100mL		**----**	**210**	**----**	**----**	**----**
Escherichia coli	----	1	CFU/100mL		**----**	**~3**	**----**	**----**	**----**
ED038P: Acidity by Auto Titrator									
Acidity as CaCO3	----	1	mg/L		**8**	**----**	**----**	**----**	**----**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**93.8**	**----**	**----**	**----**	**----**
Toluene-D8	2037-26-5	2	%		**100**	**----**	**----**	**----**	**----**
4-Bromofluorobenzene	460-00-4	2	%		**103**	**----**	**----**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	61	141
Toluene-D8	2037-26-5	73	126
4-Bromofluorobenzene	460-00-4	60	125

CERTIFICATE OF ANALYSIS

Work Order	: **EP2512979**	Page	: 1 of 26
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Madison Forster
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 13-Aug-2025 09:00
Order number	: 2049366	Date Analysis Commenced	: 13-Aug-2025
C-O-C number	: ----	Issue Date	: 22-Aug-2025 14:36
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 36		
No. of samples analysed	: 36		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

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Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Laboratory Manager (Perth)	Perth Inorganics, Wangara, WA
	Inorganics Analyst	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Instrument Chemist	Perth Inorganics, Wangara, WA

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LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EG020: Metals LOR for samples EP2512979 -018 raised due to high TDS content.
- EG020: It is recognised that total Mn concentration is less than dissolved for sample EP2512979-032. However, the difference is within experimental variation of the methods.
- EG020: It has been confirmed by re-preparation and re-analysis that total Cd, Cu, Ni, Mn, Zn concentrations are less than dissolved for sample EP2512979-023.
- EG035: Positive mercury on various samples have been confirmed by re-preparation and re-analysis.
- TDS by method EA-015 may bias high for sample #15 due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper. Confirmed by re-preparation and re-analysis.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB92	RB6	MB89	MB90	MB93
			Sampling date / time	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512979-001	EP2512979-002	EP2512979-003	EP2512979-004	EP2512979-005
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.39**	**7.46**	**7.43**	**7.80**	**7.84**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**2100**	**1250**	**1010**	**1880**	**1440**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**1210**	**726**	**584**	**1100**	**800**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**256**	**184**	**182**	**289**	**164**
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**113**	**91**	**51**	**121**	**166**
Total Alkalinity as CaCO3	----	1	mg/L	**113**	**91**	**51**	**121**	**166**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**149**	**72**	**51**	**135**	**95**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**539**	**310**	**257**	**488**	**322**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**40**	**31**	**22**	**45**	**26**
Magnesium	7439-95-4	1	mg/L	**38**	**26**	**31**	**43**	**24**
Sodium	7440-23-5	1	mg/L	**326**	**178**	**125**	**270**	**228**
Potassium	7440-09-7	1	mg/L	**21**	**14**	**8**	**11**	**17**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	**0.01**
Antimony	7440-36-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	7440-38-2	0.001	mg/L	**0.003**	**0.006**	<0.001	**0.002**	**0.010**
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	7440-69-9	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB92	RB6	MB89	MB90	MB93
			Sampling date / time	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512979-001	EP2512979-002	EP2512979-003	EP2512979-004	EP2512979-005
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.002**	<0.001	<0.001	<0.001	**0.001**
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	**0.002**	**0.002**	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.038**	**0.006**	**0.010**	<0.005	**0.024**
Manganese	7439-96-5	0.001	mg/L	**0.009**	**0.019**	<0.001	**1.04**	**0.076**
Molybdenum	7439-98-7	0.001	mg/L	**0.003**	**0.002**	<0.001	**0.006**	**0.002**
Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Thallium	7440-28-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Uranium	7440-61-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	**0.09**	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG052G: Silica by Discrete Analyser								
Reactive Silica	----	0.05	mg/L	**38.8**	**31.4**	**23.9**	**20.2**	**19.8**
Reactive Silica as Silicon	----	0.05	mg/L	**18.1**	**14.7**	**11.2**	**9.44**	**9.26**
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	<0.01	**0.03**	**0.04**	**0.09**	**0.04**
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**0.33**	**4.86**	**4.94**	**0.04**	**0.54**
Nitrate as NO3	14797-55-8	0.05	mg/L	**1.46**	**21.5**	**21.9**	**0.18**	**2.39**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB92	RB6	MB89	MB90	MB93
				Sampling date / time	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-001	EP2512979-002	EP2512979-003	EP2512979-004	EP2512979-005
					Result	Result	Result	Result	Result
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser - Continued									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.33**	**4.86**	**4.94**	**0.04**	**0.54**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.4**	**0.9**	**0.9**	**0.4**	**0.4**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**0.7**	**5.8**	**5.8**	**0.4**	**0.9**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		**0.08**	**0.32**	**0.02**	**0.22**	**0.48**
Total Phosphate	----	0.10	mg/L		**0.24**	**1.00**	<0.10	**0.69**	**1.48**
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**20.6**	**12.1**	**9.33**	**19.0**	**14.4**
ø Total Cations	----	0.01	meq/L		**19.8**	**11.8**	**9.29**	**17.8**	**13.6**
ø Ionic Balance	----	0.01	%		**1.79**	**1.15**	**0.21**	**3.22**	**2.69**
ED038P: Acidity by Auto Titrator									
Acidity as CaCO3	----	1	mg/L		**14**	**10**	**8**	**6**	**6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB14B	GGW80	MB71A	MB73A	MB74B
				Sampling date / time	08-Aug-2025 00:00	08-Aug-2025 00:00	08-Aug-2025 00:00	08-Aug-2025 00:00	08-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-006	EP2512979-007	EP2512979-008	EP2512979-009	EP2512979-010
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.49**	**7.58**	**7.21**	**7.59**	**7.16**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**2160**	**1320**	**3150**	**1450**	**572**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**1290**	**754**	**2160**	**844**	**316**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**368**	**219**	**936**	**230**	**69**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**123**	**59**	**815**	**72**	**27**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**593**	**335**	**584**	**392**	**120**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**45**	**40**	**111**	**21**	**8**
Magnesium	7439-95-4	1	mg/L		**62**	**29**	**160**	**43**	**12**
Sodium	7440-23-5	1	mg/L		**280**	**167**	**285**	**180**	**84**
Potassium	7440-09-7	1	mg/L		**18**	**12**	**28**	**16**	**6**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	**0.01**	<0.01	**0.01**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	<0.001	<0.001	**0.002**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0001**	<0.0001	**0.0044**	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		**0.004**	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	**0.009**	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	**0.003**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.013**	**0.008**	**1.90**	**0.006**	**0.006**
Manganese	7439-96-5	0.001	mg/L		<0.001	**0.003**	**0.040**	**2.14**	**0.004**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB14B	GGW80	MB71A	MB73A	MB74B
			Sampling date / time	08-Aug-2025 00:00	08-Aug-2025 00:00	08-Aug-2025 00:00	08-Aug-2025 00:00	08-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512979-006	EP2512979-007	EP2512979-008	EP2512979-009	EP2512979-010
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.31**	**0.09**	**0.88**	**0.20**	**8.71**
Arsenic	7440-38-2	0.001	mg/L	**0.002**	<0.001	**0.002**	**0.003**	**0.003**
Cadmium	7440-43-9	0.0001	mg/L	**0.0001**	<0.0001	**0.0051**	<0.0001	**0.0001**
Chromium	7440-47-3	0.001	mg/L	**0.005**	<0.001	**0.004**	<0.001	**0.040**
Copper	7440-50-8	0.001	mg/L	**0.004**	**0.002**	**0.021**	**0.003**	**0.034**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	**0.007**	**0.001**	**0.020**
Lead	7439-92-1	0.001	mg/L	**0.002**	**0.002**	**0.003**	<0.001	**0.006**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.019**	**0.012**	**2.24**	**0.011**	**0.061**
Manganese	7439-96-5	0.001	mg/L	**0.024**	**0.003**	**0.466**	**2.26**	**0.507**
Iron	7439-89-6	0.05	mg/L	**0.54**	**0.09**	**1.42**	**0.24**	**6.95**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	**0.35**	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**9.62**	**7.53**	**9.08**	**6.66**	**3.72**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**9.62**	**7.53**	**9.08**	**7.01**	**3.72**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**0.8**	**0.9**	**0.9**	**0.7**	**1.2**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**10.4**	**8.4**	**10.0**	**7.7**	**4.9**
ED038P: Acidity by Auto Titrator								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB14B	GGW80	MB71A	MB73A	MB74B
				Sampling date / time	08-Aug-2025 00:00	08-Aug-2025 00:00	08-Aug-2025 00:00	08-Aug-2025 00:00	08-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-006	EP2512979-007	EP2512979-008	EP2512979-009	EP2512979-010
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		7	6	16	5	8

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB14	MB67	ROM14	ROM15	ROM12
			Sampling date / time	08-Aug-2025 00:00	08-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512979-011	EP2512979-012	EP2512979-013	EP2512979-014	EP2512979-015
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.38**	**7.07**	**7.31**	**6.90**	**7.65**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**2030**	**764**	**1560**	**4900**	**533**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**1220**	**466**	**984**	**3060**	**654**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**314**	**78**	**225**	**550**	**69**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**100**	**33**	**221**	**495**	**43**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**562**	**182**	**331**	**1260**	**84**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**35**	**8**	**49**	**77**	**16**
Magnesium	7439-95-4	1	mg/L	**55**	**14**	**25**	**87**	**7**
Sodium	7440-23-5	1	mg/L	**272**	**110**	**222**	**706**	**84**
Potassium	7440-09-7	1	mg/L	**18**	**10**	**18**	**45**	**8**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	**0.02**	**0.06**	**1.15**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	**0.0002**	<0.0001	**0.0002**	**0.0025**	**0.0002**
Chromium	7440-47-3	0.001	mg/L	**0.006**	**0.007**	<0.001	**0.002**	**0.001**
Copper	7440-50-8	0.001	mg/L	**0.002**	**0.001**	**0.007**	**0.004**	**0.008**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	**0.003**	**0.026**	**0.006**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.035**	**0.017**	**0.043**	**0.517**	**0.042**
Manganese	7439-96-5	0.001	mg/L	**0.003**	**0.003**	**0.003**	**0.104**	**0.057**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB14	MB67	ROM14	ROM15	ROM12
			Sampling date / time	08-Aug-2025 00:00	08-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512979-011	EP2512979-012	EP2512979-013	EP2512979-014	EP2512979-015
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	**0.43**
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.29**	**0.94**	**14.4**	**0.34**	**93.2**
Arsenic	7440-38-2	0.001	mg/L	**0.001**	**0.001**	**0.005**	<0.001	**0.011**
Cadmium	7440-43-9	0.0001	mg/L	**0.0003**	<0.0001	**0.0005**	**0.0026**	**0.0009**
Chromium	7440-47-3	0.001	mg/L	**0.009**	**0.011**	**0.040**	**0.005**	**0.048**
Copper	7440-50-8	0.001	mg/L	**0.008**	**0.009**	**0.052**	**0.012**	**0.085**
Nickel	7440-02-0	0.001	mg/L	<0.001	**0.003**	**0.024**	**0.030**	**0.050**
Lead	7439-92-1	0.001	mg/L	**0.002**	**0.004**	**0.031**	**0.004**	**0.079**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.062**	**0.035**	**0.208**	**0.541**	**0.456**
Manganese	7439-96-5	0.001	mg/L	**0.054**	**0.031**	**0.428**	**0.140**	**0.684**
Iron	7439-89-6	0.05	mg/L	**0.56**	**1.56**	**23.9**	**0.54**	**51.9**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**10.2**	**6.27**	**4.95**	**2.22**	**1.41**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**10.2**	**6.27**	**4.95**	**2.22**	**1.41**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**1.7**	**1.1**	**1.9**	**0.8**	**1.7**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**11.9**	**7.4**	**6.8**	**3.0**	**3.1**
ED038P: Acidity by Auto Titrator								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB14	MB67	ROM14	ROM15	ROM12
				Sampling date / time	08-Aug-2025 00:00	08-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-011	EP2512979-012	EP2512979-013	EP2512979-014	EP2512979-015
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		7	8	6	10	7

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	ROM11	ROM13	ROM9	MB65	MB55
			Sampling date / time	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512979-016	EP2512979-017	EP2512979-018	EP2512979-019	EP2512979-020
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**6.59**	**4.69**	**6.70**	**7.77**	**6.32**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**6770**	**15200**	**22800**	**3290**	**5690**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**5020**	**11300**	**16300**	**1880**	**4110**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**1860**	**3050**	**5600**	**323**	**1740**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**1690**	**468**	**2360**	**178**	**1250**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**1200**	**5150**	**7090**	**889**	**1180**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**417**	**373**	**1080**	**47**	**211**
Magnesium	7439-95-4	1	mg/L	**200**	**514**	**706**	**50**	**294**
Sodium	7440-23-5	1	mg/L	**819**	**2040**	**3090**	**561**	**583**
Potassium	7440-09-7	1	mg/L	**46**	**104**	**140**	**16**	**19**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	**0.57**	<0.02	**0.02**	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	**0.002**	<0.002	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	**0.136**	**0.0214**	**0.161**	<0.0001	**0.0440**
Chromium	7440-47-3	0.001	mg/L	**0.002**	**0.002**	<0.002	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.024**	**0.012**	**0.073**	<0.001	**0.007**
Nickel	7440-02-0	0.001	mg/L	**0.252**	**0.435**	**0.245**	**0.004**	**0.071**
Lead	7439-92-1	0.001	mg/L	<0.001	**0.006**	<0.002	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.02	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**33.2**	**0.933**	**8.64**	**0.012**	**5.53**
Manganese	7439-96-5	0.001	mg/L	**7.57**	**15.7**	**14.2**	**0.207**	**0.866**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	ROM11	ROM13	ROM9	MB65	MB55
				Sampling date / time	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-016	EP2512979-017	EP2512979-018	EP2512979-019	EP2512979-020
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.10	**0.06**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.80**	**5.46**	**2.89**	**0.09**	**1.68**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	**0.006**	**0.004**	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.139**	**0.0227**	**0.164**	**0.0001**	**0.0475**
Chromium	7440-47-3	0.001	mg/L		**0.004**	**0.019**	**0.012**	**0.001**	**0.008**
Copper	7440-50-8	0.001	mg/L		**0.037**	**0.029**	**0.200**	**0.013**	**0.019**
Nickel	7440-02-0	0.001	mg/L		**0.270**	**0.486**	**0.261**	**0.005**	**0.083**
Lead	7439-92-1	0.001	mg/L		**0.006**	**0.017**	**0.042**	**0.006**	**0.011**
Selenium	7782-49-2	0.01	mg/L		**0.01**	<0.01	<0.02	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**34.9**	**1.03**	**9.24**	**0.092**	**6.01**
Manganese	7439-96-5	0.001	mg/L		**7.63**	**16.0**	**14.2**	**0.231**	**1.08**
Iron	7439-89-6	0.05	mg/L		**1.37**	**11.3**	**12.5**	**0.36**	**2.35**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0002**	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0004**	<0.0001	**0.0001**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**72.2**	**47.7**	**0.94**	**0.04**	**18.3**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**72.2**	**47.7**	**0.94**	**0.04**	**18.3**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**5.8**	**4.6**	**1.8**	**1.8**	**2.2**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**78.0**	**52.3**	**2.7**	**1.8**	**20.5**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	ROM11	ROM13	ROM9	MB65	MB55
			Sampling date / time	07-Aug-2025 00:00	07-Aug-2025 00:00	07-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512979-016	EP2512979-017	EP2512979-018	EP2512979-019	EP2512979-020
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	**63**	**20**	**29**	**6**	**14**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB53	MB58	MB64	MB57	MB50
				Sampling date / time	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-021	EP2512979-022	EP2512979-023	EP2512979-024	EP2512979-025
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		7.17	7.02	7.73	7.38	6.68
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		6070	568	2120	9620	2300
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		4230	379	1270	7020	1580
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		1650	128	224	3010	662
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		871	31	114	1800	301
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		1520	135	587	2660	624
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		120	10	32	352	69
Magnesium	7439-95-4	1	mg/L		327	25	35	518	119
Sodium	7440-23-5	1	mg/L		670	54	358	1070	214
Potassium	7440-09-7	1	mg/L		23	6	13	32	12
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		0.0003	<0.0001	0.0006	0.0095	0.0031
Chromium	7440-47-3	0.001	mg/L		0.002	<0.001	<0.001	0.002	<0.001
Copper	7440-50-8	0.001	mg/L		0.002	<0.001	0.009	0.011	0.061
Nickel	7440-02-0	0.001	mg/L		0.002	<0.001	0.001	0.003	0.035
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	0.002
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		0.030	0.014	0.280	0.658	1.02
Manganese	7439-96-5	0.001	mg/L		<0.001	<0.001	0.036	0.004	0.025

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB53	MB58	MB64	MB57	MB50
				Sampling date / time	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-021	EP2512979-022	EP2512979-023	EP2512979-024	EP2512979-025
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.15**	**0.14**	**0.27**	**0.10**	**0.09**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0003**	<0.0001	**0.0003**	**0.0097**	**0.0032**
Chromium	7440-47-3	0.001	mg/L		**0.002**	<0.001	**0.001**	**0.004**	**0.002**
Copper	7440-50-8	0.001	mg/L		**0.004**	**0.005**	**0.007**	**0.016**	**0.074**
Nickel	7440-02-0	0.001	mg/L		**0.002**	**0.011**	<0.001	**0.004**	**0.038**
Lead	7439-92-1	0.001	mg/L		**0.001**	**0.004**	**0.002**	**0.008**	**0.007**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.046**	**0.035**	**0.161**	**0.746**	**1.11**
Manganese	7439-96-5	0.001	mg/L		**0.011**	**0.024**	**0.023**	**0.017**	**0.032**
Iron	7439-89-6	0.05	mg/L		**0.36**	**0.26**	**0.20**	**0.27**	**0.30**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**4.67**	**6.01**	**7.12**	**2.57**	**4.39**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**4.67**	**6.01**	**7.12**	**2.57**	**4.39**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.8**	**1.3**	**0.9**	**0.4**	**0.7**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**5.5**	**7.3**	**8.0**	**3.0**	**5.1**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB53	MB58	MB64	MB57	MB50
				Sampling date / time	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-021	EP2512979-022	EP2512979-023	EP2512979-024	EP2512979-025
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**9**	**4**	**4**	**8**	**7**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB56	RB4	MB59	SB35B	SB32B
			Sampling date / time	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512979-026	EP2512979-027	EP2512979-028	EP2512979-029	EP2512979-030
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.43**	**7.57**	**7.61**	**5.84**	**6.78**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**3350**	**2560**	**2750**	**11500**	**3880**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**2380**	**1600**	**1610**	**8240**	**2900**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**1010**	**486**	**370**	**2430**	**802**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**560**	**206**	**165**	**1780**	**837**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**839**	**701**	**758**	**3300**	**825**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**98**	**51**	**41**	**635**	**135**
Magnesium	7439-95-4	1	mg/L	**185**	**87**	**65**	**206**	**113**
Sodium	7440-23-5	1	mg/L	**353**	**347**	**438**	**1690**	**550**
Potassium	7440-09-7	1	mg/L	**20**	**11**	**14**	**82**	**47**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	**0.08**	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	**0.004**	<0.001
Cadmium	7440-43-9	0.0001	mg/L	**0.0001**	<0.0001	**0.0002**	**0.0006**	**0.0525**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.001**	<0.001	**0.005**	**0.003**	**0.031**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	**0.206**	**0.095**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	**0.002**	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.038**	**0.009**	**0.070**	**0.051**	**22.0**
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	**0.004**	**6.02**	**1.75**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB56	RB4	MB59	SB35B	SB32B
				Sampling date / time	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-026	EP2512979-027	EP2512979-028	EP2512979-029	EP2512979-030
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**2.88**	**0.03**	**0.09**	**0.12**	**0.04**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	<0.001	<0.001	**0.005**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	<0.0001	**0.0002**	**0.0006**	**0.0547**
Chromium	7440-47-3	0.001	mg/L		**0.007**	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.023**	**0.001**	**0.010**	**0.006**	**0.040**
Nickel	7440-02-0	0.001	mg/L		**0.022**	**0.001**	**0.002**	**0.220**	**0.102**
Lead	7439-92-1	0.001	mg/L		**0.007**	<0.001	**0.005**	**0.003**	**0.002**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.095**	**0.015**	**0.096**	**0.060**	**23.6**
Manganese	7439-96-5	0.001	mg/L		**0.135**	**0.001**	**0.007**	**6.11**	**1.76**
Iron	7439-89-6	0.05	mg/L		**4.82**	<0.05	**0.16**	**0.12**	**0.11**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	**0.0001**	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0031**	<0.0001	<0.0001	**0.0001**	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**4.61**	**6.07**	**4.03**	<0.01	**4.07**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**4.61**	**6.07**	**4.03**	<0.01	**4.07**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.7**	**0.8**	**1.0**	**0.6**	**0.8**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**5.3**	**6.9**	**5.0**	**0.6**	**4.9**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB56	RB4	MB59	SB35B	SB32B
				Sampling date / time	06-Aug-2025 00:00	06-Aug-2025 00:00	06-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-026	EP2512979-027	EP2512979-028	EP2512979-029	EP2512979-030
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**5**	**5**	**6**	**32**	**42**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	IB32	SB77	SB34B	MB45	MB650
			Sampling date / time	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512979-031	EP2512979-032	EP2512979-033	EP2512979-034	EP2512979-035
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.11**	**7.03**	**6.93**	**6.60**	**7.06**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**10400**	**13100**	**15500**	**13300**	**8520**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**7750**	**9710**	**11500**	**9720**	**5940**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**2550**	**2680**	**3370**	**4120**	**2520**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**1830**	**1830**	**2400**	**1870**	**732**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**2890**	**3820**	**4410**	**3900**	**2780**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**345**	**813**	**953**	**310**	**204**
Magnesium	7439-95-4	1	mg/L	**410**	**157**	**240**	**812**	**488**
Sodium	7440-23-5	1	mg/L	**1400**	**1960**	**2280**	**1380**	**761**
Potassium	7440-09-7	1	mg/L	**117**	**53**	**50**	**92**	**58**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	**0.0363**	**0.0053**	**0.0044**	**0.0009**	**0.0001**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.012**	**0.018**	**0.002**	**0.005**	<0.001
Nickel	7440-02-0	0.001	mg/L	**0.201**	**0.030**	**0.030**	**0.061**	**0.014**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**10.5**	**0.322**	**3.92**	**0.022**	**0.008**
Manganese	7439-96-5	0.001	mg/L	**3.43**	**2.91**	**10.8**	**0.305**	**0.009**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB32	SB77	SB34B	MB45	MB650
				Sampling date / time	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512979-031	EP2512979-032	EP2512979-033	EP2512979-034	EP2512979-035
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	**13.4**	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.04**	**0.23**	**0.04**	**1.42**	**0.30**
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.005**	**0.002**	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0384**	**0.0057**	**0.0050**	**0.0009**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		**0.001**	**0.002**	**0.002**	**0.023**	**0.013**
Copper	7440-50-8	0.001	mg/L		**0.015**	**0.036**	**0.004**	**0.014**	**0.003**
Nickel	7440-02-0	0.001	mg/L		**0.221**	**0.032**	**0.033**	**0.074**	**0.016**
Lead	7439-92-1	0.001	mg/L		**0.002**	**0.014**	**0.002**	**0.002**	**0.002**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**11.4**	**0.351**	**4.35**	**0.038**	**0.014**
Manganese	7439-96-5	0.001	mg/L		**3.46**	**2.90**	**11.2**	**0.348**	**0.023**
Iron	7439-89-6	0.05	mg/L		**0.10**	**7.89**	**33.2**	**3.56**	**0.64**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0001**	<0.0001	<0.0001	**0.0005**	**0.0010**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0001**	<0.0001	<0.0001	**0.0004**	**0.0029**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**2.12**	**0.37**	**0.01**	**0.16**	**5.49**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**2.12**	**0.37**	**0.01**	**0.16**	**5.49**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.5**	**0.9**	**2.2**	**0.3**	**0.7**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**2.6**	**1.3**	**2.2**	**0.5**	**6.2**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	IB32	SB77	SB34B	MB45	MB650
			Sampling date / time	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512979-031	EP2512979-032	EP2512979-033	EP2512979-034	EP2512979-035
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	**27**	**9**	**34**	**28**	**9**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB19	----	----	----	----
				Sampling date / time	11-Aug-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EP2512979-036	--------	--------	--------	--------
					Result	----	----	----	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**6.84**	----	----	----	----
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**10100**	----	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**7320**	----	----	----	----
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**2750**	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**1140**	----	----	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**3040**	----	----	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**404**	----	----	----	----
Magnesium	7439-95-4	1	mg/L		**424**	----	----	----	----
Sodium	7440-23-5	1	mg/L		**1110**	----	----	----	----
Potassium	7440-09-7	1	mg/L		**100**	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0008**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		**0.002**	----	----	----	----
Copper	7440-50-8	0.001	mg/L		**0.003**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.025**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.064**	----	----	----	----
Manganese	7439-96-5	0.001	mg/L		**0.183**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB19	----	----	----	----
				Sampling date / time	11-Aug-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EP2512979-036	--------	--------	--------	--------
					Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	----	----	----	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.09**	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0009**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		**0.002**	----	----	----	----
Copper	7440-50-8	0.001	mg/L		**0.007**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.029**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		**0.003**	----	----	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.078**	----	----	----	----
Manganese	7439-96-5	0.001	mg/L		**0.214**	----	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.23**	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0001**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0001**	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**1.19**	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**1.19**	----	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.4**	----	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**1.6**	----	----	----	----
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB19	----	----	----	----
				Sampling date / time	11-Aug-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EP2512979-036	--------	--------	--------	--------
					Result	----	----	----	----
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**16**	**----**	**----**	**----**	**----**

CERTIFICATE OF ANALYSIS

Work Order	: **EP2512991**	Page	: 1 of 17
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Madison Forster
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 13-Aug-2025 09:00
Order number	: 2049366	Date Analysis Commenced	: 13-Aug-2025
C-O-C number	: ----	Issue Date	: 21-Aug-2025 15:29
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 24		
No. of samples analysed	: 24		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Inorganics Analyst	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Inorganic Chemist	Perth Inorganics, Wangara, WA
	Instrument Chemist	Perth Inorganics, Wangara, WA

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EG020: It is recognised that various total metal concentrations are less than dissolved for various samples. However, the difference is within experimental variation of the methods.
- EG035: Positive Hg result for samples EP2512991-001, -005 -007 and -022 have been confirmed by re-preparation and re-analysis.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB35	IB34	MB18B	IB31B	MB18
				Sampling date / time	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512991-001	EP2512991-002	EP2512991-003	EP2512991-004	EP2512991-005
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		6.45	7.28	7.64	3.38	7.11
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		11600	10900	7190	11400	8960
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		8490	8470	5500	8550	6690
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		2450	2300	1900	2640	2790
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		1700	1630	630	1950	772
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		3280	3080	2690	3140	2790
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		611	798	208	782	238
Magnesium	7439-95-4	1	mg/L		224	76	336	167	534
Sodium	7440-23-5	1	mg/L		1620	1610	776	1670	788
Potassium	7440-09-7	1	mg/L		93	51	57	58	62
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	0.38	<0.01
Arsenic	7440-38-2	0.001	mg/L		0.002	<0.001	<0.001	0.002	<0.001
Cadmium	7440-43-9	0.0001	mg/L		0.0010	0.0002	0.0004	0.0072	0.0002
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	0.001	0.003	<0.001
Copper	7440-50-8	0.001	mg/L		0.013	0.003	<0.001	0.070	<0.001
Nickel	7440-02-0	0.001	mg/L		0.271	0.015	0.356	0.157	0.017
Lead	7439-92-1	0.001	mg/L		0.009	<0.001	<0.001	0.031	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		0.104	0.064	0.024	5.09	0.010
Manganese	7439-96-5	0.001	mg/L		5.64	1.88	0.006	10.0	0.031

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB35	IB34	MB18B	IB31B	MB18
				Sampling date / time	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512991-001	EP2512991-002	EP2512991-003	EP2512991-004	EP2512991-005
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	**0.09**	<0.05	**0.30**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.20**	**0.02**	**0.02**	**0.38**	**0.13**
Arsenic	7440-38-2	0.001	mg/L		**0.003**	<0.001	**0.001**	**0.002**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0013**	**0.0002**	**0.0004**	**0.0069**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		**0.019**	<0.001	**0.141**	**0.004**	**0.009**
Copper	7440-50-8	0.001	mg/L		**0.032**	**0.004**	**0.004**	**0.067**	**0.002**
Nickel	7440-02-0	0.001	mg/L		**0.269**	**0.016**	**0.365**	**0.145**	**0.018**
Lead	7439-92-1	0.001	mg/L		**0.015**	<0.001	**0.002**	**0.030**	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.167**	**0.063**	**0.035**	**4.71**	**0.017**
Manganese	7439-96-5	0.001	mg/L		**5.83**	**1.94**	**0.075**	**9.88**	**0.045**
Iron	7439-89-6	0.05	mg/L		**0.68**	**0.70**	**0.62**	**0.48**	**0.42**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0003**	<0.0001	<0.0001	<0.0001	**0.0009**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0003**	<0.0001	<0.0001	<0.0001	**0.0022**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.36**	**1.18**	**4.83**	**0.15**	**5.23**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.36**	**1.18**	**4.83**	**0.15**	**5.23**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.1**	**0.6**	**0.4**	**1.7**	**0.6**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**1.5**	**1.8**	**5.2**	**1.8**	**5.8**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB35	IB34	MB18B	IB31B	MB18
				Sampling date / time	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00	11-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512991-001	EP2512991-002	EP2512991-003	EP2512991-004	EP2512991-005
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		22	21	9	59	16

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB45	IB45	SB16B	SB82	MB15B
				Sampling date / time	11-Aug-2025 00:00	11-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512991-006	EP2512991-007	EP2512991-008	EP2512991-009	EP2512991-010
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**5.95**	**7.38**	**7.87**	**7.56**	**7.93**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**11700**	**12900**	**11600**	**11200**	**3430**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**8670**	**8680**	**7700**	**6670**	**1720**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**2570**	**2590**	**1940**	**798**	**253**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**1810**	**1830**	**910**	**829**	**173**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**3260**	**3320**	**3170**	**3510**	**767**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**696**	**665**	**298**	**130**	**27**
Magnesium	7439-95-4	1	mg/L		**203**	**226**	**290**	**115**	**45**
Sodium	7440-23-5	1	mg/L		**1660**	**1660**	**1550**	**2010**	**522**
Potassium	7440-09-7	1	mg/L		**92**	**96**	**82**	**45**	**25**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		**0.003**	**0.003**	<0.001	<0.001	**0.002**
Cadmium	7440-43-9	0.0001	mg/L		**0.0006**	**0.0008**	**0.0004**	**0.0002**	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.009**
Copper	7440-50-8	0.001	mg/L		**0.005**	**0.005**	**0.005**	**0.001**	<0.001
Nickel	7440-02-0	0.001	mg/L		**0.181**	**0.210**	**0.002**	**0.001**	<0.001
Lead	7439-92-1	0.001	mg/L		**0.001**	**0.001**	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	**0.01**	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.041**	**0.052**	**0.107**	**0.020**	**0.007**
Manganese	7439-96-5	0.001	mg/L		**4.68**	**4.66**	**0.008**	**0.004**	**0.002**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB45	IB45	SB16B	SB82	MB15B
				Sampling date / time	11-Aug-2025 00:00	11-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512991-006	EP2512991-007	EP2512991-008	EP2512991-009	EP2512991-010
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.07**	**0.04**	**0.38**	**1.27**	**1.77**
Arsenic	7440-38-2	0.001	mg/L		**0.003**	**0.004**	**0.001**	**0.003**	**0.003**
Cadmium	7440-43-9	0.0001	mg/L		**0.0007**	**0.0008**	**0.0005**	**0.0003**	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	**0.002**	**0.005**	**0.031**
Copper	7440-50-8	0.001	mg/L		**0.008**	**0.007**	**0.014**	**0.007**	**0.018**
Nickel	7440-02-0	0.001	mg/L		**0.180**	**0.210**	**0.003**	**0.002**	**0.012**
Lead	7439-92-1	0.001	mg/L		**0.002**	**0.002**	**0.005**	**0.003**	**0.003**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	**0.01**	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.048**	**0.051**	**0.120**	**0.032**	**0.019**
Manganese	7439-96-5	0.001	mg/L		**4.86**	**4.81**	**0.019**	**0.009**	**0.080**
Iron	7439-89-6	0.05	mg/L		**0.17**	**0.12**	**0.76**	**2.34**	**5.70**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	**0.0001**	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	**0.0001**	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.01**	<0.01	**17.9**	**19.2**	**13.8**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.01**	<0.01	**17.9**	**19.2**	**13.8**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.4**	**0.4**	**1.2**	**1.6**	**1.3**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**0.4**	**0.4**	**19.1**	**20.8**	**15.1**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB45	IB45	SB16B	SB82	MB15B
				Sampling date / time	11-Aug-2025 00:00	11-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512991-006	EP2512991-007	EP2512991-008	EP2512991-009	EP2512991-010
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**54**	**48**	**12**	**16**	**4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SB81	SB36B	IB17B	SB15B	SB15B1
			Sampling date / time	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512991-011	EP2512991-012	EP2512991-013	EP2512991-014	EP2512991-015
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.71**	**7.67**	**6.59**	**8.20**	**8.00**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**3370**	**14400**	**12400**	**23600**	**10400**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**1800**	**9170**	**8220**	**15600**	**6560**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**137**	**1880**	**2400**	**3990**	**1500**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**173**	**1590**	**1660**	**2750**	**980**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**798**	**3690**	**3190**	**6630**	**5450**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**22**	**230**	**669**	**747**	**204**
Magnesium	7439-95-4	1	mg/L	**20**	**318**	**177**	**517**	**240**
Sodium	7440-23-5	1	mg/L	**562**	**2290**	**1640**	**3900**	**1470**
Potassium	7440-09-7	1	mg/L	**24**	**94**	**65**	**135**	**122**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.01**	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	**0.001**	**0.002**	**0.002**	<0.001	**0.002**
Cadmium	7440-43-9	0.0001	mg/L	**0.0001**	**0.0009**	**0.0051**	**0.0020**	**0.0005**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.003**	**0.002**	**0.050**	**0.006**	**0.003**
Nickel	7440-02-0	0.001	mg/L	<0.001	**0.003**	**0.115**	**0.008**	**0.010**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	**0.001**	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.028**	**0.127**	**0.782**	**0.571**	**0.058**
Manganese	7439-96-5	0.001	mg/L	**0.003**	<0.001	**4.39**	**0.114**	**0.007**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB81	SB36B	IB17B	SB15B	SB15B1
				Sampling date / time	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512991-011	EP2512991-012	EP2512991-013	EP2512991-014	EP2512991-015
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	**0.13**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**4.90**	**0.21**	**0.05**	**0.13**	**3.73**
Arsenic	7440-38-2	0.001	mg/L		**0.004**	**0.002**	**0.002**	**0.001**	**0.005**
Cadmium	7440-43-9	0.0001	mg/L		**0.0003**	**0.0010**	**0.0053**	**0.0020**	**0.0006**
Chromium	7440-47-3	0.001	mg/L		**0.014**	**0.001**	<0.001	**0.001**	**0.012**
Copper	7440-50-8	0.001	mg/L		**0.024**	**0.005**	**0.054**	**0.013**	**0.028**
Nickel	7440-02-0	0.001	mg/L		**0.004**	**0.004**	**0.116**	**0.008**	**0.017**
Lead	7439-92-1	0.001	mg/L		**0.011**	**0.003**	**0.002**	**0.002**	**0.008**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.066**	**0.137**	**0.791**	**0.573**	**0.119**
Manganese	7439-96-5	0.001	mg/L		**0.032**	**0.005**	**4.60**	**0.126**	**0.068**
Iron	7439-89-6	0.05	mg/L		**5.34**	**0.28**	**0.10**	**0.57**	**3.34**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	**0.08**	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**9.43**	**3.83**	**0.59**	**2.38**	**45.1**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**9.43**	**3.83**	**0.59**	**2.46**	**45.1**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.1**	**0.4**	**0.5**	**0.8**	**2.7**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**10.5**	**4.2**	**1.1**	**3.3**	**47.8**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB81	SB36B	IB17B	SB15B	SB15B1
				Sampling date / time	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512991-011	EP2512991-012	EP2512991-013	EP2512991-014	EP2512991-015
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**7**	**16**	**11**	**41**	**10**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB16	MB21	MB17B	MB16B	SB79
			Sampling date / time	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00
Compound	CAS Number	LOR	Unit	EP2512991-016	EP2512991-017	EP2512991-018	EP2512991-019	EP2512991-020
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.90**	**7.95**	**7.55**	**8.31**	**7.52**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**6790**	**2140**	**12800**	**1860**	**11700**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**4380**	**1180**	**8980**	**1000**	**8050**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**1200**	**248**	**2790**	**116**	**2430**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**671**	**82**	**1760**	**66**	**1320**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**1630**	**520**	**3300**	**973**	**3080**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**105**	**25**	**537**	**12**	**343**
Magnesium	7439-95-4	1	mg/L	**227**	**45**	**352**	**21**	**382**
Sodium	7440-23-5	1	mg/L	**868**	**295**	**1600**	**295**	**1520**
Potassium	7440-09-7	1	mg/L	**49**	**18**	**88**	**16**	**88**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	**0.004**	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	**0.0020**	<0.0001	**0.0005**
Chromium	7440-47-3	0.001	mg/L	**0.006**	<0.001	<0.001	**0.003**	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	**0.007**	<0.001	**0.005**
Nickel	7440-02-0	0.001	mg/L	**0.016**	<0.001	**0.162**	<0.001	**0.003**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.019**	**0.019**	**0.138**	**0.006**	**0.024**
Manganese	7439-96-5	0.001	mg/L	**0.002**	**0.002**	**4.40**	<0.001	**0.001**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB16	MB21	MB17B	MB16B	SB79
				Sampling date / time	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512991-016	EP2512991-017	EP2512991-018	EP2512991-019	EP2512991-020
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.38**	**0.30**	**0.18**	**0.56**	**0.86**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	**0.004**	**0.002**
Cadmium	7440-43-9	0.0001	mg/L		**0.0001**	<0.0001	**0.0021**	<0.0001	**0.0006**
Chromium	7440-47-3	0.001	mg/L		**0.007**	**0.003**	**0.002**	**0.007**	**0.005**
Copper	7440-50-8	0.001	mg/L		**0.005**	**0.005**	**0.011**	**0.006**	**0.033**
Nickel	7440-02-0	0.001	mg/L		**0.016**	**0.002**	**0.157**	**0.003**	**0.005**
Lead	7439-92-1	0.001	mg/L		**0.002**	**0.001**	**0.002**	**0.001**	**0.029**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.028**	**0.021**	**0.140**	**0.012**	**0.056**
Manganese	7439-96-5	0.001	mg/L		**0.008**	**0.012**	**4.55**	**0.032**	**0.046**
Iron	7439-89-6	0.05	mg/L		**0.82**	**0.68**	**0.51**	**1.45**	**1.96**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**4.52**	**15.4**	**0.70**	**8.66**	**4.38**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**4.52**	**15.4**	**0.70**	**8.66**	**4.38**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.5**	**1.2**	**0.4**	**0.8**	**0.4**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**5.0**	**16.6**	**1.1**	**9.5**	**4.8**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB16	MB21	MB17B	MB16B	SB79
				Sampling date / time	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00
Compound	CAS Number	LOR	Unit		EP2512991-016	EP2512991-017	EP2512991-018	EP2512991-019	EP2512991-020
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**26**	**6**	**45**	**4**	**27**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB36	SB83	MB44	MB44B	----
				Sampling date / time	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	----
Compound	CAS Number	LOR	Unit		EP2512991-021	EP2512991-022	EP2512991-023	EP2512991-024	--------
					Result	Result	Result	Result	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.43**	**6.73**	**5.62**	**6.75**	**----**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**8940**	**7220**	**12200**	**12400**	**----**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**5730**	**4050**	**9180**	**8590**	**----**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**1070**	**603**	**2750**	**2700**	**----**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**900**	**510**	**4760**	**1750**	**----**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**2510**	**2080**	**3420**	**3360**	**----**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**148**	**80**	**605**	**705**	**----**
Magnesium	7439-95-4	1	mg/L		**171**	**98**	**300**	**229**	**----**
Sodium	7440-23-5	1	mg/L		**1490**	**1270**	**1670**	**1720**	**----**
Potassium	7440-09-7	1	mg/L		**70**	**36**	**99**	**86**	**----**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	**0.02**	**0.18**	<0.01	**----**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	**0.001**	<0.001	**----**
Cadmium	7440-43-9	0.0001	mg/L		**0.0005**	**0.0003**	**0.0007**	<0.0001	**----**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	**0.003**	**----**
Copper	7440-50-8	0.001	mg/L		**0.003**	**0.002**	**0.007**	<0.001	**----**
Nickel	7440-02-0	0.001	mg/L		**0.001**	**0.006**	**0.214**	**0.016**	**----**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	**0.001**	<0.001	**----**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	**----**
Zinc	7440-66-6	0.005	mg/L		**0.078**	**0.038**	**0.054**	**0.008**	**----**
Manganese	7439-96-5	0.001	mg/L		<0.001	**0.003**	**4.20**	**4.36**	**----**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB36	SB83	MB44	MB44B	----
				Sampling date / time	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	----
Compound	CAS Number	LOR	Unit		EP2512991-021	EP2512991-022	EP2512991-023	EP2512991-024	--------
					Result	Result	Result	Result	----
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	**0.26**	**0.34**	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.09**	**8.15**	**4.12**	**0.43**	----
Arsenic	7440-38-2	0.001	mg/L		**0.001**	**0.002**	**0.002**	**0.002**	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0005**	**0.0004**	**0.0007**	**0.0008**	----
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.011**	**0.005**	**0.004**	----
Copper	7440-50-8	0.001	mg/L		**0.008**	**0.033**	**0.014**	**0.007**	----
Nickel	7440-02-0	0.001	mg/L		**0.001**	**0.011**	**0.218**	**0.029**	----
Lead	7439-92-1	0.001	mg/L		**0.008**	**0.020**	**0.003**	**0.005**	----
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	----
Zinc	7440-66-6	0.005	mg/L		**0.087**	**0.087**	**0.059**	**0.031**	----
Manganese	7439-96-5	0.001	mg/L		**0.009**	**0.018**	**4.38**	**4.55**	----
Iron	7439-89-6	0.05	mg/L		**0.25**	**3.27**	**2.15**	**1.41**	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	**0.0002**	<0.0001	<0.0001	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**12.2**	**13.0**	**0.06**	<0.01	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**12.2**	**13.0**	**0.06**	<0.01	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.8**	**2.3**	**0.4**	**0.8**	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**13.0**	**15.3**	**0.5**	**0.8**	----
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	IB36	SB83	MB44	MB44B	----
			Sampling date / time	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	09-Aug-2025 00:00	----
Compound	CAS Number	LOR	Unit	EP2512991-021	EP2512991-022	EP2512991-023	EP2512991-024	--------
				Result	Result	Result	Result	----
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	**7**	**8**	**32**	**25**	**----**

CERTIFICATE OF ANALYSIS

Work Order	: **EP2515700**	Page	: 1 of 16
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Madison Forster
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 24-Sep-2025 10:00
Order number	: 2049366	Date Analysis Commenced	: 24-Sep-2025
C-O-C number	: ----	Issue Date	: 03-Oct-2025 12:03
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 20		
No. of samples analysed	: 20		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Organic Supervisor	Perth Organics, Wangara, WA
	Inorganic Chemist	Perth Inorganics, Wangara, WA

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EG020: Metals LOR for samples EP2515700-012 and -020 raised due to high TDS content.
- EP080: High failing LCS deemed acceptable as all associated analyte results are less than LOR.
- EG020: It is recognised that various total metal concentrations are less than dissolved for various samples. However, the difference is within experimental variation of the methods.
- EK055G (Ammonia): LOR for sample #19 raised due to possible sample matrix interference.
- EG035: LOR raised on sample EP2515700-020 due to high TDS content.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	TSF3 DRAIN	SMDP	GGWP93P	DUP2	COFFER DAM
			Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00
Compound	CAS Number	LOR	Unit	EP2515700-001	EP2515700-002	EP2515700-003	EP2515700-004	EP2515700-005
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**6.85**	**9.10**	**7.41**	**9.28**	**7.75**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**20500**	**11400**	**678**	**11400**	**16800**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**14200**	**7980**	**375**	**8050**	**11400**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**3650**	**2500**	**127**	**2490**	**3480**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**3300**	**1830**	**53**	**1880**	**2620**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**5610**	**3040**	**151**	**3080**	**4910**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**872**	**875**	**18**	**879**	**1170**
Magnesium	7439-95-4	1	mg/L	**357**	**77**	**20**	**72**	**136**
Sodium	7440-23-5	1	mg/L	**3330**	**1600**	**95**	**1580**	**2470**
Potassium	7440-09-7	1	mg/L	**157**	**62**	**7**	**62**	**103**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.04**	<0.01	<0.01	<0.01	**0.08**
Arsenic	7440-38-2	0.001	mg/L	**0.001**	<0.001	<0.001	<0.001	**0.001**
Cadmium	7440-43-9	0.0001	mg/L	**0.0032**	**0.0042**	<0.0001	**0.0037**	**0.0057**
Chromium	7440-47-3	0.001	mg/L	<0.001	**0.001**	<0.001	**0.002**	<0.001
Copper	7440-50-8	0.001	mg/L	**0.021**	**0.003**	**0.002**	**0.003**	**0.070**
Nickel	7440-02-0	0.001	mg/L	**0.003**	<0.001	**0.011**	<0.001	**0.020**
Lead	7439-92-1	0.001	mg/L	**0.004**	<0.001	<0.001	<0.001	**0.012**
Selenium	7782-49-2	0.01	mg/L	<0.01	**0.01**	<0.01	**0.01**	**0.01**
Zinc	7440-66-6	0.005	mg/L	**3.06**	**0.034**	**0.029**	**0.022**	**3.79**
Manganese	7439-96-5	0.001	mg/L	**2.44**	**0.030**	**0.346**	**0.003**	**4.15**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	TSF3 DRAIN	SMDP	GGWP93P	DUP2	COFFER DAM
			Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00
Compound	CAS Number	LOR	Unit	EP2515700-001	EP2515700-002	EP2515700-003	EP2515700-004	EP2515700-005
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Iron	7439-89-6	0.05	mg/L	**34.4**	<0.05	**0.12**	<0.05	**0.06**
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.20**	**0.06**	**0.03**	**0.05**	**0.65**
Arsenic	7440-38-2	0.001	mg/L	**0.002**	<0.001	<0.001	<0.001	**0.002**
Cadmium	7440-43-9	0.0001	mg/L	**0.0032**	**0.0074**	**0.0002**	**0.0072**	**0.0376**
Chromium	7440-47-3	0.001	mg/L	<0.001	**0.002**	<0.001	**0.002**	**0.001**
Copper	7440-50-8	0.001	mg/L	**0.063**	**0.021**	**0.015**	**0.018**	**0.676**
Nickel	7440-02-0	0.001	mg/L	**0.003**	<0.001	**0.012**	<0.001	**0.022**
Lead	7439-92-1	0.001	mg/L	**0.016**	**0.007**	**0.002**	**0.006**	**0.074**
Selenium	7782-49-2	0.01	mg/L	<0.01	**0.02**	<0.01	**0.01**	**0.01**
Zinc	7440-66-6	0.005	mg/L	**3.08**	**0.403**	**0.106**	**0.403**	**11.4**
Manganese	7439-96-5	0.001	mg/L	**2.44**	**0.272**	**0.348**	**0.251**	**4.19**
Iron	7439-89-6	0.05	mg/L	**35.5**	**0.18**	**0.44**	**0.10**	**0.93**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	**1.50**	<0.01	**1.52**	**1.07**
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**0.01**	**11.5**	**0.56**	**11.5**	**1.83**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**0.01**	**13.0**	**0.56**	**13.0**	**2.90**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**7.9**	**7.9**	**0.2**	**7.2**	**19.8**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**7.9**	**20.9**	**0.8**	**20.2**	**22.7**
ED038P: Acidity by Auto Titrator								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	TSF3 DRAIN	SMDP	GGWP93P	DUP2	COFFER DAM
			Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00
Compound	CAS Number	LOR	Unit	EP2515700-001	EP2515700-002	EP2515700-003	EP2515700-004	EP2515700-005
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	**54**	<1	**1**	<1	**25**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	ROM DAM	EPC	LDP	GGW53P	CLEAN DAM
			Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00
Compound	CAS Number	LOR	Unit	EP2515700-006	EP2515700-007	EP2515700-008	EP2515700-009	EP2515700-010
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.89**	**7.35**	**8.55**	**7.34**	**5.63**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**15900**	**11400**	**12800**	**70**	**1380**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**10600**	**7610**	**9050**	**54**	**842**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**3060**	**2430**	**2740**	**16**	**336**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**2270**	**2080**	**2180**	**6**	**300**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**4500**	**3020**	**3410**	**8**	**261**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**986**	**682**	**979**	**3**	**110**
Magnesium	7439-95-4	1	mg/L	**146**	**177**	**72**	**2**	**15**
Sodium	7440-23-5	1	mg/L	**2390**	**1580**	**1800**	**6**	**137**
Potassium	7440-09-7	1	mg/L	**100**	**70**	**76**	**2**	**7**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.02**	<0.01	<0.01	<0.01	**0.14**
Arsenic	7440-38-2	0.001	mg/L	**0.001**	<0.001	**0.002**	**0.003**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L	**0.0199**	**0.120**	**0.0017**	<0.0001	**0.0718**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	**0.001**	**0.002**	<0.001
Copper	7440-50-8	0.001	mg/L	**0.125**	**0.221**	**0.012**	**0.006**	**3.91**
Nickel	7440-02-0	0.001	mg/L	**0.014**	**0.024**	<0.001	**0.015**	**0.013**
Lead	7439-92-1	0.001	mg/L	**0.006**	<0.001	<0.001	<0.001	**0.207**
Selenium	7782-49-2	0.01	mg/L	**0.01**	**0.02**	**0.03**	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**4.53**	**30.9**	**0.108**	**0.037**	**23.6**
Manganese	7439-96-5	0.001	mg/L	**2.07**	**2.97**	**0.134**	**0.325**	**1.10**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	ROM DAM	EPC	LDP	GGW53P	CLEAN DAM
				Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00
Compound	CAS Number	LOR	Unit		EP2515700-006	EP2515700-007	EP2515700-008	EP2515700-009	EP2515700-010
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	**1.13**	<0.05	**5.40**	**0.14**
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.10**	**0.12**	**0.01**	**0.16**	**0.32**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	<0.001	**0.002**	**0.004**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		**0.0206**	**0.122**	**0.0022**	**0.0001**	**0.0738**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	**0.002**	**0.021**	<0.001
Copper	7440-50-8	0.001	mg/L		**0.165**	**0.380**	**0.018**	**0.024**	**4.17**
Nickel	7440-02-0	0.001	mg/L		**0.014**	**0.025**	**0.001**	**0.031**	**0.013**
Lead	7439-92-1	0.001	mg/L		**0.016**	**0.006**	<0.001	**0.005**	**0.237**
Selenium	7782-49-2	0.01	mg/L		<0.01	**0.02**	**0.03**	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**4.55**	**32.8**	**0.244**	**0.080**	**23.4**
Manganese	7439-96-5	0.001	mg/L		**2.11**	**2.96**	**0.184**	**0.331**	**1.06**
Iron	7439-89-6	0.05	mg/L		**0.26**	**1.80**	**0.15**	**6.23**	**0.75**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**2.08**	**0.62**	**1.68**	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.93**	**4.84**	**7.01**	**0.02**	**0.21**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**3.01**	**5.46**	**8.69**	**0.02**	**0.21**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**12.9**	**4.5**	**5.1**	**0.5**	**2.1**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**15.9**	**10.0**	**13.8**	**0.5**	**2.3**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	ROM DAM	EPC	LDP	GGW53P	CLEAN DAM
				Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00
Compound	CAS Number	LOR	Unit		EP2515700-006	EP2515700-007	EP2515700-008	EP2515700-009	EP2515700-010
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**17**	**49**	<1	<1	**50**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	KITCHEN TAP	EPA DRAIN	TSF1 UNDERDRAIN	GHDP	GGW67P
			Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00
Compound	CAS Number	LOR	Unit	EP2515700-011	EP2515700-012	EP2515700-013	EP2515700-014	EP2515700-015
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.19**	**7.70**	**3.29**	**6.91**	**7.85**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**203**	**28000**	**24800**	**13200**	**2570**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**111**	**19700**	**26400**	**8590**	**1500**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	<1	**6090**	**13100**	**2650**	**642**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**2**	**4170**	**13800**	**2060**	**345**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**48**	**8960**	**4390**	**3620**	**594**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	<1	**1060**	**716**	**814**	**84**
Magnesium	7439-95-4	1	mg/L	<1	**836**	**2740**	**151**	**105**
Sodium	7440-23-5	1	mg/L	**40**	**4560**	**2660**	**1830**	**279**
Potassium	7440-09-7	1	mg/L	<1	**108**	**109**	**72**	**15**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.02	**0.62**	**0.01**	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.002	**0.002**	**0.001**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L	**0.0003**	**0.0661**	**0.0069**	**0.281**	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.002	**0.001**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.014**	**0.045**	**0.231**	**0.237**	**0.002**
Nickel	7440-02-0	0.001	mg/L	**0.001**	**0.055**	**0.011**	**0.043**	**0.002**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.002	**0.043**	**0.015**	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.02	<0.01	**0.02**	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.130**	**8.48**	**6.06**	**71.3**	**0.261**
Manganese	7439-96-5	0.001	mg/L	**0.006**	**6.68**	**21.3**	**4.00**	**1.70**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	KITCHEN TAP	EPA DRAIN	TSF1 UNDERDRAIN	GHDP	GGW67P
				Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00
Compound	CAS Number	LOR	Unit		EP2515700-011	EP2515700-012	EP2515700-013	EP2515700-014	EP2515700-015
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.10	**381**	**0.05**	**0.58**
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.01**	**0.08**	**1.00**	**13.6**	**0.02**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.002	**0.002**	**0.010**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	**0.0693**	**0.0061**	**0.303**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.002	**0.002**	**0.015**	<0.001
Copper	7440-50-8	0.001	mg/L		**0.016**	**0.083**	**0.229**	**2.03**	**0.003**
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.058**	**0.011**	**0.077**	**0.003**
Lead	7439-92-1	0.001	mg/L		**0.002**	**0.016**	**0.045**	**0.388**	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.02	<0.01	**0.02**	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.108**	**8.94**	**5.71**	**77.9**	**0.364**
Manganese	7439-96-5	0.001	mg/L		**0.004**	**6.66**	**21.5**	**4.24**	**1.71**
Iron	7439-89-6	0.05	mg/L		<0.05	**3.45**	**395**	**31.7**	**0.88**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	**2.07**	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**1.32**	**1.97**	**0.03**	**11.9**	<0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**1.32**	**1.97**	**0.03**	**14.0**	<0.01
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.5**	**1.5**	**20.4**	**8.1**	**0.4**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**1.8**	**3.5**	**20.4**	**22.1**	**0.4**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	KITCHEN TAP	EPA DRAIN	TSF1 UNDERDRAIN	GHDP	GGW67P
				Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00	21-Sep-2025 00:00
Compound	CAS Number	LOR	Unit		EP2515700-011	EP2515700-012	EP2515700-013	EP2515700-014	EP2515700-015
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		<1	**30**	**860**	**118**	**4**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SCUPPLES UG RAW	RO TANK	GVW005P	LAKE	GG12
			Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	18-Sep-2025 00:00	22-Sep-2025 00:00	22-Sep-2025 00:00
Compound	CAS Number	LOR	Unit	EP2515700-016	EP2515700-017	EP2515700-018	EP2515700-019	EP2515700-020
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**5.26**	**7.09**	**8.50**	**7.74**	**8.15**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**8660**	**209**	**3460**	**13400**	**89200**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**6590**	**113**	**1800**	**9690**	**67400**
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	**----**	**----**	**----**	<5	**18**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**2330**	**2**	**144**	**----**	**----**
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	**----**	**----**	**----**	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	**----**	**----**	**----**	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**----**	**----**	**----**	**58**	**57**
Total Alkalinity as CaCO3	----	1	mg/L	**----**	**----**	**----**	**58**	**57**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**2480**	**2**	**35**	**2320**	**5700**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**1730**	**50**	**984**	**----**	**----**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**567**	**1**	**10**	**----**	**----**
Magnesium	7439-95-4	1	mg/L	**223**	<1	**29**	**----**	**----**
Sodium	7440-23-5	1	mg/L	**982**	**38**	**640**	**----**	**----**
Potassium	7440-09-7	1	mg/L	**49**	**2**	**29**	**----**	**----**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.53**	<0.01	<0.01	<0.01	<0.10
Arsenic	7440-38-2	0.001	mg/L	**0.001**	<0.001	<0.001	<0.001	<0.010
Cadmium	7440-43-9	0.0001	mg/L	**0.165**	<0.0001	**0.0002**	**0.0026**	**0.0016**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	**0.002**	<0.010

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SCUPPLES UG RAW	RO TANK	GVW005P	LAKE	GG12
			Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	18-Sep-2025 00:00	22-Sep-2025 00:00	22-Sep-2025 00:00
Compound	CAS Number	LOR	Unit	EP2515700-016	EP2515700-017	EP2515700-018	EP2515700-019	EP2515700-020
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Copper	7440-50-8	0.001	mg/L	**0.246**	**0.001**	**0.002**	**0.008**	<0.010
Nickel	7440-02-0	0.001	mg/L	**0.103**	<0.001	<0.001	<0.001	<0.010
Lead	7439-92-1	0.001	mg/L	**0.030**	<0.001	<0.001	<0.001	<0.010
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	**0.03**	<0.10
Zinc	7440-66-6	0.005	mg/L	**122**	**0.012**	**0.044**	**0.120**	<0.050
Manganese	7439-96-5	0.001	mg/L	**17.3**	**0.001**	**0.102**	**0.135**	<0.010
Iron	7439-89-6	0.05	mg/L	**19.3**	<0.05	<0.05	<0.05	<0.50
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**8.92**	<0.01	**0.18**	**0.02**	**0.36**
Arsenic	7440-38-2	0.001	mg/L	**0.022**	<0.001	<0.001	<0.001	<0.010
Cadmium	7440-43-9	0.0001	mg/L	**0.176**	<0.0001	**0.0010**	**0.0027**	**0.0018**
Chromium	7440-47-3	0.001	mg/L	**0.014**	<0.001	<0.001	**0.002**	<0.010
Copper	7440-50-8	0.001	mg/L	**1.36**	**0.002**	**0.041**	**0.015**	**0.021**
Nickel	7440-02-0	0.001	mg/L	**0.117**	<0.001	<0.001	<0.001	<0.010
Lead	7439-92-1	0.001	mg/L	**0.481**	<0.001	**0.005**	**0.001**	<0.010
Selenium	7782-49-2	0.01	mg/L	**0.01**	<0.01	<0.01	**0.03**	<0.10
Zinc	7440-66-6	0.005	mg/L	**160**	**0.009**	**0.130**	**0.163**	<0.052
Manganese	7439-96-5	0.001	mg/L	**17.5**	<0.001	**0.147**	**0.197**	**0.016**
Iron	7439-89-6	0.05	mg/L	**51.7**	<0.05	**4.17**	**0.08**	**0.59**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**----**	**----**	**----**	<0.05	**0.19**
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	**0.45**	<0.01	<0.01	**2.04**	**0.24**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SCUPPLES UG RAW	RO TANK	GVW005P	LAKE	GG12
			Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	18-Sep-2025 00:00	22-Sep-2025 00:00	22-Sep-2025 00:00
Compound	CAS Number	LOR	Unit	EP2515700-016	EP2515700-017	EP2515700-018	EP2515700-019	EP2515700-020
				Result	Result	Result	Result	Result
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**4.61**	**1.39**	**0.03**	**14.1**	**0.65**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**5.06**	**1.39**	**0.03**	**16.1**	**0.89**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**8.0**	**0.2**	**0.4**	**1.2**	**2.3**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**13.1**	**1.6**	**0.4**	**17.3**	**3.2**
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	**----**	**----**	**----**	**0.15**	**0.33**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	**----**	**----**	**----**	<20	<20
C10 - C14 Fraction	----	50	µg/L	**----**	**----**	**----**	**90**	<50
C15 - C28 Fraction	----	100	µg/L	**----**	**----**	**----**	<100	<100
C29 - C36 Fraction	----	50	µg/L	**----**	**----**	**----**	<50	**90**
^ C10 - C36 Fraction (sum)	----	50	µg/L	**----**	**----**	**----**	**90**	**90**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	**----**	**----**	**----**	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	**----**	**----**	**----**	<20	<20
>C10 - C16 Fraction	----	100	µg/L	**----**	**----**	**----**	<100	<100
>C16 - C34 Fraction	----	100	µg/L	**----**	**----**	**----**	<100	**140**
>C34 - C40 Fraction	----	100	µg/L	**----**	**----**	**----**	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L	**----**	**----**	**----**	<100	**140**
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	**----**	**----**	**----**	<100	<100
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	**----**	**----**	**----**	<1	<1
Toluene	108-88-3	2	µg/L	**----**	**----**	**----**	<2	<2

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SCUPPLES UG RAW	RO TANK	GVW005P	LAKE	GG12
				Sampling date / time	21-Sep-2025 00:00	21-Sep-2025 00:00	18-Sep-2025 00:00	22-Sep-2025 00:00	22-Sep-2025 00:00
Compound	CAS Number	LOR	Unit		EP2515700-016	EP2515700-017	EP2515700-018	EP2515700-019	EP2515700-020
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
Ethylbenzene	100-41-4	2	µg/L		----	----	----	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		----	----	----	<2	<2
ortho-Xylene	95-47-6	2	µg/L		----	----	----	<2	<2
^ Total Xylenes	----	2	µg/L		----	----	----	<2	<2
^ Sum of BTEX	----	1	µg/L		----	----	----	<1	<1
Naphthalene	91-20-3	5	µg/L		----	----	----	<5	<5
ED038P: Acidity by Auto Titrator									
Acidity as CaCO3	----	1	mg/L		**277**	<1	<1	**5**	<1
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		----	----	----	**69.8**	**76.1**
Toluene-D8	2037-26-5	2	%		----	----	----	**86.7**	**83.1**
4-Bromofluorobenzene	460-00-4	2	%		----	----	----	**104**	**111**

Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	61	141
Toluene-D8	2037-26-5	73	126
4-Bromofluorobenzene	460-00-4	60	125

CERTIFICATE OF ANALYSIS

Work Order	: **EP2517478**	Page	: 1 of 15
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Madison Forster
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 22-Oct-2025 11:30
Order number	: 2049366	Date Analysis Commenced	: 22-Oct-2025
C-O-C number	: ----	Issue Date	: 30-Oct-2025 15:00
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 34		
No. of samples analysed	: 34		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Perth - State Manager	Perth Inorganics, Wangara, WA
	Inorganics Analyst	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Lab Technician	Perth Microbiology, Wangara, WA
	Inorganic Chemist	Perth Inorganics, Wangara, WA
	Instrument Chemist	Perth Inorganics, Wangara, WA
	Senior Microbiologist	Perth Microbiology, Wangara, WA

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- CFU = colony forming unit
- MF = membrane filtration
- Microbiological Comment: HPC results are reported an approximate (~) when the count of colonies on the plate is outside the range of 10 - 300cfu, in accordance with ALS work instruction QWI-MIC/MW002.
- MW006 is ALS's internal code and is equivalent to AS4276.5.
- EG020: Selenium LOR for sample EP2517478-026 raised due to high TDS content.
- MM684, MW002 and MW006:Analysis Commenced:Date:22/10/2025.Time:4:00PM.
- MM699:Analysis Commenced:Date:27/10/2025.Time:2:00PM.
- EG020: It is recognised that various total metal concentrations are less than dissolved for various samples. However, the difference is within experimental variation of the methods.
- EK057G (Nitrite): LOR for samples #22 & 26 raised due to possible sample matrix interference.
- EK059G (NOx): LOR for samples #22 & 26 raised due to possible sample matrix interference.
- EG020: It is recognised that total Cu, Cd, Ni, Mn, and Zn concentrations are less than dissolved for samples EP2517478 -021, -024, -027 and -032. However, the difference is within experimental variation of the methods. Results has been confirmed by re-preparation and re-analysis.
- Microbiological Comment: In accordance with ALS work instruction QWI-MIC/04, membrane filtration result is reported an approximate (~) when the count of colonies on the filtered membrane is outside the range of 10 - 100cfu.
- MW002 is ALS's internal code and is equivalent to AS4276.3.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: ICE (Matrix: WATER)			Sample ID	VILLAGE ICE	BYRNECUT ICE	GOSSAN HILL A	GOSSAN HILL B	LAB ICE
			Sampling date / time	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00
Compound	CAS Number	LOR	Unit	EP2517478-012	EP2517478-013	EP2517478-014	EP2517478-015	EP2517478-016
				Result	Result	Result	Result	Result
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	<1	<1	<1	<1
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	<1	**10**	<1	<1	**~4**
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: ICE (Matrix: WATER)			Sample ID	GH913 ICE	SCUDDLES UG ICE	SCUDDLES ADMIN	WORKSHOP ICE	----
			Sampling date / time	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00	----
Compound	CAS Number	LOR	Unit	EP2517478-017	EP2517478-018	EP2517478-019	EP2517478-020	--------
				Result	Result	Result	Result	----
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	<1	<1	<1	**----**
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	<1	<1	<1	<1	**----**
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	<1	**----**
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	**----**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GH913 CRIB	SCUDDLES UG CRIB	BYRNECUT COOLER	POOL	RDH COOLER
			Sampling date / time	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00
Compound	CAS Number	LOR	Unit	EP2517478-001	EP2517478-002	EP2517478-003	EP2517478-004	EP2517478-005
				Result	Result	Result	Result	Result
MM684: Thermotolerant Amoeba by Culture								
Thermophilic Amoeba	----	1	-	Not Detected	Not Detected	Not Detected	Not Detected	Detected
Volume Analysed	----	0.01	L	0.25	0.25	0.25	0.25	0.25
MM699: Thermotolerant Amoeba Speciation by PCR								
Naegleria fowleri	----	-	-	----	----	----	----	Not Detected
Naegleria spp.	----	-	-	----	----	----	----	Not Detected
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	<1	<1	<1	<1
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	<1	~8	<1	<1	70
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	RO PLANT	VILLAGE KITCHEN	GOSSAN HILL COOLER	BACKFILL COOLER	VILLAGE COOLER
			Sampling date / time	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00	21-Oct-2025 00:00
Compound	CAS Number	LOR	Unit	EP2517478-006	EP2517478-007	EP2517478-008	EP2517478-009	EP2517478-010
				Result	Result	Result	Result	Result
MM684: Thermotolerant Amoeba by Culture								
Thermophilic Amoeba	----	1	-	Not Detected	Not Detected	Not Detected	Detected	Not Detected
Volume Analysed	----	0.01	L	0.25	0.25	0.25	0.25	0.25
MM699: Thermotolerant Amoeba Speciation by PCR								
Naegleria fowleri	----	-	-	----	----	----	Not Detected	----
Naegleria spp.	----	-	-	----	----	----	Not Detected	----
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	<1	<1	<1	<1
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	<1	<1	~4	<1	<1
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SCUDDLES COOLER	VILLAGE KITCHEN	COFFER DAM	GGW53P	LDP
				Sampling date / time	21-Oct-2025 00:00	21-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00
Compound	CAS Number	LOR	Unit		EP2517478-011	EP2517478-021	EP2517478-022	EP2517478-023	EP2517478-024
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		----	7.18	7.94	6.85	8.75
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		----	241	17400	116	11700
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		----	138	13200	100	9230
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		----	<1	3820	25	2810
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		----	<1	2280	18	1840
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		----	57	5110	13	3380
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		----	<1	1310	5	1080
Magnesium	7439-95-4	1	mg/L		----	<1	133	3	28
Sodium	7440-23-5	1	mg/L		----	51	2780	11	1740
Potassium	7440-09-7	1	mg/L		----	<1	118	3	64
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		----	<0.01	0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		----	<0.001	0.001	0.003	0.001
Cadmium	7440-43-9	0.0001	mg/L		----	0.0005	0.0007	<0.0001	0.0015
Chromium	7440-47-3	0.001	mg/L		----	<0.001	<0.001	<0.001	0.002
Copper	7440-50-8	0.001	mg/L		----	0.049	0.009	<0.001	0.013
Nickel	7440-02-0	0.001	mg/L		----	<0.001	0.011	0.039	0.002
Lead	7439-92-1	0.001	mg/L		----	<0.001	0.003	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		----	<0.01	0.02	<0.01	0.04
Zinc	7440-66-6	0.005	mg/L		----	0.186	0.193	0.075	0.038
Manganese	7439-96-5	0.001	mg/L		----	0.007	3.09	0.758	0.100

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SCUDDLES COOLER	VILLAGE KITCHEN	COFFER DAM	GGW53P	LDP
			Sampling date / time	21-Oct-2025 00:00	21-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00
Compound	CAS Number	LOR	Unit	EP2517478-011	EP2517478-021	EP2517478-022	EP2517478-023	EP2517478-024
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Iron	7439-89-6	0.05	mg/L	----	<0.05	**0.19**	**8.39**	<0.05
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	----	<0.01	**0.36**	**0.50**	**0.03**
Arsenic	7440-38-2	0.001	mg/L	----	<0.001	**0.003**	**0.004**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L	----	<0.0001	**0.0081**	**0.0003**	**0.0019**
Chromium	7440-47-3	0.001	mg/L	----	<0.001	**0.001**	**0.062**	**0.006**
Copper	7440-50-8	0.001	mg/L	----	**0.039**	**0.143**	**0.051**	**0.021**
Nickel	7440-02-0	0.001	mg/L	----	<0.001	**0.014**	**0.066**	<0.001
Lead	7439-92-1	0.001	mg/L	----	<0.001	**0.031**	**0.008**	**0.002**
Selenium	7782-49-2	0.01	mg/L	----	<0.01	**0.02**	<0.01	**0.04**
Zinc	7440-66-6	0.005	mg/L	----	**0.029**	**2.00**	**0.149**	**0.144**
Manganese	7439-96-5	0.001	mg/L	----	<0.001	**3.39**	**0.817**	**0.113**
Iron	7439-89-6	0.05	mg/L	----	<0.05	**1.34**	**11.3**	**0.15**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	----	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	----	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	----	<0.01	<0.02	<0.01	**2.50**
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	----	**1.58**	<0.02	<0.01	**6.67**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	----	**1.58**	<0.02	<0.01	**9.17**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	----	**0.3**	**24.5**	**0.5**	**5.5**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	----	**1.9**	**24.5**	**0.5**	**14.7**
MM684: Thermotolerant Amoeba by Culture								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SCUDDLES COOLER	VILLAGE KITCHEN	COFFER DAM	GGW53P	LDP
			Sampling date / time	21-Oct-2025 00:00	21-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00
Compound	CAS Number	LOR	Unit	EP2517478-011	EP2517478-021	EP2517478-022	EP2517478-023	EP2517478-024
				Result	Result	Result	Result	Result
MM684: Thermotolerant Amoeba by Culture - Continued								
Thermophilic Amoeba	----	1	-	**Detected**	**----**	**----**	**----**	**----**
Volume Analysed	----	0.01	L	**0.25**	**----**	**----**	**----**	**----**
MM699: Thermotolerant Amoeba Speciation by PCR								
Naegleria fowleri	----	-	-	**Not Detected**	**----**	**----**	**----**	**----**
Naegleria spp.	----	-	-	**Not Detected**	**----**	**----**	**----**	**----**
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	**----**	**----**	**----**	**----**
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	**~2**	**----**	**----**	**----**	**----**
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	**----**	**----**	**----**	**----**
Escherichia coli	----	1	CFU/100mL	<1	**----**	**----**	**----**	**----**
ED038P: Acidity by Auto Titrator								
Acidity as CaCO3	----	1	mg/L	**----**	**4**	**22**	**6**	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GHDP	TSF1 UNDERDRAIN	TSF3 DRAIN	GGW67P	GGW93P
			Sampling date / time	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00
Compound	CAS Number	LOR	Unit	EP2517478-025	EP2517478-026	EP2517478-027	EP2517478-028	EP2517478-029
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.23**	**3.00**	**7.06**	**7.92**	**7.68**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**11000**	**31000**	**19800**	**2440**	**618**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**8020**	**35900**	**14400**	**1600**	**410**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**2250**	**17600**	**3730**	**641**	**117**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**1540**	**15400**	**2900**	**342**	**60**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**3240**	**6010**	**5520**	**621**	**169**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**673**	**746**	**892**	**82**	**14**
Magnesium	7439-95-4	1	mg/L	**139**	**3830**	**365**	**106**	**20**
Sodium	7440-23-5	1	mg/L	**1630**	**3790**	**3560**	**283**	**90**
Potassium	7440-09-7	1	mg/L	**57**	**117**	**163**	**15**	**7**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	**1.54**	**0.02**	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	**0.001**	**0.003**	<0.001	**0.001**	<0.001
Cadmium	7440-43-9	0.0001	mg/L	**0.277**	**0.0026**	**0.0016**	<0.0001	**0.0002**
Chromium	7440-47-3	0.001	mg/L	<0.001	**0.005**	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.155**	**0.103**	<0.001	<0.001	**0.004**
Nickel	7440-02-0	0.001	mg/L	**0.036**	**0.009**	**0.003**	**0.002**	**0.013**
Lead	7439-92-1	0.001	mg/L	**0.014**	**0.059**	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	**0.02**	<0.02	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**71.2**	**6.82**	**2.51**	**0.694**	**0.122**
Manganese	7439-96-5	0.001	mg/L	**4.01**	**29.5**	**2.38**	**1.68**	**0.369**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	GHDP	TSF1 UNDERDRAIN	TSF3 DRAIN	GGW67P	GGW93P
				Sampling date / time	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00
Compound	CAS Number	LOR	Unit		EP2517478-025	EP2517478-026	EP2517478-027	EP2517478-028	EP2517478-029
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	**396**	**33.8**	**0.59**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.52**	**1.74**	**0.04**	**0.03**	**0.03**
Arsenic	7440-38-2	0.001	mg/L		**0.002**	**0.003**	**0.001**	**0.002**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.297**	**0.0030**	**0.0011**	<0.0001	**0.0002**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.006**	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.275**	**0.144**	**0.013**	**0.005**	**0.016**
Nickel	7440-02-0	0.001	mg/L		**0.040**	**0.009**	**0.002**	**0.002**	**0.014**
Lead	7439-92-1	0.001	mg/L		**0.052**	**0.066**	**0.002**	**0.001**	**0.004**
Selenium	7782-49-2	0.01	mg/L		**0.03**	<0.02	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**76.6**	**7.27**	**2.59**	**1.30**	**0.159**
Manganese	7439-96-5	0.001	mg/L		**4.35**	**31.0**	**2.48**	**1.77**	**0.394**
Iron	7439-89-6	0.05	mg/L		**1.79**	**416**	**36.6**	**0.84**	**0.34**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**1.62**	<0.05	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**11.1**	<0.05	**0.04**	<0.01	**0.34**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**12.7**	<0.05	**0.04**	<0.01	**0.34**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**10.8**	**26.1**	**8.3**	**0.2**	**0.1**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**23.5**	**26.1**	**8.3**	**0.2**	**0.4**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	GHDP	TSF1 UNDERDRAIN	TSF3 DRAIN	GGW67P	GGW93P
				Sampling date / time	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00
Compound	CAS Number	LOR	Unit		EP2517478-025	EP2517478-026	EP2517478-027	EP2517478-028	EP2517478-029
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**105**	**1020**	**28**	**5**	**3**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	EPC	ROM DAM	RO TANK	SCUDDLES UG RAW	CLEAN DAM
			Sampling date / time	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00
Compound	CAS Number	LOR	Unit	EP2517478-030	EP2517478-031	EP2517478-032	EP2517478-033	EP2517478-034
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.40**	**8.01**	**7.27**	**5.92**	**4.39**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**10400**	**16100**	**240**	**8320**	**1490**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**7590**	**12900**	**138**	**6280**	**1080**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**2380**	**3640**	**18**	**2320**	**404**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**1750**	**2290**	**2**	**2030**	**344**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**2880**	**5090**	**56**	**1960**	**332**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**673**	**1170**	**4**	**629**	**132**
Magnesium	7439-95-4	1	mg/L	**170**	**174**	**2**	**183**	**18**
Sodium	7440-23-5	1	mg/L	**1530**	**2870**	**56**	**1040**	**165**
Potassium	7440-09-7	1	mg/L	**65**	**117**	**3**	**60**	**9**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	**0.40**
Arsenic	7440-38-2	0.001	mg/L	<0.001	**0.001**	<0.001	<0.001	**0.001**
Cadmium	7440-43-9	0.0001	mg/L	**0.0817**	**0.0213**	<0.0001	**0.115**	**0.0951**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.034**	**0.117**	<0.001	**0.022**	**6.44**
Nickel	7440-02-0	0.001	mg/L	**0.017**	**0.015**	<0.001	**0.066**	**0.018**
Lead	7439-92-1	0.001	mg/L	<0.001	**0.005**	<0.001	**0.003**	**0.521**
Selenium	7782-49-2	0.01	mg/L	**0.01**	**0.01**	<0.01	**0.02**	<0.01
Zinc	7440-66-6	0.005	mg/L	**19.4**	**4.33**	**0.025**	**95.3**	**32.3**
Manganese	7439-96-5	0.001	mg/L	**2.65**	**2.34**	**0.005**	**13.7**	**1.35**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	EPC	ROM DAM	RO TANK	SCUDDLES UG RAW	CLEAN DAM
			Sampling date / time	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00
Compound	CAS Number	LOR	Unit	EP2517478-030	EP2517478-031	EP2517478-032	EP2517478-033	EP2517478-034
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Iron	7439-89-6	0.05	mg/L	**0.60**	<0.05	<0.05	**6.64**	**0.11**
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.05**	**0.34**	<0.01	**4.49**	**0.46**
Arsenic	7440-38-2	0.001	mg/L	<0.001	**0.003**	<0.001	**0.009**	**0.002**
Cadmium	7440-43-9	0.0001	mg/L	**0.0900**	**0.0236**	<0.0001	**0.128**	**0.103**
Chromium	7440-47-3	0.001	mg/L	<0.001	**0.002**	<0.001	**0.008**	<0.001
Copper	7440-50-8	0.001	mg/L	**0.092**	**0.237**	**0.002**	**0.544**	**7.00**
Nickel	7440-02-0	0.001	mg/L	**0.018**	**0.016**	<0.001	**0.076**	**0.019**
Lead	7439-92-1	0.001	mg/L	**0.010**	**0.034**	<0.001	**0.386**	**0.570**
Selenium	7782-49-2	0.01	mg/L	**0.01**	**0.01**	<0.01	**0.02**	<0.01
Zinc	7440-66-6	0.005	mg/L	**23.0**	**5.12**	**0.018**	**108**	**34.7**
Manganese	7439-96-5	0.001	mg/L	**2.96**	**2.76**	<0.001	**15.2**	**1.43**
Iron	7439-89-6	0.05	mg/L	**1.01**	**1.17**	<0.05	**23.9**	**0.32**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	**0.73**	**0.40**	<0.01	**0.71**	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**4.29**	**0.05**	**1.56**	**4.13**	**0.91**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**5.02**	**0.45**	**1.56**	**4.84**	**0.91**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**3.3**	**14.4**	**0.6**	**9.7**	**2.6**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**8.3**	**14.8**	**2.2**	**14.5**	**3.5**
ED038P: Acidity by Auto Titrator								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	EPC	ROM DAM	RO TANK	SCUDDLES UG RAW	CLEAN DAM
			Sampling date / time	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00	20-Oct-2025 00:00
Compound	CAS Number	LOR	Unit	EP2517478-030	EP2517478-031	EP2517478-032	EP2517478-033	EP2517478-034
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	**35**	**13**	<1	**156**	**68**

CERTIFICATE OF ANALYSIS

Work Order	: **EP2518286**	Page	: 1 of 9
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Madison Forster
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 04-Nov-2025 10:15
Order number	: 2049366	Date Analysis Commenced	: 04-Nov-2025
C-O-C number	: ----	Issue Date	: 11-Nov-2025 17:48
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 7		
No. of samples analysed	: 7		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Perth - State Manager	Perth Inorganics, Wangara, WA
	Inorganics Analyst	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Lab Technician	Perth Microbiology, Wangara, WA
	Organic Supervisor	Perth Organics, Wangara, WA
	Senior Inorganic Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- ED037 (Alkalinity): NATA accreditation does not cover the performance of this service.
- MF = membrane filtration
- CFU = colony forming unit
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- MW006 is ALS's internal code and is equivalent to AS4276.5.
- MW006:Analysis Commenced:Date:4/11/2025.Time:1:30PM.
- ED037P (Alkalinity): EP2518286 samples 3-7 were filtered prior to analysis due to possible sample matrix interference. The sample was observed to contain fine particulate that may consume additional titrant.
- EG020: Cr results for EP2518286 -005 has been confirmed by re-preparation and re-analysis.
- EP071: Poor duplicate precision for QC sample due to suspected matrix effects and sample heterogeneity. Confirmed by re-extraction and re-analysis.
- Microbiological Comment: In accordance with ALS work instruction QWI-MIC/04, membrane filtration result is reported an approximate (~) when the count of colonies on the filtered membrane is outside the range of 10 - 100cfu.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	LWR01	LWR02	LWR03	LWR04	LWR05
			Sampling date / time	01-Nov-2025 00:00	01-Nov-2025 00:00	01-Nov-2025 00:00	01-Nov-2025 00:00	01-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2518286-003	EP2518286-004	EP2518286-005	EP2518286-006	EP2518286-007
				Result	Result	Result	Result	Result
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	8.2	8.6	8.1	8.0	8.3
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	13800	28500	4420	2970	5720
EA014 Total Soluble Salts								
Total Soluble Salts	----	5	mg/kg	46900	96800	15000	10100	19400
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	7.7	10.4	2.0	1.7	2.1
ED037: Alkalinity								
ø Carbonate Alkalinity as CaCO3	3812-32-6	5	mg/kg	<5	7	<5	<5	<5
ø Bicarbonate Alkalinity as CaCO3	71-52-3	5	mg/kg	61	96	80	70	62
ø Total Alkalinity as CaCO3	----	5	mg/kg	61	102	80	70	62
ED040S : Soluble Sulfate by ICPAES								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	11500	19900	1140	3830	7310
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	18100	47100	6640	2680	4600
ED093T: Total Major Cations								
Sodium	7440-23-5	50	mg/kg	11300	33700	4120	1400	2460
Potassium	7440-09-7	50	mg/kg	1160	3290	3280	1390	520
Calcium	7440-70-2	50	mg/kg	78100	121000	42500	14800	24500
Magnesium	7439-95-4	50	mg/kg	7080	18800	5090	3450	2050
EG005(ED093)-SD: Total Metals in Sediments by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	2520	5590	6750	2980	1060
Iron	7439-89-6	50	mg/kg	8270	9600	34800	12000	4150
EG020-SD: Total Metals in Sediments by ICPMS								
Arsenic	7440-38-2	1.00	mg/kg	1.38	1.53	3.72	1.66	<1.00
Cadmium	7440-43-9	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	7440-47-3	1.0	mg/kg	36.5	35.7	143	58.0	26.4
Copper	7440-50-8	1.0	mg/kg	4.2	7.4	12.5	4.6	1.7

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	LWR01	LWR02	LWR03	LWR04	LWR05
				Sampling date / time	01-Nov-2025 00:00	01-Nov-2025 00:00	01-Nov-2025 00:00	01-Nov-2025 00:00	01-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2518286-003	EP2518286-004	EP2518286-005	EP2518286-006	EP2518286-007
					Result	Result	Result	Result	Result
EG020-SD: Total Metals in Sediments by ICPMS - Continued									
Cobalt	7440-48-4	0.5	mg/kg		1.0	2.1	3.9	1.5	0.5
Lead	7439-92-1	1.0	mg/kg		1.5	1.9	7.0	1.5	<1.0
Manganese	7439-96-5	10	mg/kg		49	116	118	39	21
Nickel	7440-02-0	1.0	mg/kg		3.0	5.9	11.7	5.4	1.9
Selenium	7782-49-2	0.1	mg/kg		0.1	0.2	0.1	<0.1	<0.1
Silver	7440-22-4	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	7440-66-6	1.0	mg/kg		9.5	13.5	11.1	6.9	2.6
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.01	mg/kg		<0.01	<0.01	<0.01	<0.01	<0.01
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N (Sol.)	14797-65-0	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N (Sol.)	14797-55-8	0.1	mg/kg		<0.1	3.5	3.9	2.7	0.5
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N (Sol.)	----	0.1	mg/kg		<0.1	3.5	3.9	2.7	0.5
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	20	mg/kg		240	420	210	260	110
EK062: Total Nitrogen as N (TKN + NOx)									
^ Total Nitrogen as N	----	20	mg/kg		240	420	210	260	110
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	2	mg/kg		83	153	140	105	62
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%		0.28	0.29	0.23	0.23	0.26

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	WWTF	LAKE DISCHARGE	----	----	----
			Sampling date / time	03-Nov-2025 00:00	01-Nov-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EP2518286-001	EP2518286-002	--------	--------	--------
				Result	Result	----	----	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.24**	**7.78**	----	----	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	**12000**	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**775**	**8550**	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	**6**	<5	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	----	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	----	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	----	**69**	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	----	**69**	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	----	**2160**	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	----	<0.01	----	----	----
Arsenic	7440-38-2	0.001	mg/L	----	**0.001**	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	----	**0.0009**	----	----	----
Chromium	7440-47-3	0.001	mg/L	----	**0.001**	----	----	----
Copper	7440-50-8	0.001	mg/L	----	**0.010**	----	----	----
Nickel	7440-02-0	0.001	mg/L	----	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L	----	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L	----	**0.009**	----	----	----
Manganese	7439-96-5	0.001	mg/L	----	**0.026**	----	----	----
Selenium	7782-49-2	0.010	mg/L	----	**0.031**	----	----	----
Iron	7439-89-6	0.05	mg/L	----	<0.05	----	----	----
EG020T: Total Metals by ICP-MS								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	WWTF	LAKE DISCHARGE	----	----	----
				Sampling date / time	03-Nov-2025 00:00	01-Nov-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2518286-001	EP2518286-002	--------	--------	--------
					Result	Result	----	----	----
EG020T: Total Metals by ICP-MS - Continued									
Aluminium	7429-90-5	0.01	mg/L		----	<0.01	----	----	----
Arsenic	7440-38-2	0.001	mg/L		----	**0.001**	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		----	**0.0009**	----	----	----
Chromium	7440-47-3	0.001	mg/L		----	**0.001**	----	----	----
Copper	7440-50-8	0.001	mg/L		----	**0.011**	----	----	----
Nickel	7440-02-0	0.001	mg/L		----	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L		----	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L		----	**0.012**	----	----	----
Manganese	7439-96-5	0.001	mg/L		----	**0.026**	----	----	----
Selenium	7782-49-2	0.010	mg/L		----	**0.033**	----	----	----
Iron	7439-89-6	0.05	mg/L		----	<0.05	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		----	<0.0001	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		----	<0.0001	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		----	**0.03**	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		----	**0.02**	----	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		----	**13.0**	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**5.78**	**13.0**	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**18.3**	**1.7**	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**24.1**	**14.7**	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	WWTF	LAKE DISCHARGE	----	----	----
				Sampling date / time	03-Nov-2025 00:00	01-Nov-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2518286-001	EP2518286-002	--------	--------	--------
					Result	Result	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser - Continued									
Total Phosphorus as P	----	0.01	mg/L		**7.52**	**0.20**	----	----	----
EP030: Biochemical Oxygen Demand (BOD)									
Biochemical Oxygen Demand	----	2	mg/L		**8**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		----	<20	----	----	----
C10 - C14 Fraction	----	50	µg/L		----	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L		----	<100	----	----	----
C29 - C36 Fraction	----	50	µg/L		----	<50	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L		----	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		----	<20	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		----	<20	----	----	----
>C10 - C16 Fraction	----	100	µg/L		----	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L		----	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L		----	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L		----	<100	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L		----	<100	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		----	<1	----	----	----
Toluene	108-88-3	2	µg/L		----	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L		----	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		----	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L		----	<2	----	----	----
^ Total Xylenes	----	2	µg/L		----	<2	----	----	----
^ Sum of BTEX	----	1	µg/L		----	<1	----	----	----
Naphthalene	91-20-3	5	µg/L		----	<5	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	WWTF	LAKE DISCHARGE	----	----	----
				Sampling date / time	03-Nov-2025 00:00	01-Nov-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2518286-001	EP2518286-002	--------	--------	--------
					Result	Result	----	----	----
MW006: Thermotolerant Coliforms & E.coli by MF									
Thermotolerant Coliforms	----	1	CFU/100mL		<1	**----**	**----**	**----**	**----**
Escherichia coli	----	1	CFU/100mL		<1	**----**	**----**	**----**	**----**
ED038P: Acidity by Auto Titrator									
Acidity as CaCO3	----	1	mg/L		**----**	**9**	**----**	**----**	**----**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**----**	**81.6**	**----**	**----**	**----**
Toluene-D8	2037-26-5	2	%		**----**	**86.0**	**----**	**----**	**----**
4-Bromofluorobenzene	460-00-4	2	%		**----**	**87.0**	**----**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	61	141
Toluene-D8	2037-26-5	73	126
4-Bromofluorobenzene	460-00-4	60	125

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry / Biology).

(SOIL) EP003: Total Organic Carbon (TOC) in Soil

CERTIFICATE OF ANALYSIS

Work Order	: **EP2519289**	Page	: 1 of 43
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Madison Forster
Address	: PMB 7 GERALDTON WA, AUSTRALIA 6531	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 18-Nov-2025 13:55
Order number	: 2049366	Date Analysis Commenced	: 19-Nov-2025
C-O-C number	: ----	Issue Date	: 26-Nov-2025 23:34
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 74		
No. of samples analysed	: 74		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Inorganics Analyst	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Inorganic Chemist	Perth Inorganics, Wangara, WA

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EG020: Metals LOR for sample EP25192879 -066 and -074 raised due to high TDS content.
- EG035: Positive mercury on samples EP2519289- 028 and 042 have been confirmed by re-preparation and re-analysis.
- EG020: It is recognised that various total metal concentrations are less than dissolved for various samples. However, the difference is within experimental variation of the methods.
- EG020: It has been confirmed by re-preparation and re-analysis that total Mn concentration is less than dissolved for samples EP2519289-031, -040 and -065.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SDM22	SDM14	SDM21	SDM06	SDM03
				Sampling date / time	16-Nov-2025 00:00	16-Nov-2025 00:00	16-Nov-2025 00:00	16-Nov-2025 00:00	16-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-001	EP2519289-002	EP2519289-003	EP2519289-004	EP2519289-005
					Result	Result	Result	Result	Result
EG020T: Total Metals by ICP-MS									
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	**0.0015**	<0.0001	**0.0003**	**0.0009**
Copper	7440-50-8	0.001	mg/L		**0.020**	**0.069**	**0.009**	**0.021**	**0.073**
Lead	7439-92-1	0.001	mg/L		<0.001	**0.056**	**0.012**	**0.004**	**0.030**
Zinc	7440-66-6	0.005	mg/L		**0.015**	**0.432**	**0.025**	**0.149**	**0.334**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SDM20	SDM17	SDM10	SDM23	SDM11
				Sampling date / time	16-Nov-2025 00:00	16-Nov-2025 00:00	16-Nov-2025 00:00	16-Nov-2025 00:00	16-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-006	EP2519289-007	EP2519289-008	EP2519289-009	EP2519289-010
					Result	Result	Result	Result	Result
EG020T: Total Metals by ICP-MS									
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	**0.0005**	**0.0027**	**0.0001**	**0.0004**
Copper	7440-50-8	0.001	mg/L		**0.107**	**0.030**	**0.098**	**0.205**	**0.040**
Lead	7439-92-1	0.001	mg/L		**0.059**	**0.021**	**0.011**	**0.005**	**0.016**
Zinc	7440-66-6	0.005	mg/L		**0.047**	**0.178**	**0.111**	**0.037**	**0.106**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SDM04	GVW007P	SB14B1	SB15B	SB36B
			Sampling date / time	16-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-011	EP2519289-012	EP2519289-013	EP2519289-014	EP2519289-015
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	----	7.90	7.53	7.08	7.72
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	3010	9450	19300	15500
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	----	1710	6140	13100	10600
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	----	213	1390	3120	2390
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	----	174	932	2320	2140
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	----	797	2800	5780	4400
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	----	26	182	590	267
Magnesium	7439-95-4	1	mg/L	----	36	228	401	419
Sodium	7440-23-5	1	mg/L	----	521	1450	3260	2630
Potassium	7440-09-7	1	mg/L	----	27	117	117	105
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	----	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	----	<0.001	0.002	<0.001	0.001
Cadmium	7440-43-9	0.0001	mg/L	----	0.0003	0.0003	0.0027	0.0009
Chromium	7440-47-3	0.001	mg/L	----	<0.001	<0.001	<0.001	0.001
Copper	7440-50-8	0.001	mg/L	----	0.002	0.003	0.002	0.001
Nickel	7440-02-0	0.001	mg/L	----	0.002	0.009	0.008	0.004
Lead	7439-92-1	0.001	mg/L	----	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.010	mg/L	----	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L	----	0.014	0.047	0.816	0.127
Manganese	7439-96-5	0.001	mg/L	----	0.094	0.008	0.074	<0.001

Analytical Results

Sub-Matrix: WATER
(Matrix: WATER)

Compound	CAS Number	LOR	Unit	Sample ID	SDM04	GVW007P	SB14B1	SB15B	SB36B
				Sampling date / time	16-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00
					EP2519289-011	EP2519289-012	EP2519289-013	EP2519289-014	EP2519289-015
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		----	**0.10**	<0.05	**0.13**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		----	**0.06**	**3.71**	**1.09**	**0.03**
Arsenic	7440-38-2	0.001	mg/L		----	<0.001	**0.005**	**0.003**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		**0.0008**	**0.0006**	**0.0005**	**0.0035**	**0.0009**
Chromium	7440-47-3	0.001	mg/L		----	**0.002**	**0.017**	**0.008**	**0.002**
Copper	7440-50-8	0.001	mg/L		**0.075**	**0.006**	**0.047**	**0.046**	**0.004**
Nickel	7440-02-0	0.001	mg/L		----	**0.002**	**0.020**	**0.010**	**0.005**
Lead	7439-92-1	0.001	mg/L		**0.052**	**0.005**	**0.018**	**0.010**	**0.001**
Selenium	7782-49-2	0.010	mg/L		----	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**0.271**	**0.050**	**0.191**	**1.00**	**0.138**
Manganese	7439-96-5	0.001	mg/L		----	**0.115**	**0.100**	**0.081**	**0.002**
Iron	7439-89-6	0.05	mg/L		----	**6.43**	**5.28**	**2.85**	**0.08**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		----	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		----	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		----	**0.01**	<0.01	**0.07**	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		----	**4.23**	**42.4**	**6.28**	**2.20**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		----	**4.24**	**42.4**	**6.35**	**2.20**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		----	**0.7**	**4.5**	**0.9**	**0.5**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		----	**4.9**	**46.9**	**7.2**	**2.7**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SDM04	GVW007P	SB14B1	SB15B	SB36B
			Sampling date / time	16-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-011	EP2519289-012	EP2519289-013	EP2519289-014	EP2519289-015
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	**----**	<1	**8**	**27**	**14**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SB81	SB82	SB83	MB14	MB14B
			Sampling date / time	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-016	EP2519289-017	EP2519289-018	EP2519289-019	EP2519289-020
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.35**	**7.55**	**6.71**	**7.35**	**7.59**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**2970**	**9660**	**6830**	**2000**	**2120**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**1790**	**5580**	**4330**	**1250**	**1160**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**168**	**751**	**560**	**286**	**357**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**184**	**853**	**508**	**98**	**119**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**828**	**2850**	**2190**	**567**	**592**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**21**	**108**	**66**	**27**	**39**
Magnesium	7439-95-4	1	mg/L	**28**	**117**	**96**	**53**	**63**
Sodium	7440-23-5	1	mg/L	**588**	**2020**	**1250**	**269**	**288**
Potassium	7440-09-7	1	mg/L	**24**	**44**	**36**	**16**	**19**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	**0.001**	<0.001	<0.001	<0.001	**0.001**
Cadmium	7440-43-9	0.0001	mg/L	**0.0010**	**0.0004**	**0.0003**	<0.0001	**0.0002**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	**0.006**	**0.004**
Copper	7440-50-8	0.001	mg/L	<0.001	**0.001**	**0.001**	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	**0.001**	<0.001	**0.005**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L	**0.016**	**0.029**	**0.021**	**0.007**	**0.017**
Manganese	7439-96-5	0.001	mg/L	**0.016**	**0.005**	**0.005**	**0.004**	**0.003**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SB81	SB82	SB83	MB14	MB14B
			Sampling date / time	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-016	EP2519289-017	EP2519289-018	EP2519289-019	EP2519289-020
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.31**	**0.09**	**0.19**	**0.07**	**0.03**
Arsenic	7440-38-2	0.001	mg/L	**0.002**	**0.001**	<0.001	**0.001**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L	**0.0008**	**0.0005**	**0.0004**	**0.0001**	**0.0002**
Chromium	7440-47-3	0.001	mg/L	**0.002**	**0.001**	<0.001	**0.007**	**0.004**
Copper	7440-50-8	0.001	mg/L	**0.016**	**0.006**	**0.007**	**0.005**	**0.003**
Nickel	7440-02-0	0.001	mg/L	**0.001**	**0.001**	**0.006**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	**0.017**	**0.004**	**0.004**	**0.002**	**0.001**
Selenium	7782-49-2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L	**0.044**	**0.042**	**0.033**	**0.018**	**0.033**
Manganese	7439-96-5	0.001	mg/L	**0.044**	**0.011**	**0.008**	**0.012**	**0.009**
Iron	7439-89-6	0.05	mg/L	**0.65**	**0.23**	**0.27**	**0.17**	**0.07**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	**0.41**	<0.01	**0.02**	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**8.91**	**15.1**	**13.0**	**10.1**	**9.62**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**8.91**	**15.5**	**13.0**	**10.1**	**9.62**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**0.8**	**2.1**	**1.5**	**1.9**	**1.3**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**9.7**	**17.6**	**14.5**	**12.0**	**10.9**
ED038P: Acidity by Auto Titrator								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB81	SB82	SB83	MB14	MB14B
				Sampling date / time	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-016	EP2519289-017	EP2519289-018	EP2519289-019	EP2519289-020
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		7	14	12	7	6

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB15B	MB21	GFWB002	GVW005P	SB16B
				Sampling date / time	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-021	EP2519289-022	EP2519289-023	EP2519289-024	EP2519289-025
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.70**	**7.63**	**7.58**	**8.57**	**7.51**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**2790**	**1950**	**5400**	**3290**	**11800**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**1670**	**1060**	**2970**	**1750**	**7360**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**205**	**236**	**548**	**136**	**2170**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**164**	**80**	**322**	**25**	**1060**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**776**	**542**	**1460**	**995**	**3710**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**16**	**22**	**66**	**5**	**320**
Magnesium	7439-95-4	1	mg/L		**40**	**44**	**93**	**30**	**332**
Sodium	7440-23-5	1	mg/L		**497**	**290**	**935**	**642**	**1700**
Potassium	7440-09-7	1	mg/L		**25**	**18**	**42**	**30**	**87**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		**0.002**	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	**0.0003**	<0.0001	<0.0001	**0.0002**
Chromium	7440-47-3	0.001	mg/L		**0.009**	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	**0.004**	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.001**	**0.116**	<0.001	**0.002**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		<0.005	**0.093**	**0.047**	<0.005	**0.029**
Manganese	7439-96-5	0.001	mg/L		**0.001**	**0.016**	**0.523**	**0.097**	**0.017**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB15B	MB21	GFWB002	GVW005P	SB16B
			Sampling date / time	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-021	EP2519289-022	EP2519289-023	EP2519289-024	EP2519289-025
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	**11.3**	<0.05	<0.05
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**3.39**	**1.13**	**0.40**	**0.39**	**1.17**
Arsenic	7440-38-2	0.001	mg/L	**0.003**	**0.002**	<0.001	<0.001	**0.002**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	**0.0005**	**0.0005**	**0.0004**	**0.0004**
Chromium	7440-47-3	0.001	mg/L	**0.055**	**0.004**	**0.248**	**0.002**	**0.008**
Copper	7440-50-8	0.001	mg/L	**0.032**	**0.026**	**0.022**	**0.030**	**0.019**
Nickel	7440-02-0	0.001	mg/L	**0.024**	**0.004**	**0.765**	**0.001**	**0.006**
Lead	7439-92-1	0.001	mg/L	**0.003**	**0.010**	**0.013**	**0.014**	**0.010**
Selenium	7782-49-2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L	**0.030**	**0.173**	**0.152**	**0.112**	**0.062**
Manganese	7439-96-5	0.001	mg/L	**0.119**	**0.040**	**0.520**	**0.176**	**0.110**
Iron	7439-89-6	0.05	mg/L	**10.2**	**2.19**	**16.5**	**5.86**	**2.60**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**12.9**	**14.7**	**0.04**	**0.03**	**18.6**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**12.9**	**14.7**	**0.04**	**0.03**	**18.6**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**1.3**	**1.8**	**1.0**	**0.2**	**1.8**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**14.2**	**16.5**	**1.0**	**0.2**	**20.4**
ED038P: Acidity by Auto Titrator								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB15B	MB21	GFWB002	GVW005P	SB16B
				Sampling date / time	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	14-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-021	EP2519289-022	EP2519289-023	EP2519289-024	EP2519289-025
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**5**	**5**	**13**	<1	**10**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SB32B	SB34B	SB35B	SB77	SB45
				Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-026	EP2519289-027	EP2519289-028	EP2519289-029	EP2519289-030
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**6.41**	**7.19**	**5.99**	**7.15**	**6.21**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**2040**	**13300**	**11700**	**12400**	**11900**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**1280**	**9160**	**7890**	**9150**	**8150**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**353**	**2920**	**2500**	**2850**	**2610**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**422**	**2030**	**1790**	**1910**	**1750**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**425**	**3830**	**3360**	**3490**	**3340**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**64**	**745**	**673**	**964**	**707**
Magnesium	7439-95-4	1	mg/L		**47**	**257**	**199**	**107**	**204**
Sodium	7440-23-5	1	mg/L		**258**	**1960**	**1660**	**1770**	**1670**
Potassium	7440-09-7	1	mg/L		**28**	**46**	**83**	**56**	**89**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.01**	<0.01	**0.20**	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	**0.004**	<0.001	**0.003**
Cadmium	7440-43-9	0.0001	mg/L		**0.0967**	**0.0194**	**0.0006**	**0.0004**	**0.0005**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.103**	**0.001**	**0.004**	**0.005**	**0.005**
Nickel	7440-02-0	0.001	mg/L		**0.063**	**0.043**	**0.194**	**0.028**	**0.175**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	**0.003**	<0.001	**0.003**
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**46.7**	**4.90**	**0.073**	**0.059**	**0.051**
Manganese	7439-96-5	0.001	mg/L		**1.43**	**15.4**	**6.82**	**3.63**	**5.59**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SB32B	SB34B	SB35B	SB77	SB45
			Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-026	EP2519289-027	EP2519289-028	EP2519289-029	EP2519289-030
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Iron	7439-89-6	0.05	mg/L	<0.05	**0.06**	<0.05	**1.13**	<0.05
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.25**	**0.01**	**0.29**	**0.14**	**0.06**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	**0.004**	**0.003**	**0.002**
Cadmium	7440-43-9	0.0001	mg/L	**0.0994**	**0.0197**	**0.0007**	**0.0004**	**0.0005**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	**0.002**	<0.001
Copper	7440-50-8	0.001	mg/L	**0.110**	**0.003**	**0.006**	**0.012**	**0.006**
Nickel	7440-02-0	0.001	mg/L	**0.064**	**0.044**	**0.204**	**0.028**	**0.180**
Lead	7439-92-1	0.001	mg/L	**0.002**	**0.002**	**0.004**	**0.008**	**0.004**
Selenium	7782-49-2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L	**42.6**	**4.89**	**0.082**	**0.068**	**0.033**
Manganese	7439-96-5	0.001	mg/L	**1.40**	**13.5**	**6.92**	**3.64**	**5.71**
Iron	7439-89-6	0.05	mg/L	**0.44**	**2.81**	**0.10**	**5.05**	**0.19**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	**0.0001**	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**2.99**	**0.08**	<0.01	**0.04**	**0.01**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**2.99**	**0.08**	<0.01	**0.04**	**0.01**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**0.8**	**1.3**	**0.8**	**1.3**	**0.3**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**3.8**	**1.4**	**0.8**	**1.3**	**0.3**
ED038P: Acidity by Auto Titrator								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SB32B	SB34B	SB35B	SB77	SB45
			Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-026	EP2519289-027	EP2519289-028	EP2519289-029	EP2519289-030
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	**81**	**26**	**20**	**13**	**21**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB16	MB17B	MB18	MB650	MB18B
				Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-031	EP2519289-032	EP2519289-033	EP2519289-034	EP2519289-035
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.17**	**6.37**	**7.16**	**7.19**	**7.65**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**6260**	**11900**	**8580**	**8240**	**7450**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**3860**	**7830**	**5550**	**5290**	**4860**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**1160**	**2850**	**2500**	**2630**	**1890**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**665**	**1740**	**737**	**684**	**661**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**1880**	**3480**	**2830**	**2640**	**2350**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**90**	**556**	**193**	**203**	**196**
Magnesium	7439-95-4	1	mg/L		**227**	**356**	**489**	**516**	**341**
Sodium	7440-23-5	1	mg/L		**892**	**1620**	**755**	**781**	**809**
Potassium	7440-09-7	1	mg/L		**50**	**89**	**60**	**62**	**60**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	**0.0022**	**0.0001**	**0.0002**	**0.0005**
Chromium	7440-47-3	0.001	mg/L		**0.006**	<0.001	<0.001	<0.001	**0.003**
Copper	7440-50-8	0.001	mg/L		<0.001	**0.012**	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		**0.015**	**0.156**	**0.011**	**0.023**	**0.424**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**0.067**	**0.146**	**0.008**	**0.024**	**0.030**
Manganese	7439-96-5	0.001	mg/L		**0.072**	**5.45**	**0.019**	**0.084**	**0.051**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB16	MB17B	MB18	MB650	MB18B
				Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-031	EP2519289-032	EP2519289-033	EP2519289-034	EP2519289-035
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.41**	**0.17**	**0.28**	**0.65**	**0.14**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.002**
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	**0.0023**	**0.0002**	**0.0002**	**0.0007**
Chromium	7440-47-3	0.001	mg/L		**0.007**	**0.004**	**0.017**	**0.032**	**0.344**
Copper	7440-50-8	0.001	mg/L		**0.003**	**0.016**	**0.004**	**0.008**	**0.012**
Nickel	7440-02-0	0.001	mg/L		**0.017**	**0.164**	**0.015**	**0.029**	**0.488**
Lead	7439-92-1	0.001	mg/L		**0.002**	**0.002**	**0.002**	**0.003**	**0.004**
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**0.068**	**0.179**	**0.013**	**0.040**	**0.064**
Manganese	7439-96-5	0.001	mg/L		**0.041**	**5.53**	**0.051**	**0.109**	**0.425**
Iron	7439-89-6	0.05	mg/L		**0.99**	**0.49**	**0.86**	**2.29**	**1.81**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0004**	**0.0002**	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0040**	**0.0057**	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	**1.55**	**0.81**	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**4.21**	**0.64**	**4.40**	**5.20**	**4.56**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**4.21**	**0.64**	**5.95**	**6.01**	**4.56**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.5**	**0.6**	**0.7**	**0.7**	**0.6**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**4.7**	**1.2**	**6.6**	**6.7**	**5.2**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB16	MB17B	MB18	MB650	MB18B
				Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-031	EP2519289-032	EP2519289-033	EP2519289-034	EP2519289-035
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**17**	**25**	**10**	**8**	**7**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB44	MB44B	MB45	IB17B	IB19
				Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-036	EP2519289-037	EP2519289-038	EP2519289-039	EP2519289-040
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**5.93**	**7.02**	**6.86**	**6.76**	**7.07**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**12400**	**12100**	**12900**	**11900**	**10000**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**8390**	**8200**	**9190**	**8100**	**6170**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**2870**	**2750**	**4130**	**2600**	**2800**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**1860**	**1790**	**1840**	**1740**	**1160**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**3500**	**3510**	**3950**	**3460**	**3030**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**626**	**716**	**293**	**731**	**421**
Magnesium	7439-95-4	1	mg/L		**317**	**234**	**826**	**188**	**424**
Sodium	7440-23-5	1	mg/L		**1730**	**1780**	**1400**	**1750**	**1080**
Potassium	7440-09-7	1	mg/L		**101**	**89**	**96**	**68**	**103**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.21**	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		**0.001**	<0.001	<0.001	**0.002**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0008**	<0.0001	**0.0009**	**0.0030**	**0.0013**
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.003**	<0.001	<0.001	**0.003**
Copper	7440-50-8	0.001	mg/L		**0.007**	<0.001	**0.004**	**0.046**	**0.003**
Nickel	7440-02-0	0.001	mg/L		**0.217**	**0.015**	**0.062**	**0.118**	**0.013**
Lead	7439-92-1	0.001	mg/L		**0.002**	<0.001	<0.001	**0.002**	<0.001
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**0.071**	**0.017**	**0.026**	**0.737**	**0.074**
Manganese	7439-96-5	0.001	mg/L		**5.29**	**5.33**	**0.301**	**5.77**	**0.056**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB44	MB44B	MB45	IB17B	IB19
			Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-036	EP2519289-037	EP2519289-038	EP2519289-039	EP2519289-040
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Iron	7439-89-6	0.05	mg/L	<0.05	**0.29**	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**4.18**	**0.13**	**3.60**	**0.03**	**0.02**
Arsenic	7440-38-2	0.001	mg/L	**0.002**	**0.001**	<0.001	**0.002**	<0.001
Cadmium	7440-43-9	0.0001	mg/L	**0.0009**	**0.0004**	**0.0009**	**0.0031**	**0.0013**
Chromium	7440-47-3	0.001	mg/L	**0.004**	**0.004**	**0.067**	<0.001	**0.003**
Copper	7440-50-8	0.001	mg/L	**0.015**	**0.010**	**0.025**	**0.050**	**0.004**
Nickel	7440-02-0	0.001	mg/L	**0.226**	**0.028**	**0.088**	**0.121**	**0.012**
Lead	7439-92-1	0.001	mg/L	**0.004**	**0.005**	**0.002**	**0.003**	**0.002**
Selenium	7782-49-2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L	**0.080**	**0.046**	**0.058**	**0.748**	**0.079**
Manganese	7439-96-5	0.001	mg/L	**4.67**	**5.30**	**0.360**	**5.02**	**0.039**
Iron	7439-89-6	0.05	mg/L	**1.38**	**0.92**	**9.81**	**0.07**	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	**0.0005**	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	**0.0006**	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**0.02**	<0.01	**0.14**	**0.37**	**1.14**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**0.02**	<0.01	**0.14**	**0.37**	**1.14**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**0.5**	**0.9**	**0.4**	**0.6**	**0.4**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**0.5**	**0.9**	**0.5**	**1.0**	**1.5**
ED038P: Acidity by Auto Titrator								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB44	MB44B	MB45	IB17B	IB19
				Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-036	EP2519289-037	EP2519289-038	EP2519289-039	EP2519289-040
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**19**	**19**	**20**	**11**	**14**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB31B	IB32	IB34	IB35	IB45
				Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-041	EP2519289-042	EP2519289-043	EP2519289-044	EP2519289-045
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		3.39	6.87	7.22	6.59	6.21
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		11700	8130	12500	11600	12000
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		7780	5710	9440	7860	8240
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		2570	2000	2910	2490	2710
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		1920	2170	1970	1770	1850
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		3230	1630	3470	3300	3330
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		757	295	1010	632	713
Magnesium	7439-95-4	1	mg/L		165	308	95	222	226
Sodium	7440-23-5	1	mg/L		1670	1140	1810	1730	1730
Potassium	7440-09-7	1	mg/L		58	97	56	95	95
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.37	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		0.002	<0.001	<0.001	0.003	0.003
Cadmium	7440-43-9	0.0001	mg/L		0.0064	0.0358	<0.0001	0.0011	0.0005
Chromium	7440-47-3	0.001	mg/L		0.002	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		0.068	0.024	0.002	0.010	0.004
Nickel	7440-02-0	0.001	mg/L		0.147	0.210	0.017	0.258	0.195
Lead	7439-92-1	0.001	mg/L		0.034	0.003	<0.001	0.026	0.002
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		5.12	10.5	0.012	0.076	0.029
Manganese	7439-96-5	0.001	mg/L		11.5	6.86	2.69	7.00	5.81

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB31B	IB32	IB34	IB35	IB45
				Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-041	EP2519289-042	EP2519289-043	EP2519289-044	EP2519289-045
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		**0.32**	<0.05	**2.89**	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.50**	**0.02**	**0.07**	**0.07**	**0.03**
Arsenic	7440-38-2	0.001	mg/L		**0.003**	<0.001	**0.001**	**0.003**	**0.004**
Cadmium	7440-43-9	0.0001	mg/L		**0.0066**	**0.0350**	**0.0003**	**0.0010**	**0.0005**
Chromium	7440-47-3	0.001	mg/L		**0.004**	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.071**	**0.025**	**0.010**	**0.014**	**0.004**
Nickel	7440-02-0	0.001	mg/L		**0.150**	**0.212**	**0.018**	**0.264**	**0.202**
Lead	7439-92-1	0.001	mg/L		**0.036**	**0.004**	**0.005**	**0.031**	**0.002**
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**5.15**	**10.1**	**0.037**	**0.086**	**0.030**
Manganese	7439-96-5	0.001	mg/L		**9.93**	**5.96**	**2.53**	**6.13**	**5.08**
Iron	7439-89-6	0.05	mg/L		**0.63**	**0.06**	**3.64**	**0.21**	**0.08**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	**0.0002**	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	**0.0001**	<0.0001	**0.0003**	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	**0.11**	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.16**	**1.39**	**0.94**	**0.07**	<0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.16**	**1.39**	**1.05**	**0.07**	<0.01
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.6**	**0.4**	**2.3**	**0.3**	**0.3**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**1.8**	**1.8**	**3.4**	**0.4**	**0.3**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB31B	IB32	IB34	IB35	IB45
				Sampling date / time	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00	15-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-041	EP2519289-042	EP2519289-043	EP2519289-044	EP2519289-045
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**57**	**25**	**14**	**11**	**19**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB36	MB40	MB41	MB50	MB51
				Sampling date / time	15-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-046	EP2519289-047	EP2519289-048	EP2519289-049	EP2519289-050
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**7.45**	**7.76**	**7.79**	**6.72**	**7.47**
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**8860**	**2560**	**3860**	**2480**	**3190**
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**5600**	**1400**	**2260**	**1490**	**1930**
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**1090**	**480**	**727**	**697**	**857**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**896**	**198**	**409**	**320**	**464**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**2600**	**674**	**952**	**634**	**772**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**141**	**44**	**90**	**73**	**94**
Magnesium	7439-95-4	1	mg/L		**178**	**90**	**122**	**125**	**151**
Sodium	7440-23-5	1	mg/L		**1520**	**351**	**537**	**214**	**380**
Potassium	7440-09-7	1	mg/L		**71**	**11**	**17**	**13**	**15**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0003**	<0.0001	<0.0001	**0.0028**	**0.0001**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.002**	<0.001	**0.003**	**0.091**	**0.003**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	**0.036**	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	**0.003**	<0.001
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**0.079**	**0.007**	**0.047**	**0.908**	**0.042**
Manganese	7439-96-5	0.001	mg/L		**0.005**	<0.001	**0.002**	**0.030**	<0.001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB36	MB40	MB41	MB50	MB51
				Sampling date / time	15-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-046	EP2519289-047	EP2519289-048	EP2519289-049	EP2519289-050
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.52**	**0.01**	**0.06**	**0.10**	**0.69**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0010**	<0.0001	**0.0002**	**0.0028**	**0.0002**
Chromium	7440-47-3	0.001	mg/L		**0.003**	**0.004**	**0.002**	**0.003**	**0.004**
Copper	7440-50-8	0.001	mg/L		**0.033**	**0.003**	**0.012**	**0.098**	**0.009**
Nickel	7440-02-0	0.001	mg/L		**0.002**	**0.001**	**0.001**	**0.036**	**0.003**
Lead	7439-92-1	0.001	mg/L		**0.021**	**0.002**	**0.004**	**0.008**	**0.003**
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**0.195**	**0.011**	**0.083**	**0.947**	**0.057**
Manganese	7439-96-5	0.001	mg/L		**0.014**	<0.001	**0.003**	**0.037**	**0.031**
Iron	7439-89-6	0.05	mg/L		**1.42**	<0.05	**0.21**	**0.29**	**1.12**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**11.4**	**6.41**	**6.84**	**4.04**	**5.12**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**11.4**	**6.41**	**6.84**	**4.04**	**5.12**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.0**	**0.6**	**0.8**	**1.1**	**2.0**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**12.4**	**7.0**	**7.6**	**5.1**	**7.1**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	IB36	MB40	MB41	MB50	MB51
				Sampling date / time	15-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-046	EP2519289-047	EP2519289-048	EP2519289-049	EP2519289-050
					Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued									
Acidity as CaCO3	----	1	mg/L		**7**	**3**	**4**	**5**	**5**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB52	MB53	MB55	MB56	MB57
				Sampling date / time	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-051	EP2519289-052	EP2519289-053	EP2519289-054	EP2519289-055
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		7.75	7.38	6.72	7.56	7.49
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		3490	6110	4530	3420	9580
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		2080	3780	3150	2120	6460
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		770	1750	1330	974	3110
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		427	966	1050	548	1820
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		874	1670	946	841	2600
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		112	130	188	95	365
Magnesium	7439-95-4	1	mg/L		119	346	210	179	533
Sodium	7440-23-5	1	mg/L		455	682	525	342	1070
Potassium	7440-09-7	1	mg/L		17	25	13	20	33
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		0.0001	0.0003	0.0522	<0.0001	0.0100
Chromium	7440-47-3	0.001	mg/L		<0.001	0.002	0.001	<0.001	0.002
Copper	7440-50-8	0.001	mg/L		0.002	0.003	0.015	0.001	0.022
Nickel	7440-02-0	0.001	mg/L		<0.001	0.002	0.090	<0.001	0.004
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		0.015	0.044	9.14	0.017	0.857
Manganese	7439-96-5	0.001	mg/L		<0.001	<0.001	2.00	<0.001	0.002

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB52	MB53	MB55	MB56	MB57
			Sampling date / time	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-051	EP2519289-052	EP2519289-053	EP2519289-054	EP2519289-055
				Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued								
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.20**	**0.17**	**0.86**	**0.22**	**0.33**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	**0.001**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	**0.0004**	**0.0523**	**0.0002**	**0.0104**
Chromium	7440-47-3	0.001	mg/L	<0.001	**0.002**	**0.006**	**0.001**	**0.008**
Copper	7440-50-8	0.001	mg/L	**0.003**	**0.008**	**0.021**	**0.005**	**0.049**
Nickel	7440-02-0	0.001	mg/L	<0.001	**0.003**	**0.096**	**0.002**	**0.007**
Lead	7439-92-1	0.001	mg/L	**0.004**	**0.006**	**0.009**	**0.003**	**0.033**
Selenium	7782-49-2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L	**0.021**	**0.095**	**9.77**	**0.029**	**1.01**
Manganese	7439-96-5	0.001	mg/L	**0.013**	**0.011**	**2.15**	**0.013**	**0.063**
Iron	7439-89-6	0.05	mg/L	**0.21**	**0.35**	**1.51**	**0.36**	**1.13**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	**0.0001**	<0.0001	**0.0004**	<0.0001
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**5.97**	**3.82**	**15.6**	**4.60**	**2.52**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**5.97**	**3.82**	**15.6**	**4.60**	**2.52**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**0.8**	**0.5**	**2.7**	**0.5**	**0.4**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**6.8**	**4.3**	**18.3**	**5.1**	**2.9**
ED038P: Acidity by Auto Titrator								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB52	MB53	MB55	MB56	MB57
			Sampling date / time	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-051	EP2519289-052	EP2519289-053	EP2519289-054	EP2519289-055
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	**5**	**7**	**22**	**4**	**8**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB58	MB59	MB64	MB65	RB4
			Sampling date / time	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-056	EP2519289-057	EP2519289-058	EP2519289-059	EP2519289-060
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.23**	**7.77**	**7.97**	**7.76**	**7.74**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**583**	**2800**	**2110**	**3290**	**2580**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**347**	**1550**	**1170**	**1860**	**1460**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**136**	**383**	**226**	**334**	**500**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**31**	**182**	**110**	**190**	**215**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**141**	**759**	**565**	**894**	**694**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**10**	**43**	**31**	**48**	**52**
Magnesium	7439-95-4	1	mg/L	**27**	**67**	**36**	**52**	**90**
Sodium	7440-23-5	1	mg/L	**57**	**433**	**357**	**571**	**346**
Potassium	7440-09-7	1	mg/L	**7**	**14**	**13**	**17**	**12**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	**0.0001**	**0.0006**	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	**0.002**	**0.007**	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	**0.001**	**0.005**	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L	**0.009**	**0.036**	**0.134**	**0.014**	<0.005
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	**0.008**	**0.209**	<0.001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB58	MB59	MB64	MB65	RB4
				Sampling date / time	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-056	EP2519289-057	EP2519289-058	EP2519289-059	EP2519289-060
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	**0.18**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**1.59**	**0.16**	**0.03**	**0.03**	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	**0.0001**	**0.0006**	**0.0001**	<0.0001
Chromium	7440-47-3	0.001	mg/L		**0.006**	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.011**	**0.006**	**0.013**	**0.008**	**0.002**
Nickel	7440-02-0	0.001	mg/L		**0.006**	<0.001	**0.001**	**0.005**	<0.001
Lead	7439-92-1	0.001	mg/L		**0.008**	**0.002**	**0.004**	**0.006**	<0.001
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**0.030**	**0.047**	**0.159**	**0.038**	**0.007**
Manganese	7439-96-5	0.001	mg/L		**0.191**	**0.004**	**0.009**	**0.212**	<0.001
Iron	7439-89-6	0.05	mg/L		**2.79**	**0.29**	**0.09**	**0.26**	<0.05
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	**0.42**	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**6.95**	**3.48**	**0.53**	<0.01	**6.44**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**6.95**	**3.48**	**0.95**	<0.01	**6.44**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.9**	**0.5**	**0.2**	**0.4**	**0.9**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**7.8**	**4.0**	**1.2**	**0.4**	**7.3**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB58	MB59	MB64	MB65	RB4
			Sampling date / time	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00	12-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-056	EP2519289-057	EP2519289-058	EP2519289-059	EP2519289-060
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	3	4	3	16	8

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB67	MB71A	MB73A	MB74B	GGW80
				Sampling date / time	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-061	EP2519289-062	EP2519289-063	EP2519289-064	EP2519289-065
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		7.43	7.47	7.68	7.45	7.79
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		764	2750	1410	556	1240
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		444	1870	776	331	730
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		84	806	253	76	232
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		37	597	75	27	60
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		187	546	382	121	327
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		9	92	22	9	40
Magnesium	7439-95-4	1	mg/L		15	140	48	13	32
Sodium	7440-23-5	1	mg/L		111	274	186	79	180
Potassium	7440-09-7	1	mg/L		10	26	17	6	12
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	0.002	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		0.0001	0.0039	<0.0001	<0.0001	0.0009
Chromium	7440-47-3	0.001	mg/L		0.007	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		0.001	0.007	<0.001	<0.001	0.003
Nickel	7440-02-0	0.001	mg/L		<0.001	0.003	<0.001	0.001	0.002
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	0.002
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		0.031	1.69	0.015	0.022	0.069
Manganese	7439-96-5	0.001	mg/L		0.002	0.024	2.60	0.004	0.074

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB67	MB71A	MB73A	MB74B	GGW80
				Sampling date / time	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-061	EP2519289-062	EP2519289-063	EP2519289-064	EP2519289-065
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**2.73**	**0.33**	**0.15**	**1.82**	**0.15**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	**0.001**	**0.002**	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	**0.0042**	<0.0001	<0.0001	**0.0008**
Chromium	7440-47-3	0.001	mg/L		**0.013**	**0.003**	<0.001	**0.012**	**0.002**
Copper	7440-50-8	0.001	mg/L		**0.016**	**0.018**	**0.002**	**0.012**	**0.012**
Nickel	7440-02-0	0.001	mg/L		**0.008**	**0.006**	**0.001**	**0.007**	**0.002**
Lead	7439-92-1	0.001	mg/L		**0.006**	**0.005**	<0.001	**0.003**	**0.017**
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**0.084**	**1.89**	**0.014**	**0.044**	**0.091**
Manganese	7439-96-5	0.001	mg/L		**0.123**	**0.226**	**2.62**	**0.175**	**0.063**
Iron	7439-89-6	0.05	mg/L		**4.07**	**0.64**	**0.24**	**2.64**	**0.38**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	**0.08**	**0.25**	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**6.30**	**8.12**	**6.73**	**3.91**	**7.41**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**6.30**	**8.20**	**6.98**	**3.91**	**7.41**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.3**	**0.9**	**0.8**	**0.6**	**0.9**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**7.6**	**9.1**	**7.8**	**4.5**	**8.3**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB67	MB71A	MB73A	MB74B	GGW80
			Sampling date / time	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-061	EP2519289-062	EP2519289-063	EP2519289-064	EP2519289-065
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	**6**	**12**	**8**	**8**	**6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	ROM9	ROM11	ROM15	MB90	MB92
			Sampling date / time	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2519289-066	EP2519289-067	EP2519289-068	EP2519289-069	EP2519289-070
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.00**	**7.19**	**6.74**	**7.92**	**7.81**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**23100**	**5510**	**4270**	**1780**	**2100**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**16000**	**4000**	**2720**	**1010**	**1200**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**5900**	**1490**	**841**	**----**	**----**
Total Hardness as CaCO3	----	1	mg/L	**----**	**----**	**----**	**296**	**267**
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	**----**	**----**	**----**	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	**----**	**----**	**----**	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**----**	**----**	**----**	**124**	**110**
Total Alkalinity as CaCO3	----	1	mg/L	**----**	**----**	**----**	**124**	**110**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**2330**	**1560**	**585**	**123**	**162**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**7700**	**900**	**1070**	**455**	**523**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**1170**	**308**	**106**	**46**	**41**
Magnesium	7439-95-4	1	mg/L	**723**	**174**	**140**	**44**	**40**
Sodium	7440-23-5	1	mg/L	**3310**	**817**	**597**	**268**	**330**
Potassium	7440-09-7	1	mg/L	**140**	**45**	**39**	**11**	**21**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.02	<0.01	<0.01	<0.01	<0.01
Antimony	7440-36-0	0.001	mg/L	**----**	**----**	**----**	<0.001	<0.001
Arsenic	7440-38-2	0.001	mg/L	<0.002	<0.001	<0.001	**0.011**	**0.003**
Bismuth	7440-69-9	0.001	mg/L	**----**	**----**	**----**	<0.001	<0.001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	ROM9	ROM11	ROM15	MB90	MB92
				Sampling date / time	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-066	EP2519289-067	EP2519289-068	EP2519289-069	EP2519289-070
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Cadmium	7440-43-9	0.0001	mg/L		**0.194**	**0.0726**	**0.0037**	<0.0001	**0.0001**
Chromium	7440-47-3	0.001	mg/L		<0.002	**0.002**	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.118**	**0.041**	**0.010**	<0.001	**0.003**
Nickel	7440-02-0	0.001	mg/L		**0.319**	**0.140**	**0.160**	<0.001	**0.003**
Lead	7439-92-1	0.001	mg/L		**0.006**	**0.004**	**0.001**	<0.001	<0.001
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Zinc	7440-66-6	0.005	mg/L		**11.0**	**18.4**	**0.381**	**0.020**	**0.058**
Manganese	7439-96-5	0.001	mg/L		**18.1**	**3.14**	**0.668**	**1.24**	**0.010**
Molybdenum	7439-98-7	0.001	mg/L		----	----	----	**0.007**	**0.003**
Silver	7440-22-4	0.001	mg/L		----	----	----	<0.001	<0.001
Thallium	7440-28-0	0.001	mg/L		----	----	----	<0.001	<0.001
Uranium	7440-61-1	0.001	mg/L		----	----	----	<0.001	<0.001
Iron	7439-89-6	0.05	mg/L		<0.10	<0.05	<0.05	**0.33**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.50**	**1.20**	**0.11**	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.002	**0.002**	<0.001	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.194**	**0.0732**	**0.0038**	----	----
Chromium	7440-47-3	0.001	mg/L		**0.003**	**0.008**	**0.001**	----	----
Copper	7440-50-8	0.001	mg/L		**0.131**	**0.089**	**0.022**	----	----
Nickel	7440-02-0	0.001	mg/L		**0.330**	**0.147**	**0.167**	----	----
Lead	7439-92-1	0.001	mg/L		**0.011**	**0.030**	**0.009**	----	----
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	----	----
Zinc	7440-66-6	0.005	mg/L		**11.5**	**19.8**	**0.372**	----	----
Manganese	7439-96-5	0.001	mg/L		**18.4**	**3.35**	**0.698**	----	----
Iron	7439-89-6	0.05	mg/L		**1.50**	**3.54**	**0.35**	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0003**	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	ROM9	ROM11	ROM15	MB90	MB92
				Sampling date / time	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2519289-066	EP2519289-067	EP2519289-068	EP2519289-069	EP2519289-070
					Result	Result	Result	Result	Result
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0003**	<0.0001	<0.0001	----	----
EG052G: Silica by Discrete Analyser									
Reactive Silica	----	0.05	mg/L		----	----	----	**18.2**	**36.0**
Reactive Silica as Silicon	----	0.05	mg/L		----	----	----	**8.51**	**16.8**
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		----	----	----	**0.15**	**0.02**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	**0.03**	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**1.60**	**50.1**	**0.90**	**0.06**	**0.33**
Nitrate as NO3	14797-55-8	0.05	mg/L		----	----	----	**0.27**	**1.46**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**1.60**	**50.1**	**0.90**	**0.09**	**0.33**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.9**	**5.8**	**0.4**	**0.3**	**0.2**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**2.5**	**55.9**	**1.3**	**0.4**	**0.5**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		----	----	----	**0.36**	**0.03**
Total Phosphate	----	0.10	mg/L		----	----	----	**1.10**	<0.10
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		----	----	----	**17.9**	**20.3**
ø Total Cations	----	0.01	meq/L		----	----	----	**17.9**	**20.2**
ø Ionic Balance	----	0.01	%		----	----	----	**0.05**	**0.23**
ED038P: Acidity by Auto Titrator									
Acidity as CaCO3	----	1	mg/L		**41**	**25**	**18**	**5**	**13**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB93	MB89	RB6	SB79	----
				Sampling date / time	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	14-Nov-2025 00:00	----
Compound	CAS Number	LOR	Unit		EP2519289-071	EP2519289-072	EP2519289-073	EP2519289-074	--------
					Result	Result	Result	Result	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		**8.07**	**7.73**	**7.83**	**7.74**	----
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		**1410**	**977**	**1250**	**24500**	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**827**	**534**	**704**	**15800**	----
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L		**----**	**----**	**----**	**5830**	----
Total Hardness as CaCO3	----	1	mg/L		**172**	**187**	**191**	**----**	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	**----**	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	**----**	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**161**	**51**	**107**	**----**	----
Total Alkalinity as CaCO3	----	1	mg/L		**161**	**51**	**107**	**----**	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**92**	**53**	**66**	**2960**	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**318**	**247**	**307**	**7920**	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**26**	**22**	**32**	**605**	----
Magnesium	7439-95-4	1	mg/L		**26**	**32**	**27**	**1050**	----
Sodium	7440-23-5	1	mg/L		**231**	**125**	**180**	**3910**	----
Potassium	7440-09-7	1	mg/L		**18**	**9**	**13**	**126**	----
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	<0.02	----
Antimony	7440-36-0	0.001	mg/L		<0.001	<0.001	<0.001	**----**	----
Arsenic	7440-38-2	0.001	mg/L		**0.009**	<0.001	**0.007**	<0.002	----
Bismuth	7440-69-9	0.001	mg/L		<0.001	<0.001	<0.001	**----**	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MB93	MB89	RB6	SB79	----
				Sampling date / time	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	14-Nov-2025 00:00	----
Compound	CAS Number	LOR	Unit		EP2519289-071	EP2519289-072	EP2519289-073	EP2519289-074	--------
					Result	Result	Result	Result	----
EG020F: Dissolved Metals by ICP-MS - Continued									
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	**0.0002**	<0.0001	**0.126**	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.002	----
Copper	7440-50-8	0.001	mg/L		<0.001	**0.001**	<0.001	**0.021**	----
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	**0.002**	**0.100**	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	**0.003**	----
Selenium	7782-49-2	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	----
Zinc	7440-66-6	0.005	mg/L		**0.010**	**0.042**	**0.013**	**0.706**	----
Manganese	7439-96-5	0.001	mg/L		**0.292**	**0.005**	**0.227**	**1.54**	----
Molybdenum	7439-98-7	0.001	mg/L		**0.002**	<0.001	**0.004**	----	----
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Thallium	7440-28-0	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Uranium	7440-61-1	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.10	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		----	----	----	**4.26**	----
Arsenic	7440-38-2	0.001	mg/L		----	----	----	**0.006**	----
Cadmium	7440-43-9	0.0001	mg/L		----	----	----	**0.129**	----
Chromium	7440-47-3	0.001	mg/L		----	----	----	**0.024**	----
Copper	7440-50-8	0.001	mg/L		----	----	----	**0.174**	----
Nickel	7440-02-0	0.001	mg/L		----	----	----	**0.113**	----
Lead	7439-92-1	0.001	mg/L		----	----	----	**0.181**	----
Selenium	7782-49-2	0.010	mg/L		----	----	----	<0.010	----
Zinc	7440-66-6	0.005	mg/L		----	----	----	**0.909**	----
Manganese	7439-96-5	0.001	mg/L		----	----	----	**2.04**	----
Iron	7439-89-6	0.05	mg/L		----	----	----	**9.61**	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MB93	MB89	RB6	SB79	----
			Sampling date / time	13-Nov-2025 00:00	13-Nov-2025 00:00	13-Nov-2025 00:00	14-Nov-2025 00:00	----
Compound	CAS Number	LOR	Unit	EP2519289-071	EP2519289-072	EP2519289-073	EP2519289-074	--------
				Result	Result	Result	Result	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	----	----	----	<0.0001	----
EG052G: Silica by Discrete Analyser								
Reactive Silica	----	0.05	mg/L	**18.2**	**18.7**	**28.3**	----	----
Reactive Silica as Silicon	----	0.05	mg/L	**8.51**	**8.74**	**13.2**	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**0.04**	**0.01**	**0.02**	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	**0.01**	<0.01	**0.21**	<0.01	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**0.66**	**5.14**	**2.61**	**20.8**	----
Nitrate as NO3	14797-55-8	0.05	mg/L	**2.92**	**22.8**	**11.6**	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**0.67**	**5.14**	**2.82**	**20.8**	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**0.2**	**0.8**	**0.7**	**2.8**	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**0.9**	**5.9**	**3.5**	**23.6**	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	**0.12**	**0.02**	**0.20**	----	----
Total Phosphate	----	0.10	mg/L	**0.37**	<0.10	**0.62**	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**14.1**	**9.09**	**12.2**	----	----
ø Total Cations	----	0.01	meq/L	**13.9**	**9.40**	**12.0**	----	----
ø Ionic Balance	----	0.01	%	**0.56**	**1.67**	**0.79**	----	----
ED038P: Acidity by Auto Titrator								
Acidity as CaCO3	----	1	mg/L	**7**	**8**	**9**	**34**	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP2520205**	Page	: 1 of 23
Client	: **Golden Grove Operations Pty Ltd**	Laboratory	: Environmental Division Perth
Contact	: [redacted]	Contact	: Madison Forster
Address	: PO BOX 213 WEST PERTH WA, AUSTRALIA 6005	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: Golden Grove Routine Analysis (Enviro)	Date Samples Received	: 03-Dec-2025 08:00
Order number	: 2049366	Date Analysis Commenced	: 03-Dec-2025
C-O-C number	: ----	Issue Date	: 10-Dec-2025 22:27
Sampler	: [redacted]		
Site	: ----		
Quote number	: EP/727/22_V3		
No. of samples received	: 40		
No. of samples analysed	: 40		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Inorganics Supervisor	Perth Inorganics, Wangara, WA
	Perth - State Manager	Perth Inorganics, Wangara, WA
	Metals Chemist	Perth Inorganics, Wangara, WA
	Laboratory Technician	Perth Microbiology, Wangara, WA
	Organic Chemist	Perth Organics, Wangara, WA
	Lab Technician	Perth Microbiology, Wangara, WA
	Organic Supervisor	Perth Organics, Wangara, WA
	Inorganic Chemist	Perth Inorganics, Wangara, WA
	Senior Microbiologist	Perth Microbiology, Wangara, WA

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- CFU = colony forming unit
- MF = membrane filtration
- Microbiological Comment: HPC results are reported an approximate (~) when the count of colonies on the plate is outside the range of 10 - 300cfu, in accordance with ALS work instruction QWI-MIC/MW002.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- MW006 is ALS's internal code and is equivalent to AS4276.5.
- EG020: Metals LOR for samples EP2520205 -028, -033, -037 and -038 raised due to high TDS content.
- MW002 and MW006:Analysis Commenced:Date:3/12/2025.Time:11:00AM.
- MM684:Analysis Commenced:Date:3/12/2025.Time:1:45PM.
- EK057G (Nitrite): LOR raised for sample EP2520205-038 due to possible sample matrix interference.
- MM699:Analysis Commenced:Date:8/12/2025.Time:2:30PM.
- EP071: Due to limited remaining sample volume, re-extraction was performed using the available volume. LOR has been raised accordingly.
- EG020: It is recognised that various total metal concentrations are less than dissolved for various samples. However, the difference is within experimental variation of the methods.
- Microbiological Comment: In accordance with ALS work instruction QWI-MIC/04, membrane filtration result is reported an approximate (~) when the count of colonies on the filtered membrane is outside the range of 10 - 100cfu.
- MW002 is ALS's internal code and is equivalent to AS4276.3.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: ICE (Matrix: WATER)			Sample ID	SCUDDLES UG ICE	GH913 ICE	LAB ICE	BYRNECUT ICE	GH B ICE
			Sampling date / time	02-Dec-2025 00:00	02-Dec-2025 00:00	02-Dec-2025 00:00	02-Dec-2025 00:00	02-Dec-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-013	EP2520205-014	EP2520205-015	EP2520205-016	EP2520205-017
				Result	Result	Result	Result	Result
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	<1	**46**	**30**	<1
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	**10**	<1	**40**	**23**	<1
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: ICE (Matrix: WATER)				Sample ID	GH A ICE	VILLAGE ICE	SCUDDLES ICE	----	----
				Sampling date / time	02-Dec-2025 00:00	02-Dec-2025 00:00	02-Dec-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		EP2520205-018	EP2520205-019	EP2520205-020	--------	--------
					Result	Result	Result	----	----
MW002: Heterotrophic Plate Count									
Heterotrophic Plate Count (22°C)	----	1	CFU/mL		**92**	**440**	**~7**	**----**	**----**
Heterotrophic Plate Count (36°C)	----	1	CFU/mL		**89**	**420**	**17**	**----**	**----**
MW006: Faecal Coliforms & E.coli by MF									
Thermotolerant Coliforms	----	1	CFU/100mL		<1	<1	<1	**----**	**----**
Escherichia coli	----	1	CFU/100mL		<1	<1	<1	**----**	**----**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	RO PLANT	RDH COOLER	VILLAGE COOLER	GOSSAN HILL COOLER	GH913 CRIB
			Sampling date / time	02-Dec-2025 00:00	02-Dec-2025 00:00	02-Dec-2025 00:00	02-Dec-2025 00:00	02-Dec-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-001	EP2520205-002	EP2520205-003	EP2520205-004	EP2520205-005
				Result	Result	Result	Result	Result
MM684: Thermotolerant Amoeba by Culture								
Thermophilic Amoeba	----	1	-	**Detected**	**Detected**	**Detected**	**Detected**	**Not Detected**
Volume Analysed	----	0.01	L	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**
MM699: Thermotolerant Amoeba Speciation by PCR								
Naegleria fowleri	----	-	-	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**----**
Naegleria spp.	----	-	-	**Not Detected**	**Not Detected**	**Not Detected**	**Not Detected**	**----**
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	**210**	**14**	<1	<1
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	<1	**210**	**57**	**10**	**11**
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SCUDDLES CRIB	BACKFILL COOLER	BYRNECUT COOLER	ORICA TAP	VILLAGE KITCHEN
			Sampling date / time	02-Dec-2025 00:00	02-Dec-2025 00:00	02-Dec-2025 00:00	02-Dec-2025 00:00	02-Dec-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-006	EP2520205-007	EP2520205-008	EP2520205-009	EP2520205-010
				Result	Result	Result	Result	Result
MM684: Thermotolerant Amoeba by Culture								
Thermophilic Amoeba	----	1	-	**Detected**	**Detected**	**Not Detected**	**Not Detected**	**Not Detected**
Volume Analysed	----	0.01	L	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**
MM699: Thermotolerant Amoeba Speciation by PCR								
Naegleria fowleri	----	-	-	**Not Detected**	**Not Detected**	**----**	**----**	**----**
Naegleria spp.	----	-	-	**Not Detected**	**Not Detected**	**----**	**----**	**----**
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	**~3**	<1	<1	**~4**	<1
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	**20**	**120**	<1	**10**	<1
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	<1	<1	<1
Escherichia coli	----	1	CFU/100mL	<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	POOL	SCUDDLES ADMIN	MB89	MB93	MB92
			Sampling date / time	02-Dec-2025 00:00	02-Dec-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-011	EP2520205-012	EP2520205-021	EP2520205-022	EP2520205-023
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	----	----	7.43	7.98	7.79
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	----	963	1400	2070
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	----	----	590	768	1240
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	----	----	184	174	263
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	----	----	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	----	----	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	----	----	60	152	110
Total Alkalinity as CaCO3	----	1	mg/L	----	----	60	152	110
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	----	----	52	93	157
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	----	----	252	321	535
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	----	----	21	25	41
Magnesium	7439-95-4	1	mg/L	----	----	32	27	39
Sodium	7440-23-5	1	mg/L	----	----	127	235	329
Potassium	7440-09-7	1	mg/L	----	----	10	18	21
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	----	----	<0.01	<0.01	<0.01
Antimony	7440-36-0	0.001	mg/L	----	----	<0.001	<0.001	<0.001
Arsenic	7440-38-2	0.001	mg/L	----	----	<0.001	0.009	0.003
Bismuth	7440-69-9	0.001	mg/L	----	----	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	----	----	0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	POOL	SCUDDLES ADMIN	MB89	MB93	MB92
				Sampling date / time	02-Dec-2025 00:00	02-Dec-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2520205-011	EP2520205-012	EP2520205-021	EP2520205-022	EP2520205-023
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Chromium	7440-47-3	0.001	mg/L		----	----	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		----	----	**0.003**	<0.001	**0.003**
Nickel	7440-02-0	0.001	mg/L		----	----	<0.001	<0.001	**0.003**
Lead	7439-92-1	0.001	mg/L		----	----	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.004	mg/L		----	----	<0.004	<0.004	<0.004
Zinc	7440-66-6	0.005	mg/L		----	----	**0.050**	**0.009**	**0.054**
Manganese	7439-96-5	0.001	mg/L		----	----	**0.004**	**0.146**	**0.010**
Molybdenum	7439-98-7	0.001	mg/L		----	----	<0.001	**0.002**	**0.003**
Silver	7440-22-4	0.001	mg/L		----	----	<0.001	<0.001	<0.001
Thallium	7440-28-0	0.001	mg/L		----	----	<0.001	<0.001	<0.001
Uranium	7440-61-1	0.001	mg/L		----	----	<0.001	<0.001	<0.001
Iron	7439-89-6	0.05	mg/L		----	----	<0.05	<0.05	<0.05
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		----	----	<0.0001	<0.0001	<0.0001
EG052G: Silica by Discrete Analyser									
Reactive Silica	----	0.05	mg/L		----	----	**18.2**	**18.4**	**36.7**
Reactive Silica as Silicon	----	0.05	mg/L		----	----	**8.51**	**8.60**	**17.2**
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		----	----	**0.03**	**0.02**	**0.01**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		----	----	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		----	----	**4.97**	**0.83**	**0.36**
Nitrate as NO3	14797-55-8	0.05	mg/L		----	----	**22.0**	**3.68**	**1.59**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		----	----	**4.97**	**0.83**	**0.36**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	POOL	SCUDDLES ADMIN	MB89	MB93	MB92
			Sampling date / time	02-Dec-2025 00:00	02-Dec-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-011	EP2520205-012	EP2520205-021	EP2520205-022	EP2520205-023
				Result	Result	Result	Result	Result
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser - Continued								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	----	----	0.9	0.4	0.3
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	----	----	5.9	1.2	0.7
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	----	----	0.02	0.13	0.06
Total Phosphate	----	0.10	mg/L	----	----	<0.10	0.40	0.18
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	----	----	9.39	14.0	20.6
ø Total Cations	----	0.01	meq/L	----	----	9.46	14.2	20.1
ø Ionic Balance	----	0.01	%	----	----	0.38	0.44	1.12
MM684: Thermotolerant Amoeba by Culture								
Thermophilic Amoeba	----	1	-	Not Detected	Detected	----	----	----
Volume Analysed	----	0.01	L	0.25	0.25	----	----	----
MM699: Thermotolerant Amoeba Speciation by PCR								
Naegleria fowleri	----	-	-	----	Not Detected	----	----	----
Naegleria spp.	----	-	-	----	Not Detected	----	----	----
MW002: Heterotrophic Plate Count								
Heterotrophic Plate Count (22°C)	----	1	CFU/mL	<1	<1	----	----	----
Heterotrophic Plate Count (36°C)	----	1	CFU/mL	<1	31	----	----	----
MW006: Faecal Coliforms & E.coli by MF								
Thermotolerant Coliforms	----	1	CFU/100mL	<1	<1	----	----	----
Escherichia coli	----	1	CFU/100mL	<1	<1	----	----	----
ED038P: Acidity by Auto Titrator								
Acidity as CaCO3	----	1	mg/L	----	----	11	11	17

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	RB6	MB90	RO TANK	GGW67P	EPA DRAIN
			Sampling date / time	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-024	EP2520205-025	EP2520205-026	EP2520205-027	EP2520205-028
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	7.65	7.94	7.28	7.95	7.88
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	1230	1760	306	2450	27500
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	904	1110	173	1640	21400
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	----	----	22	645	6310
Total Hardness as CaCO3	----	1	mg/L	170	268	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	86	128	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	86	128	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	68	122	6	328	3980
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	306	457	74	602	8800
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	27	38	4	80	1100
Magnesium	7439-95-4	1	mg/L	25	42	3	108	866
Sodium	7440-23-5	1	mg/L	163	271	64	283	4740
Potassium	7440-09-7	1	mg/L	12	12	3	15	112
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.02
Antimony	7440-36-0	0.001	mg/L	<0.001	<0.001	----	----	----
Arsenic	7440-38-2	0.001	mg/L	0.006	<0.001	<0.001	0.001	<0.002
Bismuth	7440-69-9	0.001	mg/L	<0.001	<0.001	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RB6	MB90	RO TANK	GGW67P	EPA DRAIN
				Sampling date / time	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2520205-024	EP2520205-025	EP2520205-026	EP2520205-027	EP2520205-028
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	**0.0591**
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.002
Copper	7440-50-8	0.001	mg/L		**0.001**	<0.001	<0.001	<0.001	**0.042**
Nickel	7440-02-0	0.001	mg/L		**0.002**	<0.001	<0.001	**0.002**	**0.046**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.002
Selenium	7782-49-2	0.004	mg/L		<0.004	<0.004	<0.004	<0.004	<0.008
Zinc	7440-66-6	0.005	mg/L		**0.009**	**0.006**	**0.008**	**0.161**	**5.25**
Manganese	7439-96-5	0.001	mg/L		**0.114**	**0.707**	**0.006**	**1.72**	**4.07**
Molybdenum	7439-98-7	0.001	mg/L		**0.002**	**0.006**	----	----	----
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	----	----	----
Thallium	7440-28-0	0.001	mg/L		<0.001	<0.001	----	----	----
Uranium	7440-61-1	0.001	mg/L		<0.001	<0.001	----	----	----
Iron	7439-89-6	0.05	mg/L		<0.05	**0.12**	<0.05	**0.56**	<0.10
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		----	----	<0.01	<0.01	<0.02
Arsenic	7440-38-2	0.001	mg/L		----	----	<0.001	**0.001**	<0.002
Cadmium	7440-43-9	0.0001	mg/L		----	----	<0.0001	<0.0001	**0.0615**
Chromium	7440-47-3	0.001	mg/L		----	----	<0.001	<0.001	<0.002
Copper	7440-50-8	0.001	mg/L		----	----	<0.001	<0.001	**0.057**
Nickel	7440-02-0	0.001	mg/L		----	----	<0.001	**0.002**	**0.049**
Lead	7439-92-1	0.001	mg/L		----	----	<0.001	<0.001	**0.003**
Selenium	7782-49-2	0.004	mg/L		----	----	<0.004	<0.004	<0.008
Zinc	7440-66-6	0.005	mg/L		----	----	**0.008**	**0.237**	**5.74**
Manganese	7439-96-5	0.001	mg/L		----	----	<0.001	**1.76**	**4.09**
Iron	7439-89-6	0.05	mg/L		----	----	<0.05	**0.63**	**1.26**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	RB6	MB90	RO TANK	GGW67P	EPA DRAIN
			Sampling date / time	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-024	EP2520205-025	EP2520205-026	EP2520205-027	EP2520205-028
				Result	Result	Result	Result	Result
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	----	----	<0.0001	<0.0001	<0.0001
EG052G: Silica by Discrete Analyser								
Reactive Silica	----	0.05	mg/L	28.2	18.3	----	----	----
Reactive Silica as Silicon	----	0.05	mg/L	13.2	8.56	----	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.04	----	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	0.03	0.02	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	3.76	0.08	1.75	<0.01	1.73
Nitrate as NO3	14797-55-8	0.05	mg/L	16.7	0.35	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	3.79	0.10	1.75	<0.01	1.73
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	2.3	0.6	0.3	0.2	1.8
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	6.1	0.7	2.0	0.2	3.5
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	1.24	0.23	----	----	----
Total Phosphate	----	0.10	mg/L	3.81	0.71	----	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	11.8	18.0	----	----	----
ø Total Cations	----	0.01	meq/L	10.8	17.4	----	----	----
ø Ionic Balance	----	0.01	%	4.27	1.53	----	----	----
ED038P: Acidity by Auto Titrator								
Acidity as CaCO3	----	1	mg/L	14	8	3	6	21

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	LDP	COFFER DAM	GVW007P	GFWB002	ROM D4M
			Sampling date / time	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-029	EP2520205-030	EP2520205-031	EP2520205-032	EP2520205-033
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**8.43**	**7.87**	**8.07**	**7.69**	**7.91**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**12500**	**16100**	**2770**	**5470**	**19900**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**10000**	**12200**	**1650**	**3260**	**14400**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**2980**	**3610**	**183**	**590**	**4020**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**2140**	**2450**	**150**	**310**	**2960**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**3550**	**4590**	**752**	**1490**	**6230**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**1120**	**1230**	**24**	**78**	**1290**
Magnesium	7439-95-4	1	mg/L	**45**	**131**	**30**	**96**	**195**
Sodium	7440-23-5	1	mg/L	**1790**	**2450**	**420**	**961**	**3200**
Potassium	7440-09-7	1	mg/L	**69**	**97**	**21**	**41**	**128**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.02
Arsenic	7440-38-2	0.001	mg/L	**0.001**	**0.002**	<0.001	<0.001	**0.002**
Cadmium	7440-43-9	0.0001	mg/L	**0.0020**	**0.0126**	**0.0003**	<0.0001	**0.0257**
Chromium	7440-47-3	0.001	mg/L	**0.001**	<0.001	<0.001	**0.002**	<0.002
Copper	7440-50-8	0.001	mg/L	**0.014**	**0.030**	**0.002**	<0.001	**0.089**
Nickel	7440-02-0	0.001	mg/L	<0.001	**0.021**	<0.001	**0.016**	**0.018**
Lead	7439-92-1	0.001	mg/L	<0.001	**0.005**	<0.001	<0.001	**0.005**
Selenium	7782-49-2	0.004	mg/L	**0.041**	**0.015**	<0.004	<0.004	**0.012**
Zinc	7440-66-6	0.005	mg/L	**0.097**	**11.4**	**0.057**	**0.045**	**5.72**
Manganese	7439-96-5	0.001	mg/L	**0.205**	**4.38**	**0.008**	**0.419**	**2.95**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	LDP	COFFER DAM	GVW007P	GFWB002	ROM D4M
				Sampling date / time	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2520205-029	EP2520205-030	EP2520205-031	EP2520205-032	EP2520205-033
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		**0.06**	<0.05	<0.05	**11.8**	<0.10
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.01**	**0.30**	<0.01	**0.09**	**4.17**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	**0.002**	<0.001	<0.001	**0.010**
Cadmium	7440-43-9	0.0001	mg/L		**0.0042**	**0.0495**	**0.0004**	**0.0009**	**0.0405**
Chromium	7440-47-3	0.001	mg/L		**0.001**	**0.002**	**0.001**	**0.039**	**0.013**
Copper	7440-50-8	0.001	mg/L		**0.024**	**0.190**	**0.002**	**0.015**	**1.01**
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.023**	<0.001	**0.192**	**0.025**
Lead	7439-92-1	0.001	mg/L		**0.003**	**0.054**	<0.001	**0.007**	**0.288**
Selenium	7782-49-2	0.004	mg/L		**0.044**	**0.017**	<0.004	<0.004	**0.016**
Zinc	7440-66-6	0.005	mg/L		**0.275**	**15.4**	**0.061**	**0.185**	**10.8**
Manganese	7439-96-5	0.001	mg/L		**0.263**	**4.36**	**0.007**	**0.425**	**3.22**
Iron	7439-89-6	0.05	mg/L		**0.18**	**1.16**	**0.06**	**12.3**	**10.2**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**2.10**	**0.23**	<0.01	<0.01	**0.07**
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**3.85**	**0.46**	**5.69**	**0.03**	**0.53**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**5.95**	**0.69**	**5.69**	**0.03**	**0.60**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**9.2**	**21.8**	**0.7**	**2.0**	**13.8**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**15.2**	**22.5**	**6.4**	**2.0**	**14.4**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	LDP	COFFER DAM	GVW007P	GFWB002	ROM D4M
			Sampling date / time	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-029	EP2520205-030	EP2520205-031	EP2520205-032	EP2520205-033
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	<1	**27**	**3**	**28**	**20**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GGW93P	GGW53P	GHDP	TSF 3 DRAIN	TSF1 UNDERDRAIN
			Sampling date / time	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-034	EP2520205-035	EP2520205-036	EP2520205-037	EP2520205-038
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.76**	**7.30**	**6.84**	**7.34**	**2.97**
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**670**	**189**	**12300**	**20000**	**29900**
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**408**	**120**	**9260**	**14600**	**34300**
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**115**	**38**	**2570**	**3730**	**16500**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**46**	**25**	**1880**	**3330**	**14900**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**163**	**29**	**3620**	**6110**	**5990**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**13**	**7**	**773**	**897**	**718**
Magnesium	7439-95-4	1	mg/L	**20**	**5**	**156**	**362**	**3560**
Sodium	7440-23-5	1	mg/L	**91**	**20**	**1760**	**3650**	**3750**
Potassium	7440-09-7	1	mg/L	**7**	**4**	**63**	**166**	**72**
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	**0.02**	**2.96**
Arsenic	7440-38-2	0.001	mg/L	<0.001	**0.003**	**0.002**	<0.002	**0.004**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	**0.474**	**0.0003**	**0.0139**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.002	**0.005**
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	**0.578**	<0.002	**0.320**
Nickel	7440-02-0	0.001	mg/L	**0.013**	**0.037**	**0.056**	**0.002**	**0.031**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	**0.118**	<0.002	**0.048**
Selenium	7782-49-2	0.004	mg/L	<0.004	<0.004	**0.022**	<0.008	<0.008
Zinc	7440-66-6	0.005	mg/L	**0.009**	**0.031**	**134**	**1.65**	**9.67**
Manganese	7439-96-5	0.001	mg/L	**0.370**	**1.13**	**5.91**	**2.34**	**24.3**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	GGW93P	GGW53P	GHDP	TSF 3 DRAIN	TSF1 UNDERDRAIN
				Sampling date / time	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit		EP2520205-034	EP2520205-035	EP2520205-036	EP2520205-037	EP2520205-038
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Iron	7439-89-6	0.05	mg/L		**0.24**	**13.5**	<0.05	**39.0**	**99.2**
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	**0.14**	**11.0**	**0.03**	**3.14**
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.004**	**0.018**	<0.002	**0.004**
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	**0.511**	<0.0002	**0.0159**
Chromium	7440-47-3	0.001	mg/L		**0.001**	**0.030**	**0.019**	<0.002	**0.005**
Copper	7440-50-8	0.001	mg/L		<0.001	**0.012**	**4.62**	<0.002	**0.387**
Nickel	7440-02-0	0.001	mg/L		**0.014**	**0.072**	**0.074**	<0.002	**0.034**
Lead	7439-92-1	0.001	mg/L		<0.001	**0.002**	**0.903**	<0.002	**0.061**
Selenium	7782-49-2	0.004	mg/L		<0.004	<0.004	**0.026**	<0.008	<0.008
Zinc	7440-66-6	0.005	mg/L		**0.011**	**0.056**	**143**	**1.83**	**11.0**
Manganese	7439-96-5	0.001	mg/L		**0.372**	**1.11**	**6.17**	**2.35**	**24.4**
Iron	7439-89-6	0.05	mg/L		**0.28**	**15.4**	**21.5**	**37.3**	**91.9**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	**0.92**	<0.01	<0.02
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.77**	**0.01**	**10.3**	**0.03**	**0.12**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.77**	**0.01**	**11.2**	**0.03**	**0.12**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.2**	**0.6**	**13.1**	**8.3**	**27.4**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**1.0**	**0.6**	**24.3**	**8.3**	**27.5**
ED038P: Acidity by Auto Titrator									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	GGW93P	GGW53P	GHDP	TSF 3 DRAIN	TSF1 UNDERDRAIN
			Sampling date / time	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00	30-Nov-2025 00:00
Compound	CAS Number	LOR	Unit	EP2520205-034	EP2520205-035	EP2520205-036	EP2520205-037	EP2520205-038
				Result	Result	Result	Result	Result
ED038P: Acidity by Auto Titrator - Continued								
Acidity as CaCO3	----	1	mg/L	**5**	**14**	**184**	**36**	**421**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	EPC	LAKE	----	----	----
			Sampling date / time	30-Nov-2025 00:00	29-Nov-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EP2520205-039	EP2520205-040	--------	--------	--------
				Result	Result	----	----	----
EA005P: pH by PC Titrator								
pH Value	----	0.01	pH Unit	**7.19**	**7.27**	----	----	----
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	----	1	µS/cm	**9970**	**12200**	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**7390**	**9380**	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C								
Suspended Solids (SS)	----	5	mg/L	----	<5	----	----	----
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	**2390**	----	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	----	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	----	<1	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	----	**27**	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	----	**27**	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**1700**	**2060**	----	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**2820**	----	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**676**	----	----	----	----
Magnesium	7439-95-4	1	mg/L	**170**	----	----	----	----
Sodium	7440-23-5	1	mg/L	**1440**	----	----	----	----
Potassium	7440-09-7	1	mg/L	**59**	----	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.02**	<0.01	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	**0.103**	**0.0021**	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	EPC	LAKE	----	----	----
				Sampling date / time	30-Nov-2025 00:00	29-Nov-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2520205-039	EP2520205-040	--------	--------	--------
					Result	Result	----	----	----
EG020F: Dissolved Metals by ICP-MS - Continued									
Copper	7440-50-8	0.001	mg/L		**0.153**	**0.013**	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.015**	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L		**0.004**	<0.001	----	----	----
Selenium	7782-49-2	0.004	mg/L		**0.016**	**0.047**	----	----	----
Zinc	7440-66-6	0.005	mg/L		**23.3**	**0.174**	----	----	----
Manganese	7439-96-5	0.001	mg/L		**2.50**	**0.577**	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.19**	<0.05	----	----	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.09**	<0.01	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.001**	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.106**	**0.0023**	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L		**0.529**	**0.014**	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.014**	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L		**0.086**	<0.001	----	----	----
Selenium	7782-49-2	0.004	mg/L		**0.021**	**0.049**	----	----	----
Zinc	7440-66-6	0.005	mg/L		**25.8**	**0.180**	----	----	----
Manganese	7439-96-5	0.001	mg/L		**2.49**	**0.596**	----	----	----
Iron	7439-89-6	0.05	mg/L		**1.06**	<0.05	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**----**	**8.02**	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**0.57**	**1.87**	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	EPC	LAKE	----	----	----
				Sampling date / time	30-Nov-2025 00:00	29-Nov-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2520205-039	EP2520205-040	--------	--------	--------
					Result	Result	----	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**5.07**	**2.19**	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**5.64**	**4.06**	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**3.8**	**9.4**	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**9.4**	**13.5**	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		----	**0.17**	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		----	<20	----	----	----
C10 - C14 Fraction	----	50	µg/L		----	<60	----	----	----
C15 - C28 Fraction	----	100	µg/L		----	<100	----	----	----
C29 - C36 Fraction	----	50	µg/L		----	<60	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		----	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		----	<20	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L		----	<20	----	----	----
>C10 - C16 Fraction	----	100	µg/L		----	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L		----	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L		----	<100	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		----	<100	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		----	<100	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		----	<1	----	----	----
Toluene	108-88-3	2	µg/L		----	<2	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	EPC	LAKE	----	----	----
				Sampling date / time	30-Nov-2025 00:00	29-Nov-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EP2520205-039	EP2520205-040	--------	--------	--------
					Result	Result	----	----	----
EP080: BTEXN - Continued									
Ethylbenzene	100-41-4	2	µg/L		----	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		----	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L		----	<2	----	----	----
^ **Total Xylenes**	----	2	µg/L		----	<2	----	----	----
^ **Sum of BTEX**	----	1	µg/L		----	<1	----	----	----
Naphthalene	91-20-3	5	µg/L		----	<5	----	----	----
ED038P: Acidity by Auto Titrator									
Acidity as CaCO3	----	1	mg/L		**37**	**9**	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		----	**106**	----	----	----
Toluene-D8	2037-26-5	2	%		----	**95.3**	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		----	**105**	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	61	141
Toluene-D8	2037-26-5	73	126
4-Bromofluorobenzene	460-00-4	60	125

Appendix E. GROUNDWATER MONITORING REVIEW

Prepared for
Golden Grove Operations Pty Ltd
ABN: 92 114 868 325

2024 Groundwater Monitoring Review

Golden Grove Mine

30-Apr-2025
Doc No. 60747118_ENV_RPT_001

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2024 Groundwater Monitoring Review

Golden Grove Mine

Client: Golden Grove Operations Pty Ltd

ABN: 92 114 868 325

Prepared by

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Quality Information

Document 2024 Groundwater Monitoring Review

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Executive Summary

AECOM has prepared this Groundwater Monitoring Review for Golden Grove Operations Pty Ltd (GGO) to comply with the requirements of Licence to Take Water (LTW) GWL103574(9) and the Water Operating Strategy (WOS), approved by the Department of Water and Environment Regulation (DWER) (then the Department of Water (DoW)) in 2021, and the revised WOS in 2023.

GGO and the site's previous owners have been abstracting groundwater from the Golden Grove Mine for over 36 years. During this time, a comprehensive monitoring programme has been undertaken to determine impacts both on- and off-site. This review considered the monitoring data from the past three years in the context of this long-term abstraction, and likely future impacts out to, and beyond closure.

The monitoring programme that GGO has undertaken includes measurements of groundwater abstraction, groundwater levels, and groundwater quality at pre-determined locations and frequencies. The abstraction data are routinely entered into the site's water balance, which is used for reporting and water accounting purposes. Groundwater level measurements and samples for quality analyses are compiled into a consolidated database that is maintained on-site and used for various internal and external reporting purposes. There are no triggers or thresholds associated with the WOS, but there are several included in the site's environmental licence.

During the review period, GGO has abstracted: 1,043,259 kL (2022), 1,795,374 kL (2023) and 1,637,771 kL (2024), averaging 1,492,135 kL/year from the Golden Grove Mine. These abstractions represent 29.7%, 51.2% and 46.7% of the annual allocation of 3,510,000kL authorised under LTW GWL103574(9). GGO has also abstracted 11,265 kL (2023) and 162,321 kL (2024) from the Gossan Valley Mine representing 0.6% and 9.9% of the annual allocation of 750,000 kL/year authorised under LTW GWL209427(2).

Groundwater abstracted from the underground mines is utilised by GGO for ore processing and dust suppression. Dewatering abstractions more than these requirements is treated to a suitable quality and discharged to Lake Wownaminya. Groundwater is also abstracted to supply the site with potable water after being treated by a reverse osmosis (RO) plant. Groundwater is primarily drawn from one bore (GGW69P) and one or more backup supply bores (GGW53P, GGW54P, GGW67P, RMB4, GGW93P, and GVW007P) as required. In addition, groundwater is also abstracted from dedicated seepage recovery bores located around TSF2, the evaporation ponds and the ROM Pad. This water is recycled into the ore processing supply.

The following conclusions were made based on this review:

- GGO has undertaken the monitoring programme based on the Golden Grove WOS (2021 and 2023 revisions) sufficiently well to allow an effective assessment of current and likely future impacts.
- Groundwater abstraction for mine dewatering has decreased because of a general depletion of the groundwater resource due to long-term mine dewatering. This characteristic is mostly applicable to the Gossan Hill Mine.
- Groundwater levels in the regionally extensive weathered and fractured bedrock aquifer continue to fall in response to mine dewatering abstraction.
- The quality of abstracted groundwater has changed over the life of the project, particularly salinity and sulphate concentrations, which have generally increased from the underground dewatering sites. Salinity increases are likely to be a result of a change in the proportion of shallower fresh/brackish groundwater to deeper, more saline groundwater. It is possible that changes to the rates of recharge, due to site disturbance, and lower rainfall totals may be contributing to this phenomenon. Increasing sulphate concentrations are noted in groundwater from the Gossan Hill and Scuddles mines, suggesting long-term dewatering is releasing sulphate from the dewatered zone in the bedrock aquifer. Based on historical hydrogeological data, the salinities have the potential to continue increasing as the shallower groundwater is depleted and more unoxidized bedrock is dewatered.

- Groundwater is being affected by seepage from the evaporation ponds (EPA/EPB), TSF1 and TSF2. There is some evidence that TSF3 may be locally impacting groundwater in one area and possibly another that may also be due to seepage from TSF1. Seepage-related changes at the evaporation ponds are carefully monitored and are being managed in line with the site's environment licence. Seepage recovery abstraction at EPA/EPB and TSF2, in combination with the drawdown effects from the Scuddles Mine, is controlling the size and extent of seepage mounding. Groundwater levels beneath and around these facilities are declining.
- The site's water balance has changed. Lower mine dewatering abstraction volumes are resulting in less excess water being discharged to Lake Wownaminya. Water balance modelling commissioned by GGO has identified a need to consider alternative sources to meet the challenges associated with declining volumes and increasing salinities. A new bore at Gossan Valley was commissioned in late 2023 to supplement the mine's water supplies. GGO have also recently commissioned bores GVW005P and GFWB002 at Gossan Valley to supplement the site's supply. Ongoing studies are underway to identify addition water sources should they be required.
- The groundwater supply being obtained from bores GGW69P, GGW67P, GGW93P, RMB4, and GVW007P is adequate for the needs of ore processing and developing a potable supply, after treatment through an on-site RO plant. The groundwater salinity from GGW67P, RMB4 and GGW93P fluctuate in response to pumping rate. These changes are linked to localised depletion of fresh groundwater, regional recharge, and possibly the influence of seepage from TSF2 (at GGW67P). The quality from bore GVW007P has remained stable over the review period. Groundwater from RMB4 continues to have a high concentration of arsenic making it non-potable without treatment. Continued operation of GGW69P, GGW93P, RMB4 and GVW007P is not expected to result in either a poorer water supply quality or depletion of the resource.
- The monitoring conducted by GGO have sometimes not met the required frequencies as stated in the WOS. It is noted the analytical suite was changed in late 2022 to include all major ions and trace metals as previously recommended.
- The water meter audits have identified ongoing calibration issues and, in some cases, maintenance issues that are preventing full compliance with the WOS and 2009 Water Meter Order referenced in the LTW. Additional maintenance of the meters will be required to achieve full compliance.

The following recommendations are made to improve the performance and outcomes of the monitoring programme:

- The frequency of the various readings required by the monitoring programmes should be increased to comply with the WOS.
- A maintenance programme should be conducted on the flow meters identified in the annual meter audits that have setup (pipeline configuration) or corrosion-related issues. Priority should be given to meters that have consistently been out of calibration and/or the meters fitted to pipelines with higher flow rates.
- An investigation should be undertaken into the rising groundwater level at bore MB74.
- The water balance should be modified to include evaporation from the TSF's and water storages.

1.0 Introduction

The Golden Grove Mine (Golden Grove) is located approximately 55 kilometres (km) south-southeast of Yalgoo (**Figure 1**) and consists of two underground mines, Scuddles and Gossan Hill that operated since 1989 and 1994, and an open pit mine which operated between 2011 and 2015 (**Figure 2**).

A Department of Water and Environmental Regulation (DWER) holds a Licence to Take Water (LTW) to abstract groundwater for potable and process purposes and to dewater the mines. The conditions of the LTW and the associated Water Operating Strategy (WOS) require monitoring of groundwater abstraction, groundwater levels and groundwater quality and the submission of a report every three years to the DWER by 30 April.

This report presents and interprets the monitoring data and impacts for the three-year period from 1 January 2022 to 31 December 2024, in accordance with "*Operational Policy No. 5.12 – Hydrogeological Reporting Associated with a Groundwater Well Licence*" (DoW 2009). This report is the latest of a series of groundwater monitoring reports dating from 1990; the most recent annual groundwater monitoring summary being for the 2023 water year (GGO 2024a), while the previous triennial groundwater monitoring review for 2019-2021 was prepared in 2022 (AECOM 2022).

1.1 Licensing

Previously, annual water allocation of 3,510,000kL was in effect under instrument LTW No. GWL103574(9) until 14 August 2024, covering most of the current reporting period. Subsequent to this, two separate instruments were put in place to permit groundwater abstraction. These instruments covered the East Murchison Groundwater Area (GWL209427(2) for 750,000 kL/year) and Gascoyne Groundwater Area (GWL103574(10) for 3,510,000 kL/year) respectively. Copies of the current licenses are included as **Appendix A**, together with a copy of the licence to operate the site-works under the Environmental Protection Act, 1986, (No. L8593/2011/1). The latter licence includes conditions on water pollution control that are relevant to this report but are fully reported to DWER in the 2024 Annual Environmental Report prepared separately by GGO.

2.0 Climate

Golden Grove is in the semi-arid inland region of Murchison in Western Australia, adjacent to the divide with the Wheatbelt Region (Pilgrim 1987). Monthly rainfall and evaporation totals for Golden Grove between 2022 and 2024 are shown in **Table 1**, with the long-term averages for the site (**Figure 3**).

Table 1 Monthly Climate Data - Golden Grove Area 1922-2024

Month	Golden Grove Mine Site*			
	Rainfall Total (mm)	Average Rainfall 1987-2024 (mm)	Evaporation Total (mm)	Average Evaporation 1987-2024 (mm)
Jan-22	16.3	22.7	516.7	361.7
Feb-22	11.2	33.2	374.3	299.0
Mar-22	58.2	25.4	290.5	250.3
Apr-22	18.5	24.6	143.9	164.3
May-22	20.2	32.5	128.5	113.7
Jun-22	21.7	29.2	72	70.3
Jul-22	25.9	33.6	70.1	68.9
Aug-22	58.2	28.9	116.4	98.4
Sep-22	49.0	12.4	138.5	151.1
Oct-22	2.3	8.1	233.6	231.1
Nov-22	3.6	9.4	326.8	283.2
Dec-22	0.8	15.7	441.6	348.3
Total 2022	**285.9**	**275.6**	**2,852.9**	**2,440.41**
Jan-23	29.4	22.7	406.3	361.7
Feb-23	0.9	33.2	391.8	299.0
Mar-23	66.9	25.4	295.6	250.3
Apr-23	19.0	24.6	181.7	164.3
May-23	1.3	32.5	157.2	113.7
Jun-23	20.9	29.2	66.3	70.3
Jul-23	15.3	33.6	82.8	68.9
Aug-23	14.9	28.9	136.8	98.4
Sep-23	5.1	12.4	210.6	151.1
Oct-23	2.0	8.1	316.1	231.1
Nov-23	8.8	9.4	358.7	283.2
Dec-23	0.0	15.7	458	348.3
Total 2023	**184.4**	**275.6**	**3,061.9**	**2,440.41**
Jan-24	1	22.7	445.8	361.7
Feb-24	17.3	33.2	395.7	299.0

Month	Golden Grove Mine Site*			
	Rainfall Total (mm)	Average Rainfall 1987-2024 (mm)	Evaporation Total (mm)	Average Evaporation 1987-2024 (mm)
Mar-24	28	25.4	266.1	250.3
Apr-24	6.5	24.6	240.0	164.3
May-24	11.2	32.5	161.0	113.7
Jun-24	99.9	29.2	*12.0*	70.3
Jul-24	54.7	33.6	*0.0*	68.9
Aug-24	29.3	28.9	68.8	98.4
Sep-24	6	12.4	205.6	151.1
Oct-24	18.8	8.1	235.2	231.1
Nov-24	40	9.4	257.7	283.2
Dec-24	8.6	15.7	372.6	348.3
Total 2024	**321.3**	**275.6**	**2,660.5**	**2,440.41**

* - Data provided by GGO, 2025.

Underlined and italicised values are likely to be erroneous.

3.0 Hydrogeological Setting

The Golden Grove Mine area is underlain by Archaean rocks comprising metasediments and volcaniclastics, including banded iron formation (BIF) with minor felsic volcanic's that have been intruded by Proterozoic dacite sills and dolerite dykes (**Figure 4**). The Archaean rocks form the eastern limb of a north-northwest trending syncline, confined by granite to the east and west.

The Archaean rocks are mantled in low-lying areas by Quaternary sandy colluvial and alluvial sediments. The Archaean rocks are deeply weathered, locally up to 135 metres (m) below ground surface.

Groundwater occurs in permeable zones in the weathered bedrock and in fractures in the underlying fresh bedrock. The base of the weathered zone is generally more permeable, as are the main mineralised north-south shears and the margins of dolerite dykes when they are partly weathered. At Gossan Hill, a shallow-dipping shear (reverse fault) is brecciated, with carbonate-lined voids, and is significantly permeable to several hundred metres depth. The dolerite dykes at Gossan Hill in the area dip eastwards at a shallower angle than the main shear, and the margins of the dykes are permeable to a greater depth than the surrounding country rock. The fractured bedrock is hydraulically connected to the overlying weathered profile and the brecciated main shear that forms a distinct, deeper aquifer.

Recent investigations at the Gossan Valley deposit (southeast of Gossan Valley, AECOM 2020b), on the western side of Bald Hill (new bore GGW93P, AECOM 2020a), and northwest of TSF2 (at the new TSF4 site, AECOM 2023) confirm the above aquifer occurrence is extensive across Golden Grove. Deep fractured dolerite and dacite contacts at Gossan Valley and deep shears west of Bald Hill host high-yielding aquifers. In all cases, groundwater is recharged in elevated areas and flows to low-lying areas through the saprock (partly weathered and fractured bedrock). These flows migrate to regional groundwater discharge zones at salina's and salt lakes well away from Golden Grove. Along the way the groundwater accumulates salt ranging from fresh in recharge areas (high runoff and little evapotranspiration) to saline in discharge zones (low runoff and higher evapotranspiration).

The granite located near Golden Grove is deeply weathered and mantled with extremely weathered saprolite clay. The saprolite horizon across the Golden Grove site is typically of very low hydraulic conductivity. The partially weathered saprock zone beneath is typically of low hydraulic conductivity but may locally be of moderate hydraulic conductivity. The fresh bedrock is regarded as a regional aquitard.

There are no known ecological dependencies on groundwater at Golden Grove, mainly because the water table was too deep to support even deep-rooted vegetation. Prior to GGO commencing operations in 1989, groundwater was used for pastoral purposes via several wells and bores in the region. The baseline groundwater quality was fresh to brackish, near-neutral pH and had low concentrations of trace metals. Elevated arsenic and manganese have been noted to occur in several areas.

Since 1989 the development of two large underground mines has altered the hydrogeology at Golden Grove. Groundwater in the saprock aquifer close to the Scuddles and Gossan Hill mines was fresh to brackish. However, it has been largely drained by mine dewatering. The water table has been lowered by 10s of metres generally at Golden Grove and over 100 m above the two mines. Mineral exploration drilling over the past 50 years has altered the way recharge enters the aquifer. Whereas once recharge would have accumulated on the caprock that mantles the ancient bedrock geology, it now migrates down the old drillholes as well as natural fractures to the dewatered saprock aquifer.

Seepage from TSF1, TSF2, and TSF3 and other water storages at Golden Grove has accumulated (as recharge once did) within surficial alluvium overlying the caprock forming hydraulic seepage mounds. These mounds have grown and dissipated as facilities have operated and been closed over the past 35 years. Seepage migrates to the saprock aquifer through geological fractures and/or old drillholes to the saprock aquifer. Locally perched on the caprock, seepage is captured by interception trenches or recovery bores. Seepage reaching the saprock is contained within the site by hydraulic gradients in cones of depression surrounding the Scuddles and Gossan Hill mines and/or recovery bores (TSF2).

4.0 Groundwater Abstraction

4.1 Borefield Description

Groundwater abstraction at Golden Grove is typically from one production bore to supply raw feed water to the reverse osmosis (RO) plant for potable use and several additional general-purpose bores for use 'as required' (**Table 2**). One new bore (GVW007P) was constructed during the review period. Details of bore GVW007P are provided in a stand-alone hydrogeological report (AECOM 2020b).

The main water supply source, bore GGW69P has been historically used to generate potable water (via the RO plant) and on occasion supplement process water as required. Bore GGW93P, GGW69P and GVW007P have been utilised as main potable water supply, while RMB4 and GGW67P are make-up water supplies to supplement the supply. Bores GGW53P and GGW54P are currently non-operational production bores (GGW54P is not equipped). If required, they may be returned to production in the future to further supplement the general supply. Bore GHDEC44P was, until 2021 utilised for interception of groundwater flow into the Gossan Hill Decline, provision of water for dust suppression in the decline and crushing operations at the ROM Pad near the portal. Since January 2023, an old (existing) bore, GHDEC37R, has been equipped and operated to replace GHDEC44P.

Details of the installed pumps (make, model, depth and capacity) and flow meter instrument numbers are provided in the WOS (EMR 2021 and GGO 2023b, 2024b).

4.2 Groundwater Abstraction and Mine Dewatering

Annual groundwater abstraction and seepage recovery volumes, and groundwater discharged to Lake Wownaminya since 2005 are shown in **Table 3**. Utilisation of the groundwater licence allocations for the reporting period shown in **Table 4**. Corresponding monthly totals are included in **Appendix C**. Histograms of monthly abstraction since 1990 are shown on **Figure 5** (Gossan Hill Mine), **Figure 6** (Scuddles Mine) and **Figure 7** (general groundwater abstraction including Gossan Valley).

Monthly groundwater abstraction, groundwater levels and groundwater salinity for Bores GHDEC37R, GGW67P, GGW69P, GGW93P,GVW007P and RMB4 are shown on **Figure 8** to **Figure 14**. The aggregate total groundwater abstractions from each source for the review period are summarised in **Table 4**.

The Gossan Hill Mine is dewatered by pumping directly from sumps and collector drains in the underground mine. Groundwater is pumped from various temporary sumps to a pumping station at the 667 Level and another at the 190 Level. Mine water from both levels is then lifted to the surface and directed to the mine water clarifier (MWC) where treatment begins to allow the water to be used for ore processing. Since 2005, abstraction from the Gossan Hill mine has varied in response to short term changes in groundwater inflow rates from old drill holes and fractures intersected by the workings and aquifer recharge from rainfall. During the review period, total annual net groundwater abstraction from Gossan Hill Underground varied between 593,587 to 708,820kL.

The Scuddles Mine is dewatered by pumping directly from sumps and collector drains in the underground mine. Mine water is lifted to the surface and directed to the mine water clarifier (MWC). During the review period, total annual net groundwater abstraction from Scuddles Underground ranged from 99,134 to 566,680kL.

Total groundwater abstraction from the Golden Grove Operations during the review period was 12% higher than the previous three-year average. The net dewatering abstraction increased from the Gossan Hill Mine (by approximately 46%) and decreased from the Scuddles Mine (30%). Potable water use increased by approximately 46% - mostly due to new or larger abstraction volumes from bores GVW007P, GGW93P and GGW67P. Discharge to Lake Wownaminya has, in the past three years been on average 35% lower than the previous six years.

Table 2 Schedule of Production Bores, 2024

Bore number	Location		Datum Level (mAHD)	Cased Depth (mbgl)	Slotted/ Screened Interval (mbgl)	Casing Diameter (mm)	Original Recom-mended Pumping Rate (kL/day)	Original Recom-mended Pump Inlet Depth (mbgl)	Original Static Water Level		2024 Static Water Level (m AHD)*	Current Bore Status
	Easting	Northing							(mAHD)	Date		
	(MGA Zone 50)											
Potable Production Borefield												
GGW53P	494,308	6,816,565	356.64	59.0	29.3 - 59.3	154	200	48	334.12	6/05/1989	311.76	Village Potable – Non-operational Standby Production
GGW54P	494,520	6,816,229	361.71	77.0	29.2 - 77.2	154	200	54	336.38	5/03/1989	315.34	Village Potable – Non-operational Standby Production
GGW67P	494,055	6,820,308	371.07	201.0	68.3 - 200.5	203	300	140	314.87	7/11/1993	247.31	Standby RO Feed and dewatering
GGW69P	493,640	6,820,692	372.44	188.0	70.0 - 188.5	203	1,000	172	325.80	7/11/1993	300.74	RO Feed and dewatering
GGW93P	493,342	6,817,715	364.80	120.0	30.0 - 120.0	200	1,300	70	324.62	12/12/2019	308.13	General purpose water supply
RMB4	493,842	6,817,293	364.48	65.8	N.D.	154	700	34	335.88	1/05/1994	310.53	General purpose water supply
GFWB002	499,256	6,812,904	366.75	120.0	N.D.	125	N.D.	N.D.	325.5	13/08/2020	Pumping	General purpose water supply
GVW005P	499,747	6,812,083	351.70	128.0	58.0–124.0	219	260	90	322.8	13/08/2020	322.91	General purpose water supply
GVW007P	500,903	6,810,719	352.62	157.5	31.5-157.5	219	1,300	100	320.7	13/08/2020	318.64	General purpose water supply
Gossan Hill Decline Dewatering												
GHDEC44P	496,300	6,817,684	361.59	114.0	47.5 - 113.7	156	500	108	318.10	29/03/1995	283.29	Mine Dewatering (decomm)
GHDEC37R	496303.3	6817729.0	362.11	119.4	49.4-119.4	156	600	93	293.51	28/2/1997	Pumping	Mine Dewatering
TSF2 Recovery Borefield												
MB40	494,095	6,821,816	362.51	40.0	28.0 - 40.0	125	N/A	N/A	332.09	24/02/1999	327.06	Operational Seepage Recovery Bore

Bore number	Location		Datum Level (mAHD)	Cased Depth (mbgl)	Slotted/ Screened Interval (mbgl)	Casing Diameter (mm)	Original Recom-mended Pumping Rate (kL/day)	Original Recom-mended Pump Inlet Depth (mbgl)	Original Static Water Level		2024 Static Water Level (m AHD)*	Current Bore Status
	Easting (MGA Zone 50)	Northing (MGA Zone 50)							(mAHD)	Date		
MB41	493,764	6,821,919	357.91	40.0	28.0 - 40.0	125	N/A	N/A	335.51	24/02/1999	330.86	Operational Seepage Recovery Bore
MB43	493,961	6,820,857	375.89	65.0	53.0 - 65.0	125	N/A	N/A	317.78	24/02/1999	311.35	Non-operational Seepage Recovery Bore (lack of water)
RB1	494256.2	6821173.5	373.02	49.0	40.0 - 49.0	102	N/A	N/A	347.09	8/03/2007	Dry	Non-operational Seepage Recovery Bore (blocked)
RB2	494315.5	6821327.6	372.00	55.0	37.0 - 55.0	102	N/A	N/A	348.60	13/03/2007	334.30	Operational Seepage Recovery Bore
RB3	493718.3	6821087.4	375.60	85.5	55.5 - 85.5	102	N/A	N/A	N/A	14/03/2007	Dry	Non-operational Seepage Recovery Bore (pump out of service)
RB4	494087.4	6821827.5	362.40	40.5	18.0 - 40.5	102	N/A	N/A	340.90	11/06/2010	323.61	Operational Seepage Recovery Bore
RB5	494092.6	6821016.3	373.50	51.3	33.3 - 51.3	102	N/A	N/A	357.20	13/06/2010	327.78	Operational Seepage Recovery Bore
ROM Pad Seepage Recovery Borefield												
ROM 1	495,845.5	6,818,063.3	360.45	6.0	0.0 - 6.0	50	N/A	N/A	360.04	20/07/2008	No Access	Operational Seepage Recovery Bore
ROM 9	495,848.5	6,818,071.0	360.18	8.8	2.8 - 8.8	50	N/A	N/A	353.37	12/12/2011	353.28	Operational Seepage Recovery Bore

Table 3 Annual Groundwater Abstraction and Discharge Totals, 2005 to 2024

Year	Gossan Hill Mine				Scuddles Mine	Water Supply Borefield								**Total Seepage Recovery	Total Ground water Abstraction	Disposal to Lake Wownaminya
	GHDEC 37R	GHDEC 44P	Decline (net)^	Total		GGW 53P	GGW 54P	GGW 67P	GGW 69P	GVW 007P	GGW 93P	RMB4	Total			
2005	0	72,220	1,497,971	1,570,191	529,769	0	0	2,995	148,490	0	0	0	151,485	0	2,251,445	895,824
2006	0	30,964	1,554,465	1,585,429	458,709	0	0	966	159,045	0	0	0	160,011	0	2,204,149	779,757
2007	0	74,413	1,574,377	1,648,790	517,618	0	0	637	196,564	0	0	0	197,201	0	2,363,609	686,845
2008	0	7,254	1,550,054	1,557,308	609,083	0	0	11	177,255	0	0	0	177,266	162,409	2,309,236	804,881
2009	0	0	1,395,610	1,395,610	648,669	0	0	2,133	155,863	0	0	0	157,996	149,101	2,351,396	632,053
2010	0	154	826,601	826,755	712,932	0	0	7,438	161,420	0	0	101,640	270,498	131,192	1,941,117	145,369
2011	0	46,357	768,641	814,998	659,814	0	0	138	152,958	0	0	0	153,096	187,807	1,815,181	145,812
2012	0	45,841	553,110	598,951	579,337	0	0	0	116,727	0	0	2,515	119,242	148,631	1,446,161	663,090
2013	0	43,723	858,060	901,783	624,698	0	0	0	123,239	0	0	27,058	150,297	123,149	1,799,927	782,614
2014	0	41,736	750,804	792,540	615,957	0	0	41,049	122,621	0	0	59,876	223,546	101,658	1,733,921	397,763
2015	0	15,687	540,040	555,727	580,516	0	0	356	127,433	0	0	40,753	168,542	110,069	1,415,110	471,928
2016	0	6,803	491,130	497,933	573,705	0	0	2,435	104,483	0	0	6,545	113,463	95,730	1,281,273	738,168
2017	0	23,104	509,448	532,552	548,049	0	0	3,171	99,795	0	0	14,682	117,648	85,372	1,283,722	553,857
2018	0	9,979	275,876	285,855	540,983	0	0	2,277	158,345	0	0	26,278	186,900	63,258	1,077,090	400,807
2019	0	0	524,220	524,220	540,009	0	0	3,883	132,058	0	0	63,305	199,246	62,218	1,326,759	280,853
2020	0	25,724	389,855	415,579	534,306	7,099	0	9,415	130,714	0	120,397	91,546	359,171	50,576	1,361,857	240,192
2021	0	13,932	411,415	425,347	484,764	895	0	23,754	134,864	0	165,306	22,186	347,005	36,473	1,293,669	320,400
2022	0	0	593,587	593,587	99,134	16	0	29,148	114,653	0	147,163	25,986	316,966	34,399	1,044,086	259,377
2023	52,875	0	708,820	708,820	427,853	0	0	65,324	341,992	11,265	196,201	958	615,740	56,869	1,809,282	87,006
2024	100,060	0	628,995	628,995	566,680	0	0	77,347	187,533	162,321	133,009	6,404	566,614	37,803	1,800,092	197,763

NB: N/A - Not applicable * Gossan Hill and Scuddles Mine totals are net of total abstraction minus underground returns
**Total Seepage Recovery includes abstraction from the ROM bores and the TSF2 Seepage recovery bores.

Table 4 Annual Allocation Utilisation, 2022 – 2024

Year	Total Abstraction Gascoyne (GWL103574(9)	Allocation Utilisation %	Total Abstraction Murchison GWL209427 (2)	Allocation Utilisation %
2022	1,044,086	29.7%	-	-
2023	1,809,281	51.2%	11,265	1.5%*
2024*	1,637,771	46.7%	162,321	21.6%
* - Abstraction only started in December 2023.				

4.3 Water Balance

An annualised breakdown of groundwater abstracted, recovered, or discharged to Lake Wownaminya, compared to the total abstraction during the review period, is summarised in **Table 5**.

Table 5 Water Balance Breakdown for Golden Grove, 2022 - 2024 (kL)

Year	Total Combined Abstraction	Gossan Hill (net) Dewatering	Scuddles Dewatering	Total Dewatering	Potable Supply	Seepage Recovery	Lake Wownaminya Discharge
2022	1,043,259	56.9%	9.5%	**66.4%**	**30.4%**	**3.2%**	24.9%
2023	1,795,374	39.5%	23.8%	**63.3%**	**33.7%**	**3.0%**	4.8%
2024	1,637,771	38.4%	34.6%	**73.0%**	**24.7%**	**2.3%**	12.1%

The data provided in **Table 5** indicates:

- Annual contributions from mine dewatering at Gossan Hill and seepage recovery are declining
- There is an increasing reliance on the site's water supply from other sources such as the potable and other bores – mainly GGW69P, GGW67P, GGW93P and recently GVW007P.
- Lake Wownaminya is receiving a variable but smaller proportion of the water balance as an excess.

In response to declining yields from mine dewatering, GGO has been considering options to secure the future water supply for the Golden Grove Operations. Options being considered include:

- Replacing bore GGW69P due to declining yields from corrosion-related blocking of the bore screens.
- Equipping and abstracting groundwater from bores GVW005P and GFWB002 at Gossan Valley.
- Continue to monitor, manage, and predict water demands across the site by using a recently updated the site-wide water balance (Goldsim) model.
- Continue to reduce water demands across the site by implementing additional water efficiency campaigns.
- Explore for and develop new and additional groundwater sources from nearby areas.

The performance of TSF3 as the largest water facility on site has had a significant bearing on the site's water balance. **Table 6** provides a summary of the annualised volumetric statistics for the water movements to and from the TSF's. In late 2021, tailings were transitioning from TSF3 to TSF1. The totals below do not separate the two sites as they share the same pipeline and metering infrastructure. In early 2025, tailings deposition began transitioning to TSF4. Unlike the older TSF's, TSF4 is a central discharge facility equipped with a tailings slurry thickener to recover more process water and minimise evaporation losses.

Table 6 Water Balance Breakdown for the TSF1/TSF3, 2022 - 2024 (kL)

Year	TSF Discharge	Decant Returns	Underdrain Recovery	Rainfall	Evaporation*	Recovery Rate**
2022	3,782,536	2,793,770	439,249	122,937	N.D.	82.8%
2023	3,424,727	2,481,700	378,219	79,335	N.D.	81.6%
2024	4,287,677	2,780,508	479,714	138,159	N.D.	73.7%

* - Evaporation estimates not provided by GGO. Recovery rates therefore likely to be an underestimate.

** - Recovery rate = TSF outputs (decant returns, underdrains & evaporation) / inputs (discharge + rainfall).

The data provided in **Table 6** indicates:

- Discharges to the TSF's have increased overall.
- Underdrain recovery rate has been variable but increasing.
- Rainfall components have varied significantly during the review period – evaporation losses are not available.
- Decant returns, expressed as a percentage of the volumes sent and recovered have decreased overall from 83 to 74%.

4.4 Borefield Metering

Groundwater bores and mine dewatering lines at Golden Grove are fitted with flow meters that are checked each year to determine their accuracy and functional in line with the manufacturer's specifications. Audits were undertaken by Instrowest Pty Ltd during April 2022, March 2023 and May 2024 (Instrowest 2022, 2023, 2024). The audit reports are provided in **Appendix D**.

Audit findings conducted on meters associated with the abstraction bores and offsite discharge during the review period are provided in **Appendix D**. These audits include meters in addition to those shown in **Table 7**, that are collectively used for the mine site water balance. Issues associated with the identification, installation, maintenance, and calibration were identified. In the review period, meters were found to be outside the required accuracy tolerance (+/-5%) at between three and five of the ten sites. Some sites were non-operational when Instrowest conducted their audits.

Table 7 Abstraction and Discharge Flow Meter Calibration Results (2019-2024)

Meters Audited (Meter serial number)	Reported Meter Error (%)			2024 Audit Comments
	2022	2023	2024	
GGW67P (FIT4026 Magazine Bore)	**+18.85**	**+13.03**	**-7.66**	Non-standard piping, possible corrosion
GGW69P (FIT4027 NUF Bore)	+0.86	N/A	**-25.65**	Entrained air in pipeline
GGW53P (FIT4036 Village Bore Pump)	N/A	N/A	N/A	Flow rate too low to test
Gossan Hill Mine Dewatering 190 Line (FIT4058)	**+6.68**	+3.03	**+6.90**	Suitable installation. Further inspection and cleaning recommended.
Scuddles mine Dewatering (FIT4086)	**+9.94**	-2.28	N/A	Pumps out of service during audit.
Mine Water Clarifier to EPB (FIT4087)	**+9.94**	**-31.33**	**+9.92**	Further inspection and cleaning recommended
GHDEC37R (FIT4097)	N/A	**-23.15**	+1.32	Non-standard piping and placement of butterfly valve
RMB4 (FIT4098)	N/A	N/A	N/A	Suitable installation. Out of service.
GGW93P (FIT40183 Bald Hill Bore)	N/A	**-22.99**	-0.12	Suitable installation.

Meters Audited (Meter serial number)	Reported Meter Error (%)			2024 Audit Comments
	2022	2023	2024	
GVW007P (FIT40257 Gossan Valley Bore)	N/A	N/A	-0.24	Suitable installation.
EPA to Lake Wownaminya (FIT4051)	+0.86	0.23	**+6.33**	Non-return valve and tap too close to meter.
Bolded values outside the nominated 5% accuracy tolerance. N/A = meter not active or bore not in service during audit				

It is apparent from the results shown on **Table 7** that some of the older meters continue to record volumes outside the required accuracy tolerance (+/-5%). The audits provided several recommendations, including:

- ensuring pipe configurations either side of the meters are in accordance with the manufacturer's specifications
- removal and cleaning of scale built up on the inside of flow meters
- installation of adequate grounding on meters
- modifications to avoid entrapped air in the pipelines.

Flow meters attached to seepage recovery bores equipped with Airwell pumps are cycle counters and cannot be calibrated but are checked each month when they are read.

5.0 Groundwater Levels

5.1 Monitoring Bores

A schedule of all current groundwater monitoring bores at Golden Grove is provided in **Appendix E** and groundwater monitoring data are provided in **Appendix F**. The monitoring bore groups are as follows:

- Scuddles and Gossan Hill dewatering monitoring bores (GG-, GGW-, GHDEC-, CUDD- and SC-series bores).
- Environmental and geotechnical monitoring bores around TSF1, TSF2 and TSF3 (MB-, PD-, RB- and ROM-series bores).
- Regional monitoring bores (BJDD- and GGW-series bores).
- Gossan Valley dewatering and monitoring bores (GVW- and HIRD-).

Hydrographs for the above bores including recent and historical data are shown in **Figure 15** to **Figure 24**. Groundwater levels are measured monthly except for MB-series bores which are measured quarterly. Prior to 2022, the Station Wells were monitored annually, to meet the requirements of the environment licence. Successive reviews did not identify any changes to these wells as a result of GGO abstraction. Monitoring of the station wells has now ceased in line with the applicable WOS monitoring programme.

5.2 Mine Dewatering Facilities

Groundwater level contours for the end of 2021 and 2024 show two primary cones of depression developed over Scuddles and Gossan Hill mines and along the strike within the Archaean bedrock (**Figure 25** to **Figure 28**). The two cones of depression intersect bores GGW70 and GGW74. The largest and deepest drawdown cone is inferred to be centred on the Gossan Hill mine, reflecting the greater amount of historical abstraction from this mine. An outline indicating the likely extent of the drawdown is shown on the contour maps.

Two groundwater mounds are located across Evaporation Pond A (EPA) to the south of TSF1 and the other across TSF2. The EPA mound is linked to seepage from EPA and EPB that is locally recharging the dewatered bedrock aquifer. Seepage from the EPA mound is interpreted to be captured by the cones of depression surrounding Scuddles and Gossan Hill mines, due to its location on the groundwater divide. The seepage mound beneath TSF2 is a residual feature from when TSF was active prior to 2010. Seepage has been actively recovered since 2008, resulting in an irregular arrangement of groundwater levels. Steep hydraulic gradients are present in several areas because of recovery abstraction, combined with low-permeability tailings and limited underdrainage. Higher groundwater levels within the TSF are being maintained by seasonal recharge and relatively slow drainage rates.

Drawdowns decrease in a roughly radial pattern away from this site with slightly lower gradients along the strike (northwest and southeast) due to preferential flow along the stratigraphy. Some steepening of the hydraulic gradients between Scuddles and TSF2 is apparent due to the localised mounding described above.

Most of the current bores were operating prior to the current review period. However one additional bore (GVW007P) and one existing bore (GHDEC37R) was commissioned during the review period. To estimate the overall change since baseline groundwater levels have been interpolated from data derived from contours provided in the early reports (Rockwater 1982, 1989). Interpreted groundwater level changes since baseline conditions are provided in **Figure 27**. The largest changes are above the Gossan Hill Mine (-115m – GGW269) and the Scuddles Mine (-161m – SC075). The largest rises are at TSF2 (+32m), EPA (+28m) where seepage has affected groundwater levels in the saprock aquifer.

During the review period, groundwater levels appear to have declined generally by about -2 to -4m (**Figure 28)**, but more so at bores GGW93P and RMB4 (-17.2 and -10.8m), Gossan Hill at bore GG290 (-11.6m), and near Scuddles at SC080 and MB70A (-9.2 and -9.7m). Rises are apparent at Gossan Hill (GGW83 – +9.4m), TSF1 at bore MB12B (+8.5m), and TSF3 (MB74 – +13.5m).

5.2.1 TSF1

Historical groundwater levels at TSF1 show a steady and continuous rate of decline because of mine dewatering at Scuddles and Gossan Hill. MB33 and MB34 are the only bores that exhibits stationary trends attributed to ongoing but stable seepage from EPA (**Figure 18** and **Figure 19**).

These trends are expected to continue until the bedrock aquifer becomes fully dewatered, at which time, the groundwater levels will stabilise, i.e., the time-trends will flatten. None of the groundwater level trends are yet demonstrating this behaviour.

Groundwater levels at TSF1 are dominated by seepage from evaporation ponds and dewatering from Scuddles Mine (**Figure 18** and **Figure 19**). Groundwater flow is interpreted to be to the north and northeast beneath the facility. The combination of dewatering and seepage mounding has yielded groundwater levels that are between about 9 m and 18 m above the interpolated baseline levels (Figure 27) at EPA and about 29m to 32m below the baseline levels away from the seepage source.

During the review period, levels have fallen between about 2.2m (MB18B) and 5.0 (MB21) (**Figure 27**). Gradients are generally low except near the seepage location at EPA where it appears the bedrock aquifer is in hydraulic connection with the saturated superficial formations.

Since TSF1 was reactivated, the groundwater level at MB12B has risen by about 10m. This is expected to dissipate over a period of several years once TSF1 is re-decommissioned.

5.2.2 TSF2

Groundwater levels at TSF2 continue to decline because of ongoing seepage recovery pumping and general dissipation of the former seepage mound (**Figure 20, Figure 21,** and **Figure 22**). Recent groundwater levels are now close to or below the historically recorded lowest levels. Long-term dewatering from the Scuddles Mine has lowered groundwater levels in most bores along the western and southern sides of TSF2 below their baseline levels. The rates of decline are consistent and likely reflective of the proximity to the Scuddles Mine and deep permeable bedrock fractures along strike.

The distribution of groundwater level changes across the TSF2 area since baseline is still approximately 30 to 32 m high (PD6, PD14 and PD18). Gradients are relatively steep on the eastern and western sides, coinciding with the upper extend of the underdrainage. Steep gradients may also have been developed with the aid of seepage recovery abstraction (eastern side) and mine dewatering (western and south-western side). During the review period, changes at TSF2 indicate that the western and southern side of the mound decreased by between about 2.4m (MB53) and 9.4m (MB48). Elsewhere, the mound has decreased by between 1m and 2m (**Figure 27**). This indicates that the seepage recovery abstraction is further localising the extent of mounding to the facility and that the tailings are only slowly draining.

5.2.3 TSF3

Groundwater levels in the bedrock aquifer are represented by five monitoring bores shown in **Figure 23**. Except for two bores, groundwater levels have, since 2010, declined steadily in response to mine dewatering at Scuddles Mine. Two bores appear to have responded to seepage: MB71A on the eastern corner (adjacent to TSF1) and MB74 on the western side. The rise at MB71A was modest and occurred in 2023 but has since begun to recover. However, the rise at MB74 since mid-2024 is uncharacteristic of the long-term trends in this area. The typical long-term (falling) trend was abruptly halted in August 2024. By October 2024, the level had risen by 15.8m before the bore was damaged in November 2024. While this is still well below the ground (about 45m bgl), the sudden change should be investigated.

None of the other bores at TSF3 show any evidence of hydraulic mounding due to seepage. Many of the bores are dry, supporting this conclusion (**Appendix E**).

Groundwater levels during the review period reflect a moderately steep northeast-trending gradient towards the Scuddles Mine (**Figure 26**), indicating that regional recharge from the Gnows Nest Range to the west and southwest, is passing beneath TSF3. As is evident from the hydrographs from the more recent and local monitoring bores compared to the longer-term monitoring bores, this is a continuous, long-term trend. The recent groundwater level rise is apparent in the change maps (**Figure 27** and **Figure 28**).

6.0 Groundwater Quality

6.1 Mine Dewatering Abstraction

6.1.1 Salinity Monitoring

Salinity (as Total Dissolved Solids, or TDS) was measured most months at the Gossan Hill mine, but rarely at the Scuddles mine or GHDEC37R (**Appendix G**). The available data are displayed graphically, with monthly abstraction totals and groundwater level readings provided in **Figure 5**, **Figure 6**, and **Figure 8**.

The salinity of groundwater abstracted from the Gossan Hill underground mine fluctuates but is generally stable. Historic readings from the Scuddles Mine and bore GHDEC44P indicate the salinity was increasing. At Gossan Hill, the normal salinity trend remains between about 6,000 and 9,000 mg/L TDS. Three readings were above this range in the review period: fewer than in previous periods. At Scuddles, the salinity continued its increase from the previous triennial reporting period to between 6,500 and 9,000 mg/L in 2023. No additional data were available for GHDEC44P or GHDEC37R (its replacement) in the review period.

The reason for the long-term increases is attributed to one or more of several influences including:

- Upwelling of deeper, saline groundwater at Gossan Hill
- More event-based recharge that is mobilising stored salt in the dewatered profile (**Figure 3**)
- Accumulation of salt in the unsaturated zone within the drawdown cone (**Figure 26**)
- Potential drawdown effects whereby less saline water nearer to the surface has been abstracted without complete aquifer recharge, leaving more concentrated saline water behind for later years of pumping.

The differences in the trends at the Gossan Hill and Scuddles mines suggests different salt accumulation processes may be active across the site. Deep, saline groundwater (19,000 to 30,000mg/L TDS) was detected in deep exploration holes at Gossan Hill in 1993 and 1994 (Rockwater, 1997). Mixing between these deep sources and the shallower fresh to brackish resource has apparently resulted in net salinities in the 6,000 and 9,000mg/L TDS range.

6.1.2 Comprehensive Analysis

GGO take samples of groundwater from all production bores and selected monitoring bores in line with the programme defined in the WOS (EMR 2021, GGO 2023b, 2024b). The results or field monitoring and laboratory analyses are presented in **Appendix H**. These were provided as extracts from the MP5 database operated by GGO, or as raw digital laboratory report files.

The results indicate that the groundwater remains generally consistent with the previous review period (2019 – 2021), where the water remains neutral to weakly alkaline and brackish. The salinities in most bores have remained stable or fluctuate (RMB4 / GGW93P) over small ranges (**Figure 8** to **Figure 14**).

The data suggest that sulphate have also increased over the past three years, as has detections above the laboratory reporting limits of several trace metals, particularly manganese, chromium, zinc, iron and nickel, while nitrate concentrations remain generally low.

6.2 Tailings Storage Facilities

TSF1 was commissioned in the early 1990s when the Scuddles Mill was commissioned. The facility was placed at the bottom of a shallow valley that was underlain by palaeovalley alluvium and lateritic deposits (some transported) that behaved as a permeable substrate. Seepage from TSF1 was intercepted to a degree by an underdrainage system that was collected in a pond on its western side. Seepage overwhelmed this system and saturated the permeable substrate leading to a hydraulic mound that migrated down the valley to the southeast. This seepage was subsequently controlled by installing a toe drain system along the southern and western sides. This system operated for some years after it was decommissioned. TSF1 was re-commissioned for use between 2022 and 2024. Tailings is no longer sent to TSF1.

TSF2 began operation in 1999, receiving tailings derived from both the Gossan Hill and Scuddles underground mines. In October 2010, deposition of tailings at TSF2 ceased and tailings were redirected to TSF3. To contain seepage and minimise groundwater mounding at TSF3, the structure incorporates several design features: (i) floor drains; (ii) a key trench beneath the embankment; and (iii) interceptor drains around the internal and external perimeters. TSF2 also includes these features, but their effectiveness was constrained in some areas by the lack of extensions to the floor drains during its early lifts. GGO is currently in the process of transferring all tailings discharges from TSF3 to TSF4.

To manage seepage-related impacts as required by DWER Licence No. 8593/2011/1, GGO has been abstracting groundwater from eight sites around the perimeter of TSF2 (**Figure 29**) in addition to toe drains. Groundwater quality in this area has been monitored (as required) at regular intervals using monitoring wells and recovery bores located nearby. The main indicator that has been used to define the severity of changes due to seepage is the concentration of sulphate. Sulphate is released from the tailings due to the oxidation of sulphide minerals (primarily pyrite) that is exposed to oxygenated decant water and rainwater.

The following discussion is based on a presentation of sulphate concentration distributions at TSF2 as follows:

Figure 29 shows, for comparative purposes, baseline, and background sulphate concentrations for the TSF2 and TSF3 area.

Figure 30 shows the concentrations in the TSF2 and TSF3 area in late 2024

Figure 31 shows the change in concentrations between baseline/background and late 2024.

The available baseline and background data (**Figure 29**) indicate:

- Near TSF2 the groundwater contained moderate sulphate concentrations in the range of 8 mg/L (MB58) to 150 mg/L (MB41).
- Near TSF1 and TSF3 the groundwater contained moderate sulphate concentrations in the range of 15 mg/L (MB24) to 70 mg/L (MB13).

In late 2024, sulphate concentrations (**Figure 30**) ranged from:

- 1,400 mg/L (SC080) and 1.650 (MB57) near TSF2, decreasing to between 340 and 358mg/L at production bores GGW67P and GGW69P.
- 1,750 mg/L at MB34 at the evaporation ponds near TSF1.

Changes since baseline (**Figure 31**) suggest sulphate concentrations

- Near TSF2 are between 2 mg/L (GGW50) and 607 mg/L (MB40) higher.
- South of TSF2 (at GGW67P and GGW69P) are about 250 mg/L higher.
- West (upgradient) of TSF1, TSF3 and the evaporation ponds are mostly between 15 mg/L(MB73A) and 93 mg/L (MB14) higher.
- East (downgradient) of TSF1 and TSF3 are between 68 and 408 mg/L higher.

The contours shown on **Figure 30** and **Figure 31** include control points using a composite of data from previous years. Overall conclusions of these results include:

- Groundwater including seepage is still present around the northern side of TSF2
- Seepage has affected groundwater in small areas around the eastern and western sides of TSF2.
- Seepage from TSF2 has migrated downgradient to the south towards the Scuddles Mine suggesting it is an effective hydraulic sink and intercepting most of the residual seepage from TSF2.
- Elevated sulphate in production bores GGW67P and GGW69P (**Figure 30**)may contain a proportion of seepage but the increase may also be the result of long-term dewatering in weakly mineralised strata along strike of the Scuddles Mine.
- There are two sources of seepage from TSF1 and evaporation ponds. Recent data at EPA (**Figure 30** - MB34) indicates very high sulphate concentrations are present in the saprock aquifer (which is locally shallow and in hydraulic connection to the seepage source). Elevated sulphate (from seepage) is migrating downgradient (north and northwest) towards the Scuddles Mine. As with the TSF2 area, the drawdown cone surrounding the Scuddles Mine is an effective capture zone extending beneath these seepage sources.

6.3 Reverse Osmosis Plant Feed Water Bores

Samples for chemical analyses have been taken from raw feed water bores GGW53P, GGW67P, GGW69P, RMB4, GGW93P, and GVW007P during the review period. Results from the analyses are provided in **Appendix H**.

The results indicate the raw feed water is generally not of potable quality due to elevated aesthetic criteria such as total dissolved solids, sodium, and sulphate and not suitable at the health criteria for GGW53P. Trace metals are generally below the health-related guideline limits except for manganese in GGW69P and arsenic in RMB4. The available results of groundwater from GGW93P indicate it may be of potable quality, except for manganese.

7.0 Assessment of Impacts

The 2021 Golden Grove WOS (EMR 2021) includes environmental impacts arising from:

- Water licence conditions
- Excessive drawdown from groundwater abstraction
- Water table mounding due to site-based activities
- Adverse changes to the quality of the groundwater resource outside of operational areas.

The 2023 and 2024 Golden Grove WOS revisions (GGO 2023b, 2024b) identify potential but unlikely environmental impacts as noted in the 2021 revision. However, based on over 30 years of monitoring, management controls for these aspects were removed from the WOS. The current WOS now focusses management controls on:

- A breach of the LTW
- Insufficient raw water for mining / processing operations
- Insufficient potable water for the operations and site personnel.

The following discussion relates to the management of environmental impacts in accordance with the 2021 WOS.

7.1 Excessive Drawdown Impacts

Impacts associated with excessive drawdown relate to the reduction of supply for other users in the region or impacts to sensitive ecosystems.

Between 1993 and 2022, the various owners of the Golden Grove Mine monitored ten private station wells and bores. Over this time, no drawdowns were identified in any of these sites. Because of this well-established trend, the frequency of monitoring in all but Minjar Well (the closest site) was reduced. The current WOS reflects a change that removes the requirement for future monitoring of the private station bores and wells.

There are no known groundwater dependent ecosystems within the likely extent of drawdown at Golden Grove. As a result, no such impacts have occurred, or are expected in the future.

7.2 Water Table Mounding Impacts

The water table in the regionally extensive bedrock aquifer at Golden Grove is mounded at two locations: TSF2 and the TSF1 / evaporation ponds (EPA/EPB). These mounding locations are located within operational areas and have different management requirements due to the separate risks to the groundwater resource.

TSF2 mounding is managed by seepage recovery abstraction from eight dedicated bores (**Figure 29**). Seepage recovery has been undertaken to prevent seepage impacts from migrating off-site to the north and northeast. As detailed in Section 5.2.2, the seepage recovery abstraction has controlled the extent and height of seepage-related mounding. The mound is now constrained by the recovery bores and the cone of depression surrounding the Scuddles Mine. Given that TSF2 is no longer receiving tailings, continued seepage recovery is expected to remain an effective control as evidenced by the monitoring data.

Mounding at the evaporation ponds is well monitored and documented. While this is an issue being managed under the requirements of the site environment licence, GGO has remained focussed on its implications to the groundwater resource. Between 2011 and 2018 GGO commissioned investigation programmes comprising the installation, testing, and sampling of additional monitoring bores, several reviews of monitoring data, assessments of environmental risks, and options for recovery (URS, 2011, 2013 & 2015; and AECOM, 2017). These studies concluded:

- The bedrock aquifer is largely dewatered, and the native groundwater has, and will continue to be depleted for many years.
- Groundwater flow from the site is being effectively captured by dewatering from the Scuddles Mine (mainly) and Gossan Hill.
- The cones of depression that are capturing the seepage will remain for many years (probably many decades) due to the low intrinsic groundwater recharge rate in the area.
- Existing groundwater users in the region will remain unaffected in the foreseeable future.
- There are no groundwater dependent ecological receptors in the affected region.

In 2021 a seepage recovery programme was developed for the evaporation ponds area to reduce ongoing mounding in the superficial formations and release of seepage-affected water to the environment (AECOM 2021a). The programme included abstraction of perched groundwater from four monitoring bores, monitoring changes. Since then, GGO has closely monitored and maintained the EPA seepage recovery borefield as a requirement of the Golden Grove environment licence.

GGO is currently considering engineering designs for remediation works on the evaporation ponds to reinstate the low-permeability liners. In addition, conceptual level designs have been developed for a deeper and more extensive interception trench.

7.3 Groundwater Quality Impacts

Changes to the quality of the groundwater resource at Golden Grove are linked to the seepage-related mounding described above. While the quality of groundwater in the local operational area has been altered, the current controls are considered adequate.

Several other sites at Golden Grove have the potential to impact the groundwater quality, as identified in the ongoing mine closure planning (Section 7.4). The primary groundwater quality issues being considered are associated with seepage from the ROM Pad, Paste Plant, and TSF1, and post-closure seepages from the underground mines and open pits once they have fully flooded.

Seepages from the ROM Pad, Paste Plant and TSF1 are actively monitored by dedicated monitoring bores. At the ROM Pad and Paste Plant, dedicated bores are screened in the superficial formations that if saturated, present the greatest risk to local vegetation. GGO recently extended the network of monitoring bores at the ROM Pad as part of its expansion (EGI 2024a). As with the evaporation ponds, the bedrock aquifer at this site is largely dewatered and groundwater movements are controlled by the cone of depression surrounding the Gossan Hill Mine.

In 2021, GGO commissioned AECOM to review potential impacts and controls related to seepage as part of TSF1 being recommissioned. The review (AECOM 2021b) concluded any seepage to the bedrock aquifer would be captured by the drawdown cone surrounding the Scuddles Mine. Solutes within the seepage are dispersing into native groundwater from Gnows Nest Range that is flowing to the Scuddles Mine. Given the circumstances, renewed seepage from recommissioning TSF1 was unlikely to result in any significant risk to the environment. As described in Section 5.2.1, the changes to groundwater levels while TSF1 was operating were minor and are expected to recover over a period of several years.

Post-closure seepage impacts from the fully flooded underground mines are currently being assessed by GGO as part of their closure planning process (AECOM 2025 (in prep)). Before closure, it is planned that the nature of these risks will be clarified with the aid of an integrated site-wide groundwater flow and contaminant transport model.

7.4 Impacts Associated with Mine Closure

Through the mine closure planning process, GGO is considering long term impacts to the groundwater environment, in line with Commitment 17 (**Table 9**). In March 2013, a qualitative environmental risk assessment for water aspects at Golden Grove was undertaken by URS (2013).

The closure issues identified were derived from extensive site knowledge by GGO staff and consultants. The priorities were developed to highlight closure issues that were ranked based on knowledge gaps and risks. The highest-ranking issues were identified where the level of risk was unknown, followed by high-risk issues where the potential controls or their effectiveness were not yet known.

Results from this assessment have been incorporated in the site's latest closure plan and forms the basis of ongoing technical studies. The issues and associated risks are regularly reviewed by GGO in preparation for the next closure plan update.

In 2019, GGO commissioned the development of a work plan for capping TSF1 (AECOM, 2019). The plan reviewed previous capping designs to meet objectives relating to seepage amongst other things. The work programme has been put on hold while TSF1 was operational. However, the plan identified a range groundwater-related of actions GGO should consider as part of closing TSF1 that will be transferable to TSF2 and TSF3 when they are also ready to be capped.

In 2023 and 2024, GGO commissioned investigative studies into the geochemistry of waste materials that will be stored at the ROM Pad (EGI 2023, 2024b). These studies characterised the materials to be stored in the ROM Pad and combined their findings with a peer review of the design of the planned waste landform.

In late 2024, GGO commissioned AECOM (2025 (in prep)) to investigate the post-closure groundwater levels and quality of pit lakes in the Gossan Hill and Scuddles areas. The preliminary results indicate the pit lakes will recovery very slowly and take between 55 and 105 years after closure to begin filling. Stable levels are estimated to be reached about 183 years after closure. The long durations are because of the low rate of groundwater recharge and large residual volume within the site-wide drawdown cone. The pit lakes were characterised to form weak to moderate hydraulic sinks suggesting the pit lake quality may evolve to saline rather than hypersaline conditions. Further work was recommended to assess the influence of the extensive underground workings on the post-closure groundwater levels at the mine sites.

8.0 Compliance

Compliance in relation to the LTW and WOS has been assessed in three ways:

1. Adherence to the defined groundwater monitoring programme
2. Implementation of contingency measures
3. Fulfilment of the stated commitments.

For this review, compliance has been considered against the 2021 and 2023 WOS's as they were effective for the first and second halves of the review period.

8.1 Monitoring Programme

Compliance with the required monitoring programme is summarised in **Table 8**. Details of GGOs compliance against the current operating strategy are provided in **Appendix I**.

GGO has been partially compliant with regards to the groundwater quality monitoring. Prior to August 2022, the analytical suite did include several parameters required by the operating strategy including major ions (sodium, potassium, magnesium, chloride, and carbonate/bicarbonate) and major metals (iron, nickel, and manganese). This has since been rectified.

Flow meter calibration audits were undertaken by Instrowest Pty Ltd in 2022, 2023 and 2024. Based on the available reports several aspects of this part of the programme are unclear:

- Contractor transducers used for measurement are calibrated by NATA-accredited laboratories the meters, or whether the audit criteria listed under Commitment No's. 12 and 13 (refer **Table 8**)
- What the manufacturer's requirements are for each meter, as these are not specified in the audit reports
- The calibration schedule to determine whether all bores and dewatering line meters are being checked on a pre-determined frequency
- Whether the issues detailed in the audit reports have been rectified by the Maintenance Department.

Table 8 Monitoring Program Compliance Summary

Measurement	Frequency	Timing	Locations	Compliant
Pumped Volume (kL) & Flow Meter Reading	Monthly	+/- 3 days of the end of month	All potable/ production bores, recovery bores & the mine dewatering lines	**Yes** (Appendix C)
Standing Water Levels (Potable, dewatering & Evap. Ponds)	Monthly	At least 15 days from the previous readings	Production bores & monitoring bores nominated in the operating strategy*	**Partially** (see **Note 1**.) (Appendix F)
Standing Water Levels (ROM & TSF2)	Quarterly	March, June, September & December		**Partially** (see **Note 2**.) (Appendix F)
Groundwater Field Analysis (TDS)	Quarterly	March, June, September & December		**Partially** (Appendix G)
Groundwater Quality (physiochemical, major ions and metals analysis)	Quarterly	March, June, September & December		**Partially** (see **Note 3**.) (Appendix H)
Flow Meter Calibration	As per manufacturer's Recommendation	As required after annual audits	All potable/ production bores & the mine dewatering lines	**Partially** (see **Note 4**.) (Appendix D)

*Mine dewatering monitoring bores – not all are operational due to active mine dewatering and/or blockages

Compliance Summary Table Notes:

Note 1. Standing water levels in several bores were not measured in the reporting period, due to either being shut in for maintenance or in production use.

Note 2. Some bores not measured because they were dry or in production use.

Note 3. Some monitoring bores not sampled and tested in one or more years during the review period

Note 4. Several flow meters were out of calibration during the review period – some consistently. Flow meters attached to seepage recovery bores equipped with Airwell pumps are cycle counters and cannot be calibrated but are checked each month when they are read.

8.2 Contingency Measures

There have been no events during the review period that have triggered additional studies in relation to the Golden Grove Water Operating Strategy. Impacts to the groundwater resource such as ongoing recovery of seepage at TSF2 and seepage from EPA are managed according to the site Environment Licence (Commitment 19). There have been no changes to either the quality or quantity of the groundwater resource outside of the operational area (Commitment 20).

Non-compliances including monitoring and water-related incidents are managed and identified by the Safety, Health, Environment and Community Relations Department. Data required under the programme are collated each month (**Table 9**).

In practice, the monitoring programme at Golden Grove is very mature and well established in all site protocols and procedures. It is, however, apparent that the action plan for flow meter calibration audits and replacements during the review period still needs work.

During the review period, GGO initiated a bore transfer for supply of water from GHDEC44P to GHDEC37R at Gossan Hill and commissioned bore GVW007P at Gossan Valley, to counter the long-term decreases in groundwater supplies normally obtained from mine dewatering abstraction.

Water Operating Strategy Commitments

The key areas of non-conformance relate to the calibration and maintenance of flow meters. Details of these issues and fulfilment of the required commitments stated in the 2021 WOS are summarised in **Table 9**.

Table 9 Summary of Commitment Fulfilment

2		Timing	Compliant?
1	GGO will review the Water Operating Strategy annually and will lodge an amendment if required under the Department of Water Operational policy 5.08 – Use of operating strategies in the water licensing process.	Annual	**Yes** (GGO 2024b)
2	Submit to the Department of Water and Environmental Regulation (DWER) Geraldton office a Groundwater Monitoring Summary every year, except in a year when a Groundwater Monitoring Review is due, commencing 2020.	By 30 April each year commencing 2020	**Yes** (GGO 2023a 2024a)
3	GGO Golden Grove will submit to the DWER a Groundwater Monitoring Review every three years commencing 2019.	By 30 April each three years commencing 2019	**Yes** (AECOM 2022 and 2025 - this report)
4	Reports will be prepared in accordance with the DWER Operational Policy 5.12 'Hydrogeological reporting associated with a groundwater well licence '.	Ongoing	**Yes** (GGO 2023a 2024a and AECOM 2022, 2025 - this report)

2		Timing	Compliant?
5	Reports will include details of any missing data and what action will be taken to rectify the situation.	Ongoing	**Yes** (GGO 2023a 2024a and AECOM 2022, 2025 - this report)
6	Each production bore will be fitted with a cumulative water meter of a type approved under the Rights in Water and Irrigation (Approved meters) order 2009	Ongoing	**Yes** (Appendix D)
7	Water meters will be installed in accordance with the provisions of the document entitled “Guidelines for Water Meter Installation 2009” before any water is taken (except for test pumping prior to commissioning)	Ongoing	**Partial** Section 4.4 (Appendix D)
8	The DWER Geraldton office will be notified in writing of any water meter malfunction, including a timeline to rectify the malfunction and details how abstraction is proposed to be measured during this period.	Within seven days of the malfunction being noticed	**Partial** Section 4.4 (Appendix D)
9	The accuracy of installed water abstraction meters will be maintained within plus or minus 5% of the metered, in field conditions.	Ongoing	**Partial** Section 4.4 (Appendix D)
10	The DWER Geraldton office will be notified in writing of any water meter change that has occurred during the water year, and this will be detailed in the Groundwater Monitoring Summary.	Annually by 31st March	**Partial** Section 4.4 (Appendix D)
11	The result of drilling, construction and testing of any new or replacement bores will be reported to the DWER as outlined in the Operational Policy No. 5.12 - Hydrogeological Reporting Associated with a Groundwater Well Licence, November 2010.	After new bores are constructed.	**Yes** (AECOM, 2020a, 2020b)
12	Monitoring as specified in (2021) WOS Section 5.2 / Table 5-1 Golden Grove Water Use Measurement (Metered). Table 5-2 of the water operating strategy will be undertaken. (Tables 12, 13 & 14 in 2023 WOS)	Ongoing	**Partial** Section 4.4 (Appendix D)
13	If a water level or quality trigger is breached the contingency actions described in (2021) WOS Section 6 of the water operating strategy will be undertaken. (Section 8 in 2023 WOS).	Ongoing	**Yes** (AECOM 2021a)

9.0 Conclusions

GGO has undertaken the monitoring programme based on the Golden Grove WOS (2021 and 2023 revisions) sufficiently well to allow an effective assessment of current and likely future impacts.

Groundwater abstraction for mine dewatering has decreased because of a general depletion of the groundwater resource due to long-term mine dewatering. This characteristic is mostly applicable to the Gossan Hill Mine.

Groundwater levels in the regionally extensive weathered and fractured bedrock aquifer continue to fall in response to mine dewatering abstraction.

The quality of abstracted groundwater has changed over the life of the project, particularly salinity and sulphate concentrations, which have generally increased from the underground dewatering sites. Salinity increases are likely to be a result of a change in the proportion of shallower fresh/brackish groundwater to deeper, more saline groundwater. It is possible that changes to the rates of recharge, due to site disturbance, and lower rainfall totals may be contributing to this phenomenon. Increasing sulphate concentrations are noted in groundwater from the Gossan Hill and Scuddles mines, suggesting long-term dewatering is releasing sulphate from the dewatered zone in the bedrock aquifer. Based on historical hydrogeological data, the salinities have the potential to continue increasing as the shallower groundwater is depleted and more unoxidized bedrock is dewatered.

Groundwater is being affected by seepage from the evaporation ponds (EPA/EPB), TSF1 and TSF2. There is some evidence that TSF3 may be locally impacting groundwater in one area and possibly another that may also be due to seepage from TSF1. Seepage-related changes at the evaporation ponds are carefully monitored and are being managed in line with the site's environment licence. Seepage recovery abstraction at EPA/EPB and TSF2, in combination with the drawdown effects from the Scuddles Mine, is controlling the size and extent of seepage mounding. Groundwater levels beneath and around these facilities are declining.

The site's water balance has changed. Lower mine dewatering abstraction volumes are resulting in less excess water being discharged to Lake Wownaminya. Water balance modelling commissioned by GGO has identified a need to consider alternative sources to meet the challenges associated with declining volumes and increasing salinities. A new bore at Gossan Valley was commissioned in late 2023 to supplement the mine's water supplies. GGO have also recently commissioned bores GVW005P and GFWB002 at Gossan Valley to supplement the site's supply. Ongoing studies are underway to identify addition water sources should they be required.

The groundwater supply being obtained from bores GGW69P, GGW67P, GGW93P, RMB4, and GVW007P is adequate for the needs of ore processing and developing a potable supply, after treatment through an on-site RO plant. The groundwater salinity from GGW67P, RMB4 and GGW93P fluctuate in response to pumping rate. These changes are linked to localised depletion of fresh groundwater, regional recharge, and possibly the influence of seepage from TSF2 (at GGW67P). The quality from bore GVW007P has remained stable over the review period. Groundwater from RMB4 continues to have a high concentration of arsenic making it non-potable without treatment. Continued operation of GGW69P, GGW93P, RMB4 and GVW007P is not expected to result in either a poorer water supply quality or depletion of the resource.

The monitoring conducted by GGO have sometimes not met the required frequencies as stated in the WOS. It is noted the analytical suite was changed in late 2022 to include all major ions and trace metals as previously recommended.

The water meter audits have identified ongoing calibration issues and, in some cases, maintenance issues that are preventing full compliance with the WOS and 2009 Water Meter Order referenced in the LTW. Additional maintenance of the meters will be required to achieve full compliance.

10.0 Recommendations

Recommendations are provided below following the review of the monitoring data:

- The frequency of the various readings required by the monitoring programmes should be increased to comply with the WOS.
- A maintenance programme should be conducted on the flow meters identified in the annual meter audits that have setup (pipeline configuration) or corrosion-related issues. Priority should be given to meters that have consistently been out of calibration and/or the meters fitted to pipelines with higher flow rates.
- An investigation should be undertaken into the rising groundwater level at bore MB74.
- The water balance should be modified to include evaporation from the TSF's and water storages.

11.0 References

AECOM, 2017. Evaporation Pond Electromagnetic Survey, Golden Grove Mine. Unpublished report prepared for EMR Golden Grove Pty Ltd, dated 26 June 2017. Document Ref: 60543995_ENV_RPT_002.

AECOM, 2019. EMR Golden Grove TSF1 Capping Work Programme. Unpublished report prepared for EMR Golden Grove Pty Ltd, dated 19 March 2019.

AECOM, 2020a. Bore GGW93P Bore Completion Report. Unpublished report prepared for EMR Golden Grove Pty Ltd, dated 3 April 2020. Document Ref: 60597247_ENV_RPT_004.

AECOM, 2020b. Gossan Valley Groundwater Assessment. Unpublished report prepared for EMR Golden Grove Pty Ltd, dated 9 October 2020. Document Ref: 60616883_ENV_RPT_010.

AECOM, 2021a. Evaporation Pond A Seepage Recovery Programme. Unpublished report prepared for EMR Golden Grove Pty Ltd, dated 7 January 2021. Document Ref: 60597247_ENV_RPT_006.

AECOM, 2021b. TSF1 Seepage Review. Unpublished technical memorandum prepared for EMR Golden Grove Pty Ltd, dated 22 February 2021. Document Ref: 60597247_ENV_MEM_008.

AECOM, 2022. 2021 Groundwater Monitoring Review, Golden Grove Mine. Unpublished report to Golden Grove Operations Pty Ltd., dated 29 April 2022. Document Ref: 60678613_ENV_RPT_002.

AECOM, 2023. TSF4 Project Groundwater Assessment, Golden Grove Mine. Unpublished report to Golden Grove Operations Pty Ltd., dated 19 October 2023. Document Ref: 60695011_ENV_RPT_002.

AECOM, 2025. Golden Grove Mine Pit Lake Study, Mine Closure Study. Unpublished DRAFT report to Golden Grove Operations Pty Ltd., dated 26 March 2025. Document reference: 60742206_ENV_RPT_001.

DoW, 2009. Operational Policy No. 5.12 – Hydrogeological Reporting Associated with a Groundwater Well Licence. Published by the Department of Water, Western Australia, dated November 2009.

EGI, 2023. ROM facility investigation and peer review of waste rock landform design. Unpublished report prepared by Environmental Geochemistry International (EGI) Pty Ltd. for Golden Grove Operations Pty Ltd., dated 31 March 2023. Document reference: S2044 / J000796 / R1557.

EGI, 2024a. Gossan Hill WRD/ROM Groundwater Monitoring Well Installation Report. Unpublished technical memorandum prepared by Environmental Geochemistry International (EGI) Pty Ltd. for Golden Grove Operations Pty Ltd., dated 15 May 2024. Document reference: J000857 / R1665.

EGI, 2024b. Geochemical Characterisation of Gossan Hill Underground Mine Rock. Unpublished report prepared by Environmental Geochemistry International (EGI) Pty Ltd. for Golden Grove Operations Pty Ltd., dated 27 June 2024. Document reference: 2044 / J000836 / R1655.

EMR, 2021. Golden Grove Water Operating Strategy. Unpublished document prepared by EMR Golden Grove Pty Ltd. dated 10 May 2021.

GGO, 2023a. DWER Water Annual Groundwater Monitoring Summary 1 January 2022 – 31 December 2022. Unpublished document prepared by 29 Metals Golden Grove Operations Pty Ltd., dated 2023.

GGO, 2023b. Golden Grove Water Operating Strategy. Unpublished document prepared by 29 Metals Golden Grove Operations Pty Ltd., dated 14th December 2023.

GGO, 2024a. DWER Water Annual Groundwater Monitoring Summary 1 January 2023 – 31 December 2023. Unpublished document prepared by 29 Metals Golden Grove Operations Pty Ltd., dated 2024.

GGO, 2024b. Golden Grove Water Operating Strategy. Unpublished document prepared by 29 Metals Golden Grove Operations Pty Ltd., dated 29 November 2024.

Instrowest, 2022. Flow Audit Report – Report & Findings, MMG Golden Grove. Unpublished report prepared by Instrowest Pty Ltd. Report dated April 2022.

Instrowest, 2023. Flow Audit Report – Report & Findings, MMG Golden Grove. Unpublished report prepared by Instrowest Pty Ltd. Report dated March 2023.

Instrowest, 2024. Flow Audit Report – Report & Findings, MMG Golden Grove. Unpublished report prepared by Instrowest Pty Ltd. Report dated May 2024.

Pilgrim, 1987. Australian Rainfall and Runoff (AR&R). A guide to flood estimation. Pilgrim D.H (ed.). Published by the Institution of Engineers Australia: Barton, ACT, 1987.

Rockwater, 1982. Local and regional groundwater study, Golden Grove, Western Australia. Unpublished report to Esso Australia Ltd.

Rockwater, 1989. Golden Grove Project. Tailings Dam Site Investigation, Dam Site B – Drilling and Permeability testing. Unpublished report to United Construction Group Pty Ltd, Dated May, 1989.

Rockwater, 1997. Gossan Hill Underground Mine Dewatering Assessment. Unpublished report prepared for Murchison Zinc Company Pty Ltd, dated 27 March 1997. Report reference: 10.4.2/1997/1

URS, 2011. MB18 Exceedance Data Review Update. Unpublished technical memorandum prepared for MMG Golden Grove Pty Ltd, dated, dated 15 August 2011. Report reference: 42907771.609.W0531.1

URS, 2013. Water Risk Assessment for Golden Grove. Unpublished report prepared for MMG Golden Grove Pty Ltd, dated 15 March 2013. Report No. 42908242/W0769.609/0

URS, 2015. MB18 Exceedance Assessment 2015. Unpublished report prepared for MMG Golden Grove Pty Ltd, dated, dated 7 August 2015. Report reference: 42908871/RF-Wat-0167/1.

12.0 Report limitations

AECOM Australia Pty Limited (AECOM) has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Golden Gove Operations Pty Ltd and only those third parties who have been authorised in writing by AECOM to rely on the report.

It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the Scope of Work (SoW) and for the purpose outlined in the 2021 and 2023 revisions of the Golden Grove Water Operating Strategy.

The methodology adopted and sources of information used by AECOM are outlined in this Report.

Where this report indicates that information has been provided to AECOM by third parties, AECOM has made no independent verification of this information unless required as part of the agreed SoW. AECOM assumes no liability for any inaccuracies or omissions to that information.

This Report was prepared between March to April 2025. The information in this Report is considered to be accurate at the date of issue and is in accordance with conditions at the site at the dates sampled. Opinions and recommendations presented herein apply to the site existing at the time of our investigation and cannot necessarily apply to site changes of which AECOM is not aware and has not had the opportunity to evaluate. This document and the information contained herein should only be regarded as validly representing the site conditions at the time of the investigation unless otherwise explicitly stated in a preceding section of this report. AECOM disclaims responsibility for any changes that may have occurred after this time.

This Report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioners.

This Report contains information obtained by inspection, sampling, testing or other means of investigation. This information is directly relevant only to the points in the ground where they were obtained at the time of the assessment. The borehole logs indicate the inferred ground conditions only at the specific locations tested. The precision with which conditions are indicated depends largely on the uniformity of conditions and on the frequency and method of sampling as constrained by the project budget limitations. The behaviour of groundwater and some aspects of contaminants in soil and groundwater are complex. Our conclusions are based upon the analytical data presented in this report and our experience. Future advances in regard to the understanding of chemicals and their behaviour and changes in regulations affecting their management, could impact on our conclusions and recommendations regarding their potential presence on this site.

Where conditions encountered at the site are subsequently found to differ significantly from those anticipated in this Report, AECOM must be notified of any such findings and be provided with an opportunity to review the recommendations of this Report.

Whilst to the best of our knowledge, information contained in this Report is accurate at the date of issue, subsurface conditions, including groundwater levels can change in a limited time. Therefore this document and the information contained herein should only be regarded as valid at the time of the investigation unless otherwise explicitly stated in this Report.

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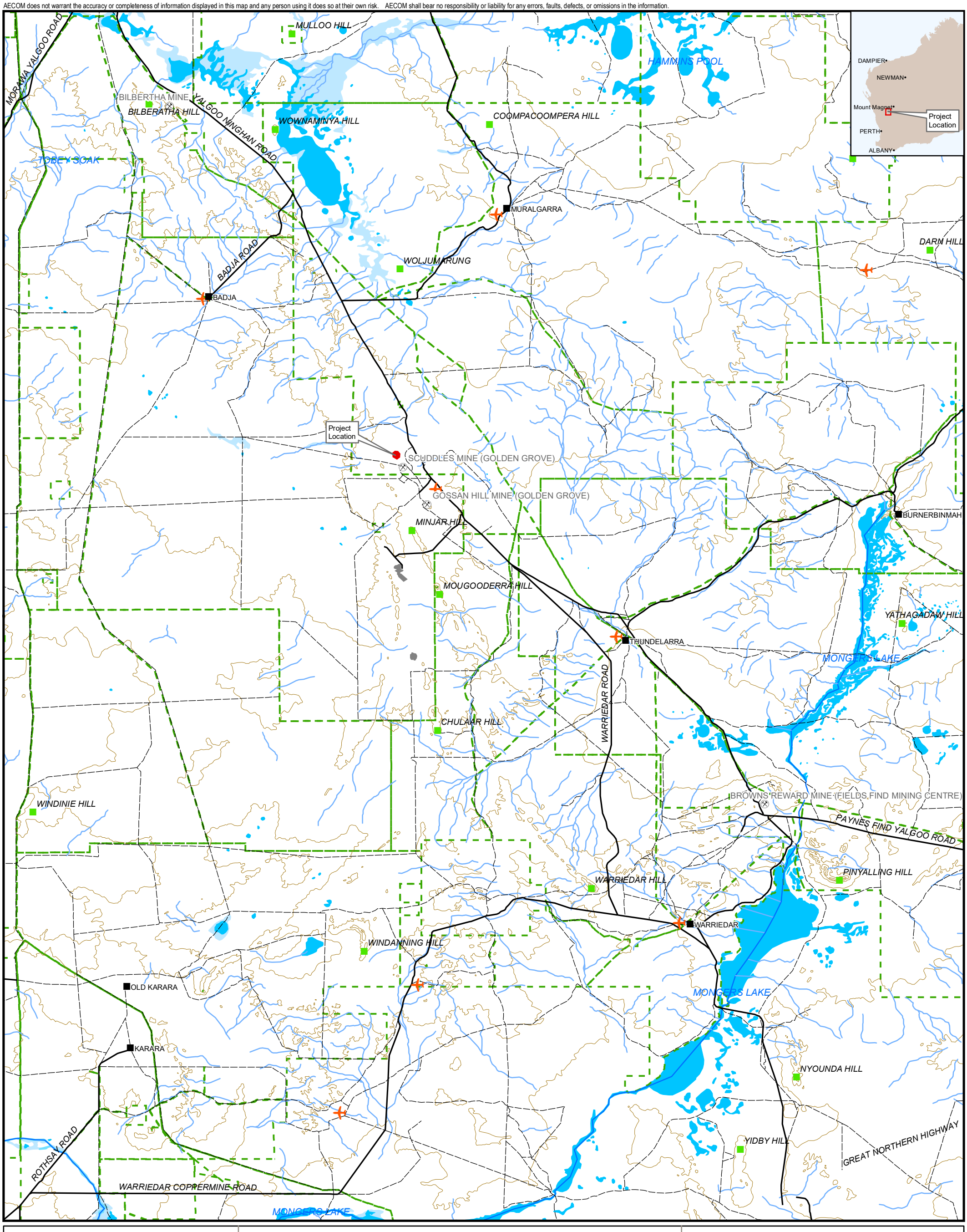

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APPROVED BY	R.Wallis
LAST MODIFIED	21 MAR 2019

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Kilometers

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LEGEND

- Homesteads
- Locations
- Mine Locations
- Landing Ground
- Minor Road
- Secondary Road
- Track
- Contours 50m
- Major Watercourse
- Minor Watercourse
- Flats
- Lakes
- Watercourse Areas
- Mine Areas

Project Location

GOLDEN GROVE OPERATIONS PTY LTD

2021 GROUNDWATER MONITORING REVIEW

Figure

1

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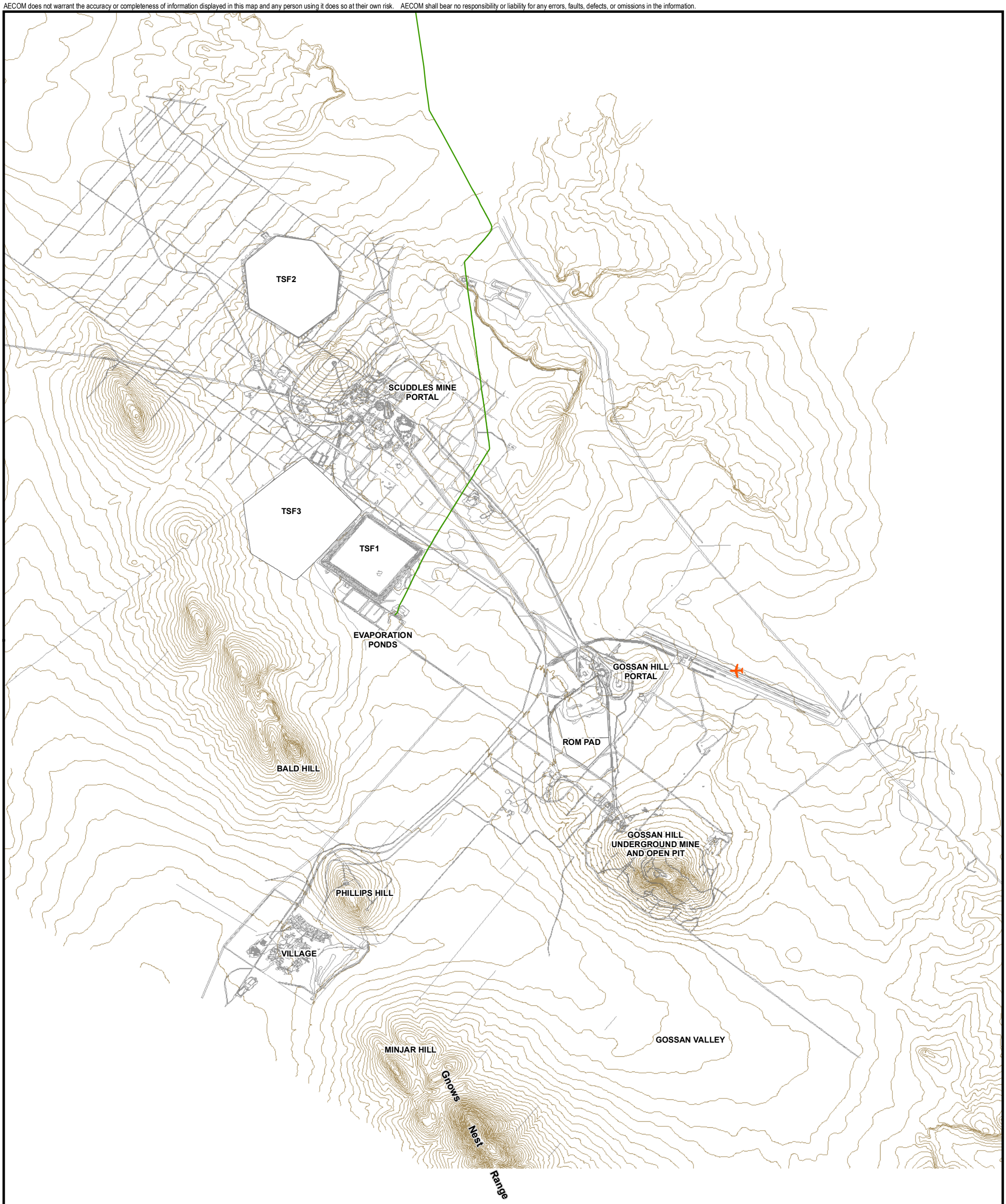

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LEGEND

- Golden Grove Infrastructure
- Ground Surface Contours 2 m Intervals

Golden Grove Operations Infrastructure

GOLDEN GROVE OPERATIONS PTY LTD

2021 GROUNDWATER MONITORING REVIEW

Figure 2

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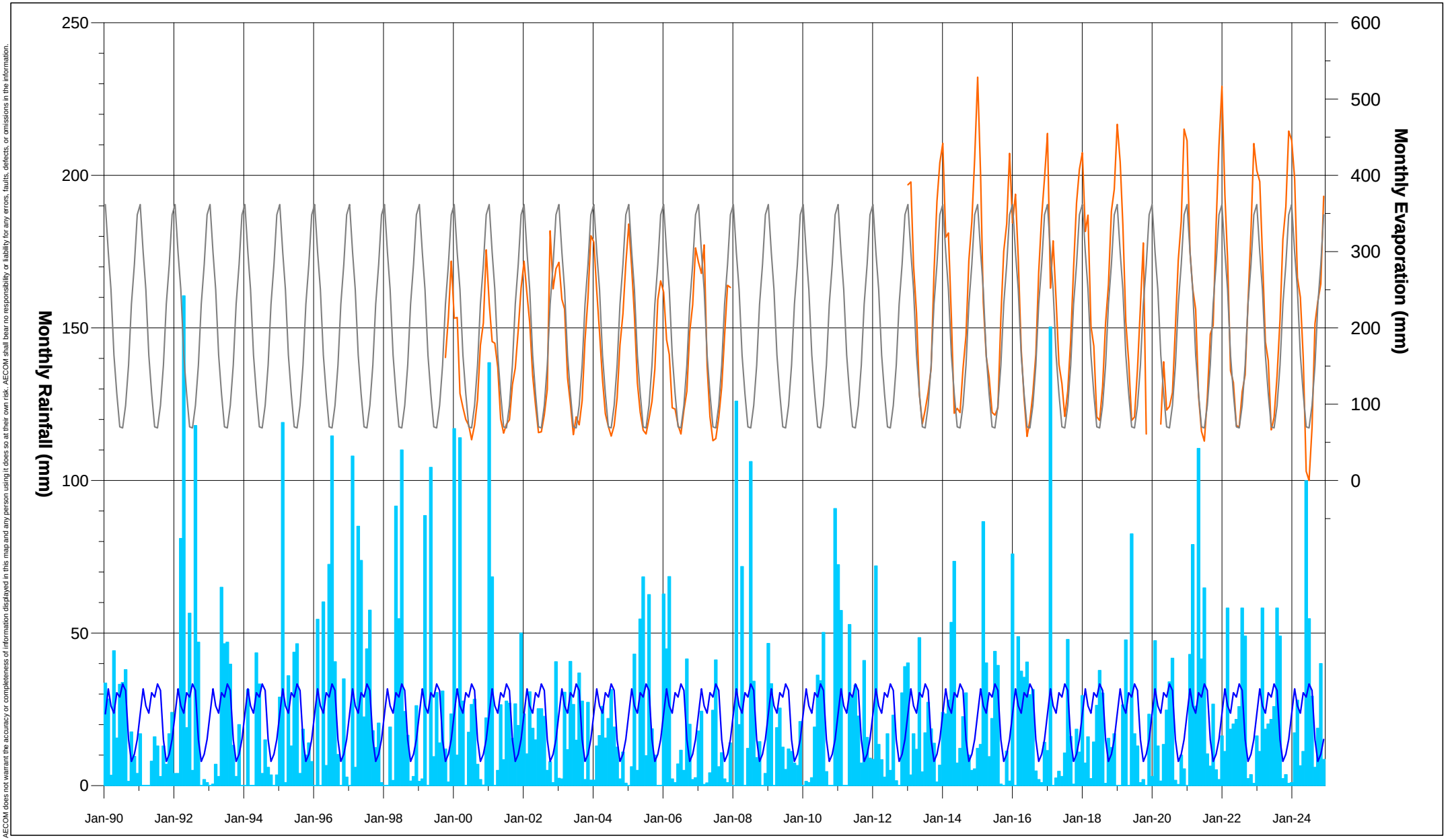

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APPROVED BY	RW
LAST MODIFIED	16/04/2025

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LEGEND

- Monthly Rainfall at Golden Grove
- Long Term Golden Grove Average Rainfall (since 1987)
- Monthly Evaporation at Golden Grove
- Long Term Golden Grove Average Evaporation (since 1999)

Data source: Golden Grove Operations Pty Ltd

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GOLDEN GROVE MINE SITE: MONTHLY RAINFALL AND EVAPORATION

GOLDEN GROVE OPERATIONS PTY LTD

2024 GROUNDWATER MONITORING REVIEW GOLDEN GROVE MINE

Figure 3

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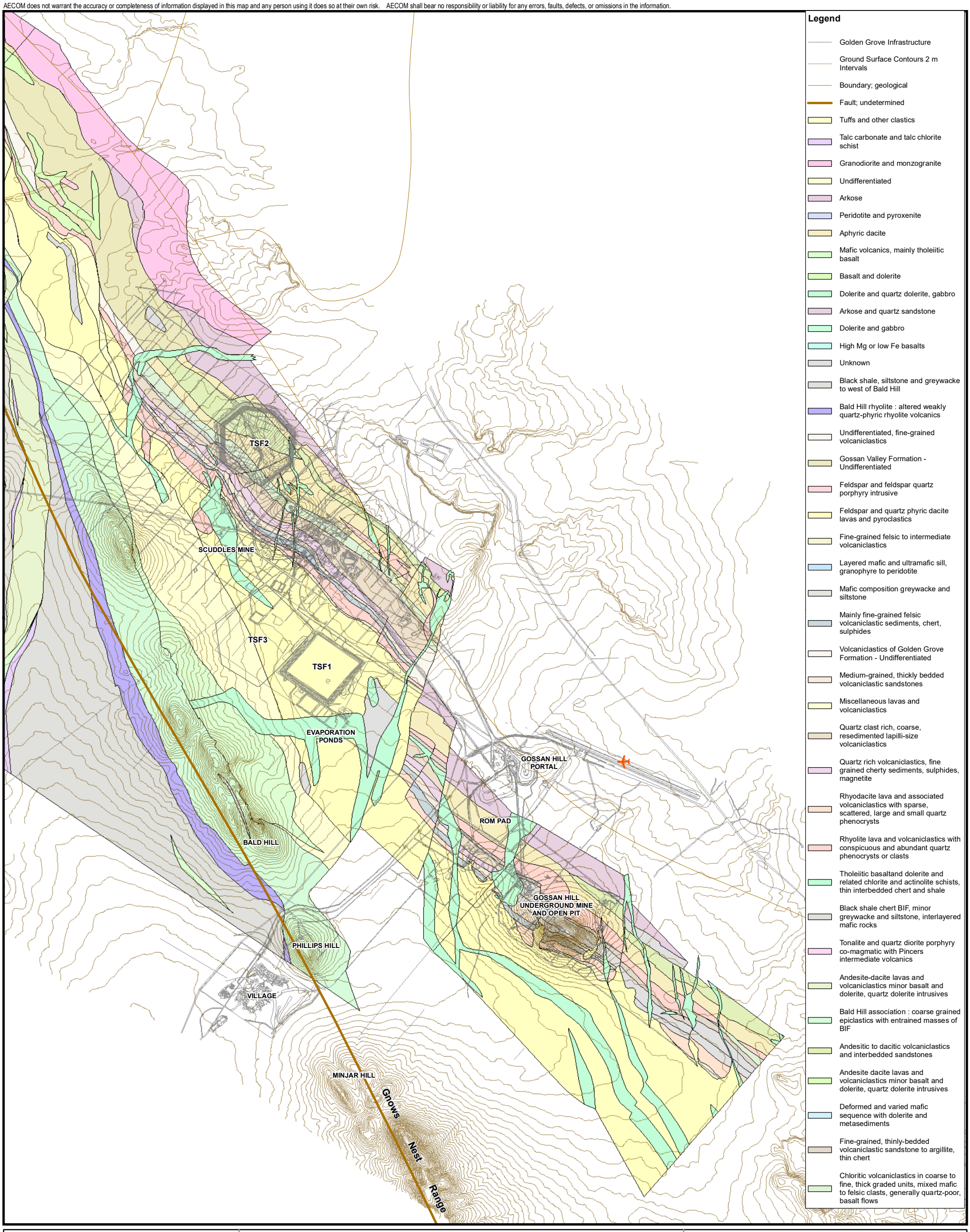

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LAST MODIFIED	21 MAR 2019

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Interpreted Geology and Site Infrastructure

GOLDEN GROVE OPERATIONS PTY LTD

2021 GROUNDWATER MONITORING REVIEW

Figure 4

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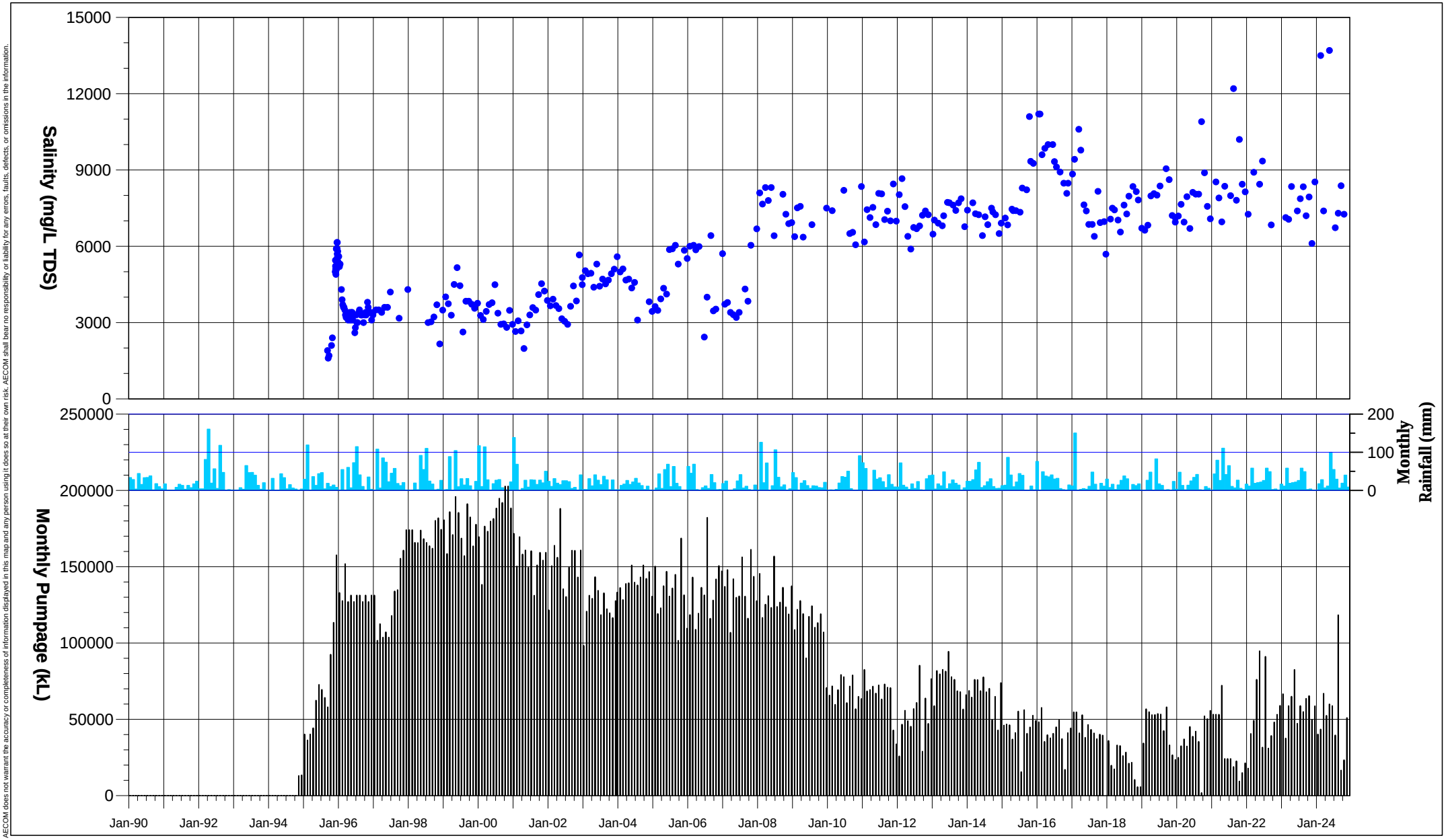

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LAST MODIFIED	29/04/2025

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LEGEND

- Groundwater Salinity (mg/L TDS)
- Monthly Pumpage (kL)
- Monthly Rainfall at Golden Grove (mm)

Data sources: Golden Grove Operations Pty Ltd

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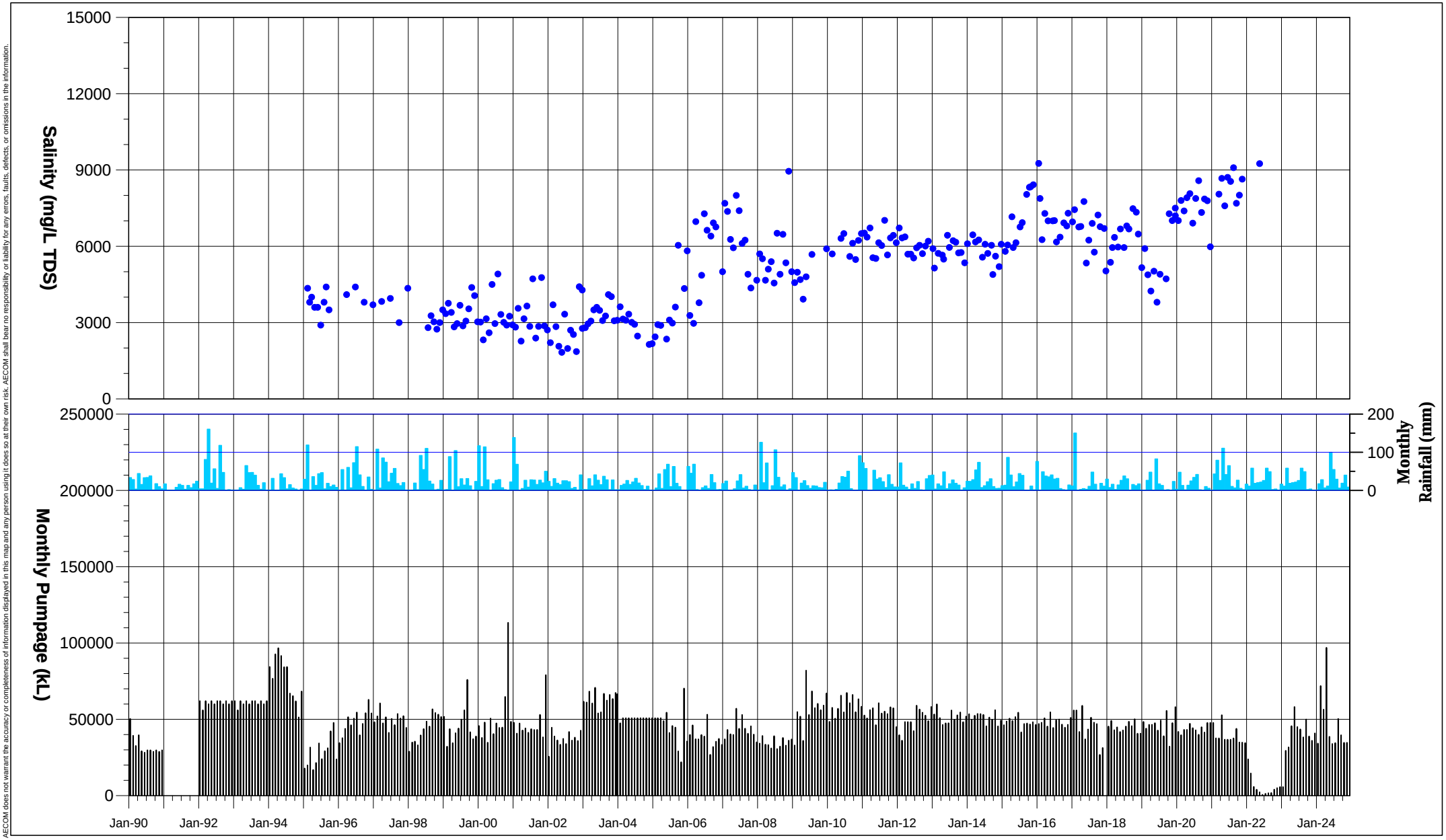
GOSSAN HILL MINE:
MONTHLY PUMPAGE AND SALINITY PLOT

GOLDEN GROVE OPERATIONS PTY LTD

2024 GROUNDWATER MONITORING REVIEW
GOLDEN GROVE MINE

Figure
5



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CREATED BY	JC
APPROVED BY	RW
LAST MODIFIED	29/04/2025

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LEGEND

- Groundwater Salinity (mg/L TDS)
- Monthly Pumpage (kL)
- Monthly Rainfall at Golden Grove (mm)

Data sources: Golden Grove Operations Pty Ltd

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SCUDDLES MINE:
MONTHLY PUMPAGE AND SALINITY PLOT

GOLDEN GROVE OPERATIONS PTY LTD

2024 GROUNDWATER MONITORING REVIEW
GOLDEN GROVE MINE

Figure
6

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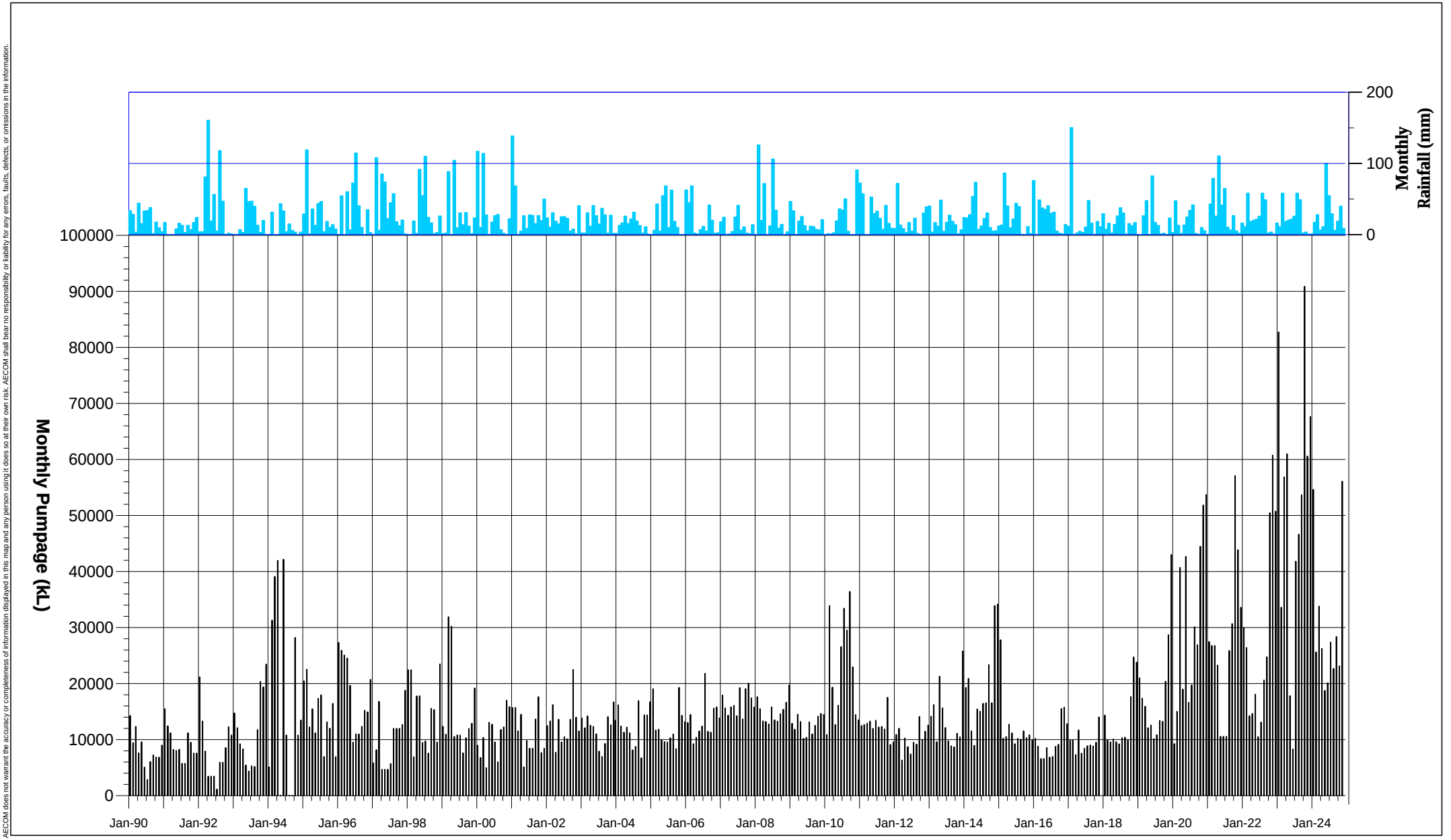

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APPROVED BY	RW
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LEGEND

- Monthly Pumpage (kL)
- Monthly Rainfall at Golden Grove (mm)

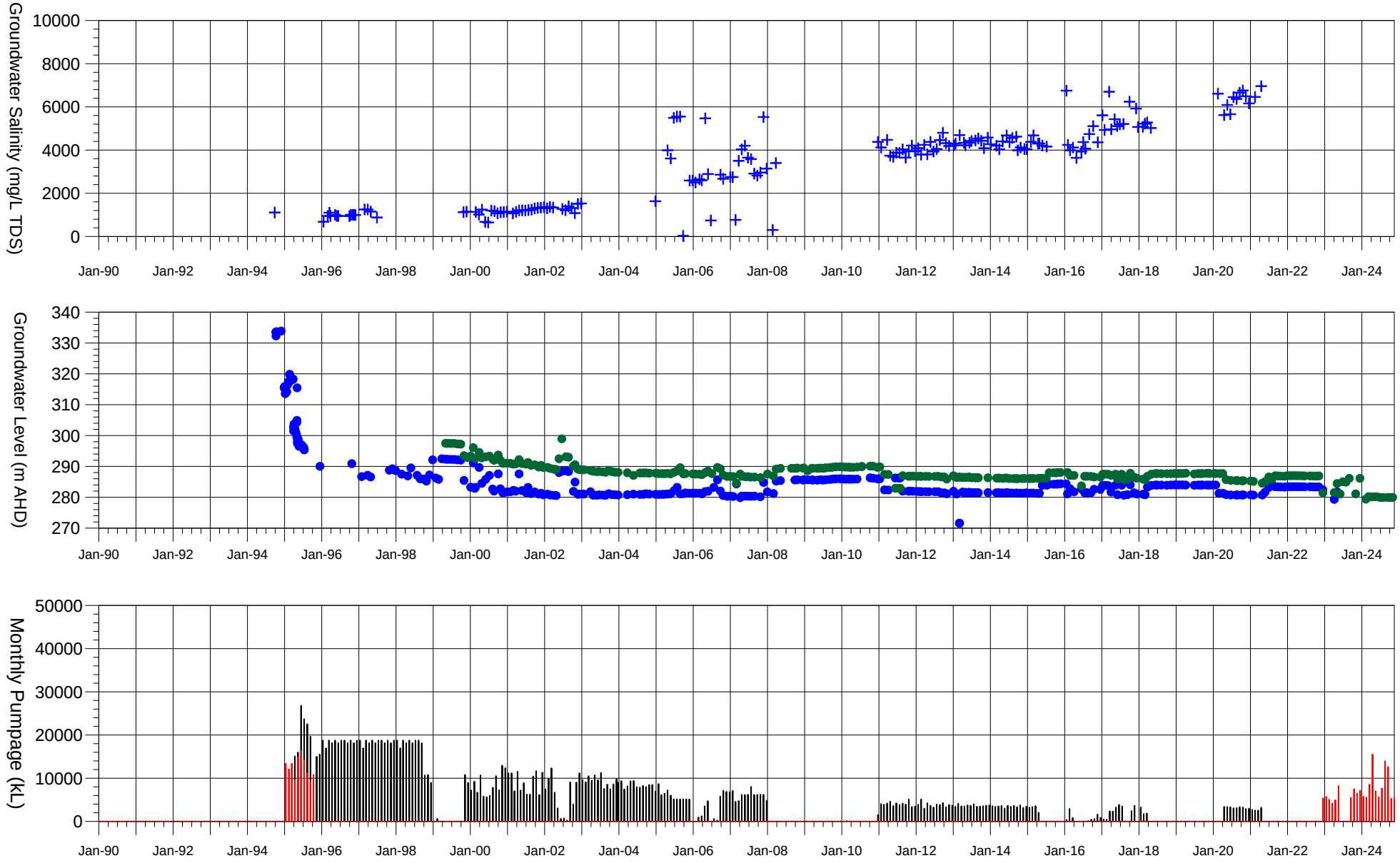
Data source: Golden Grove Operations Pty Ltd

POTABLE WATER SUPPLY MONTHLY PUMPAGE

GOLDEN GROVE OPERATIONS PTY LTD

2024 GROUNDWATER MONITORING REVIEW GOLDEN GROVE MINE

Figure **7**



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LEGEND

- Groundwater Salinity (mg/L TDS)
- Groundwater Level (GHDEC36R - mAHD)
- Groundwater Level (GHDEC38R - mAHD)
- Monthly Pumpage (GHDEC44P - kL)
- Monthly Pumpage (GHDEC37R - kL)

Data source: Golden Grove Operations Pty Ltd

DEWATERING BORE GHDEC44P/GHDEC37R: MONTHLY PUMPAGE GROUNDWATER LEVEL AND SALINITY

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2024 GROUNDWATER MONITORING REVIEW
GOLDEN GROVE MINE

Figure **8**

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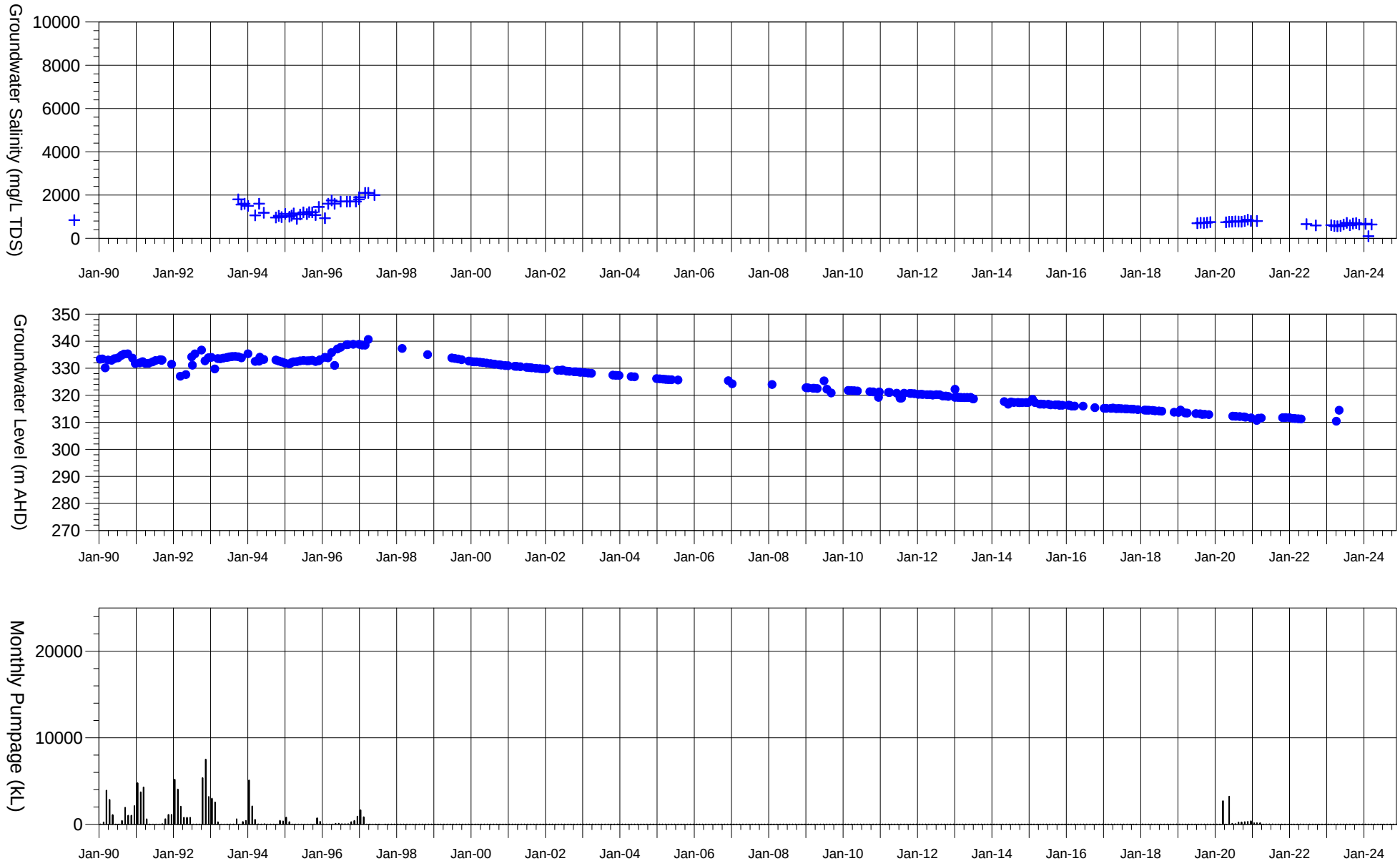

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LEGEND

- \+ Groundwater Salinity (mg/L TDS)
- ● Groundwater Level - GGW53 (m AHD)
- ■ Monthly Pumpage (kL)

Data source: Golden Grove Operations Pty Ltd

DEWATERING BORE GGW53P: MONTHLY PUMPAGE GROUNDWATER LEVEL AND SALINITY

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GOLDEN GROVE MINE

Figure **9**

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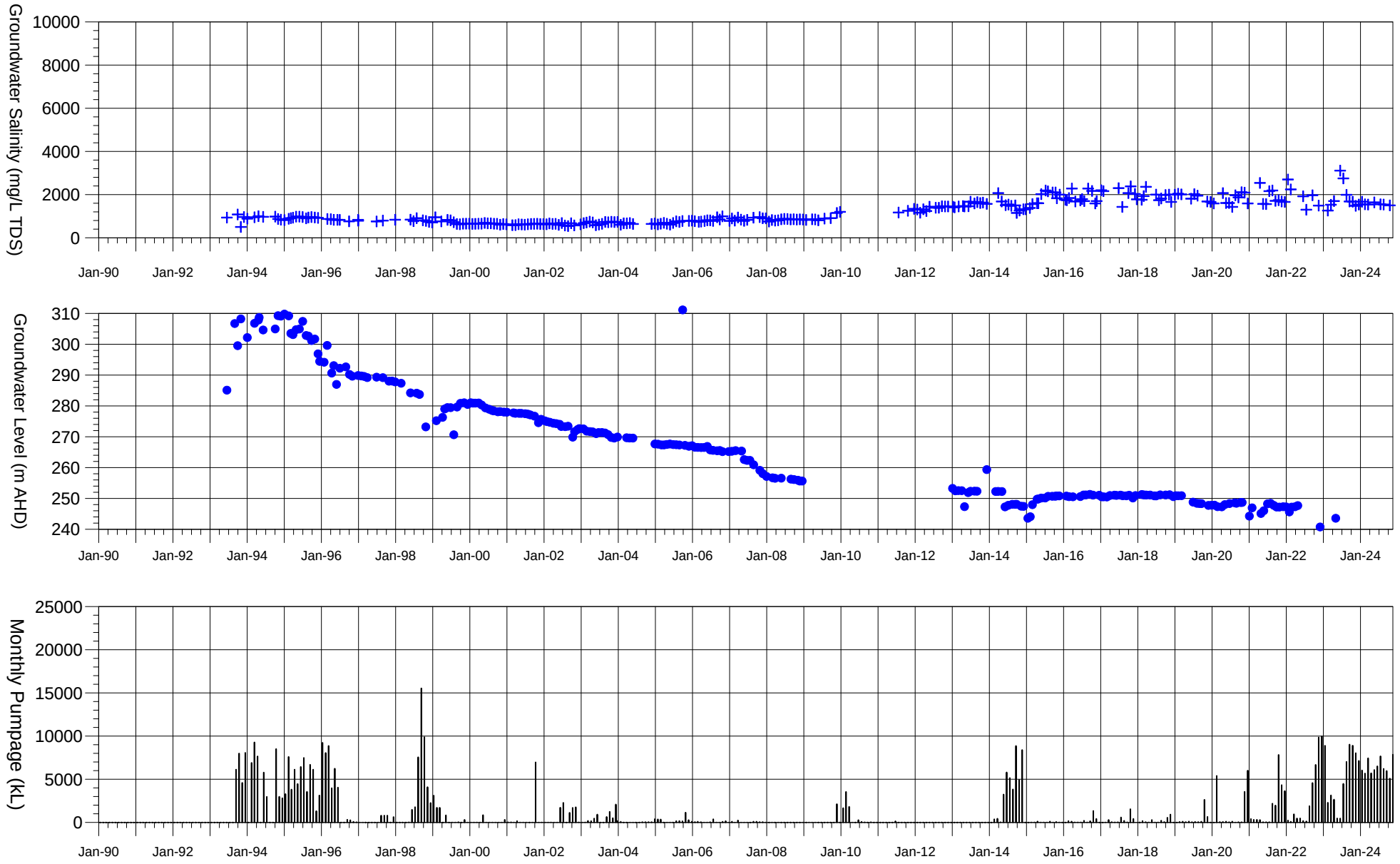

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LEGEND

- \+ Groundwater Salinity (mg/L TDS)
- ● Groundwater Level - SC073 (m AHD)
- ■ Monthly Pumpage (kL)

Data source: Golden Grove Operations Pty Ltd

DEWATERING BORE GGW67P: MONTHLY PUMPAGE GROUNDWATER LEVEL AND SALINITY

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Figure **10**

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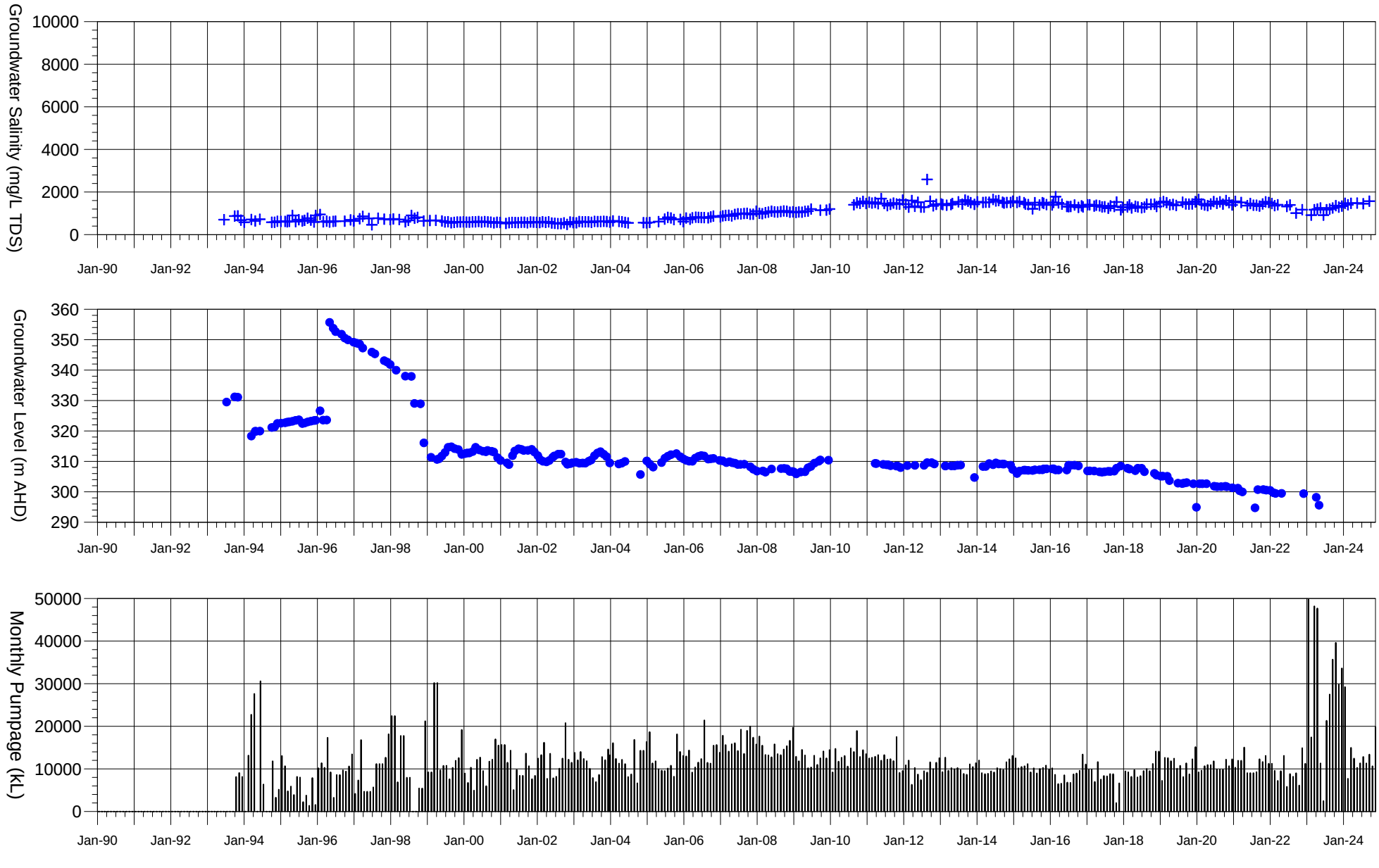

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LEGEND

- \+ Groundwater Salinity (mg/L TDS)
- ● Groundwater Level - GGW69 (m AHD)
- ■ Monthly Pumpage (kL)

Data source: Golden Grove Operations Pty Ltd

DEWATERING BORE GGW69P: MONTHLY PUMPAGE GROUNDWATER LEVEL AND SALINITY

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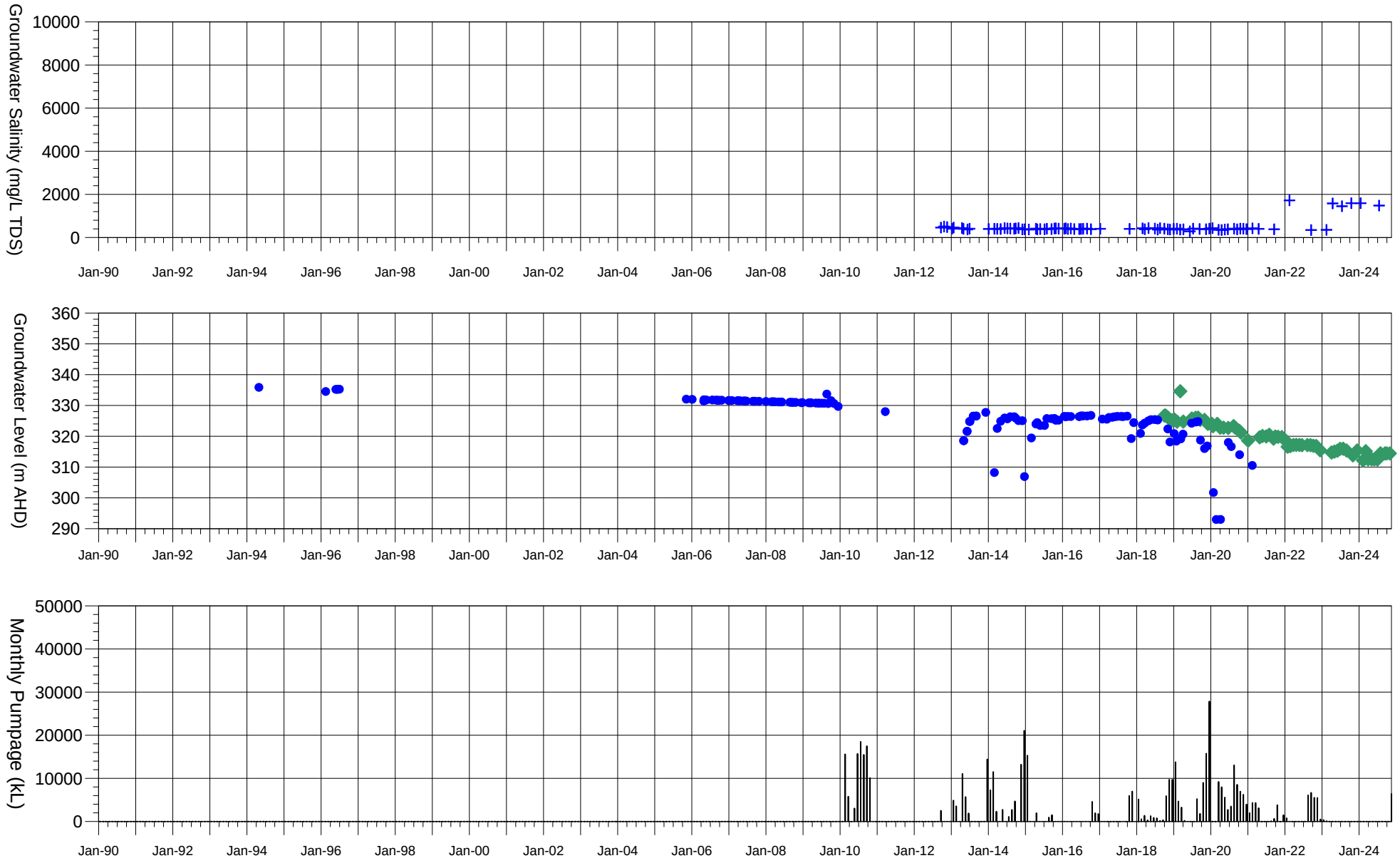
2024 GROUNDWATER MONITORING REVIEW
GOLDEN GROVE MINE

Figure **11**



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LEGEND

- Groundwater Salinity (mg/L TDS)
- Monthly Pumpage (kL)
- Groundwater Level - RMB4 (m AHD)
- Groundwater Level - GGW90 (m AHD)

Data source: Golden Grove Operations Pty Ltd

DEWATERING BORE RMB4: MONTHLY PUMPAGE GROUNDWATER LEVEL AND SALINITY

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GOLDEN GROVE MINE

Figure 12

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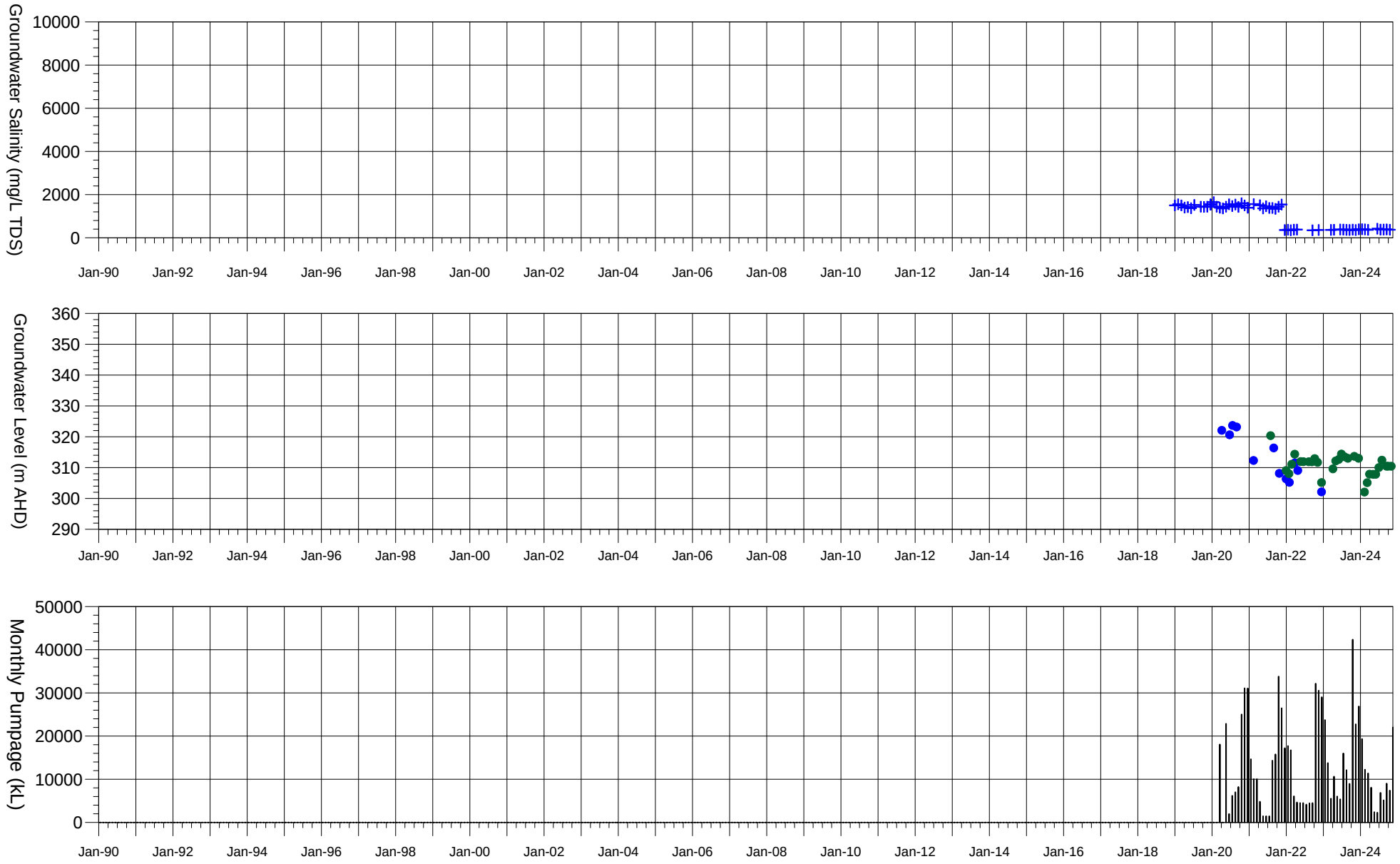

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LEGEND

- \+ Groundwater Salinity (mg/L TDS)
- ● Groundwater Level - (GGW92 - mAHD)
- ● Groundwater Level - (GGW93P - mAHD)
- ■ Monthly Pumpage (kL)

Data source: Golden Grove Operations Pty Ltd

DEWATERING BORE GGW93P: MONTHLY PUMPAGE GROUNDWATER LEVEL AND SALINITY

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2024 GROUNDWATER MONITORING REVIEW
GOLDEN GROVE MINE

Figure **13**

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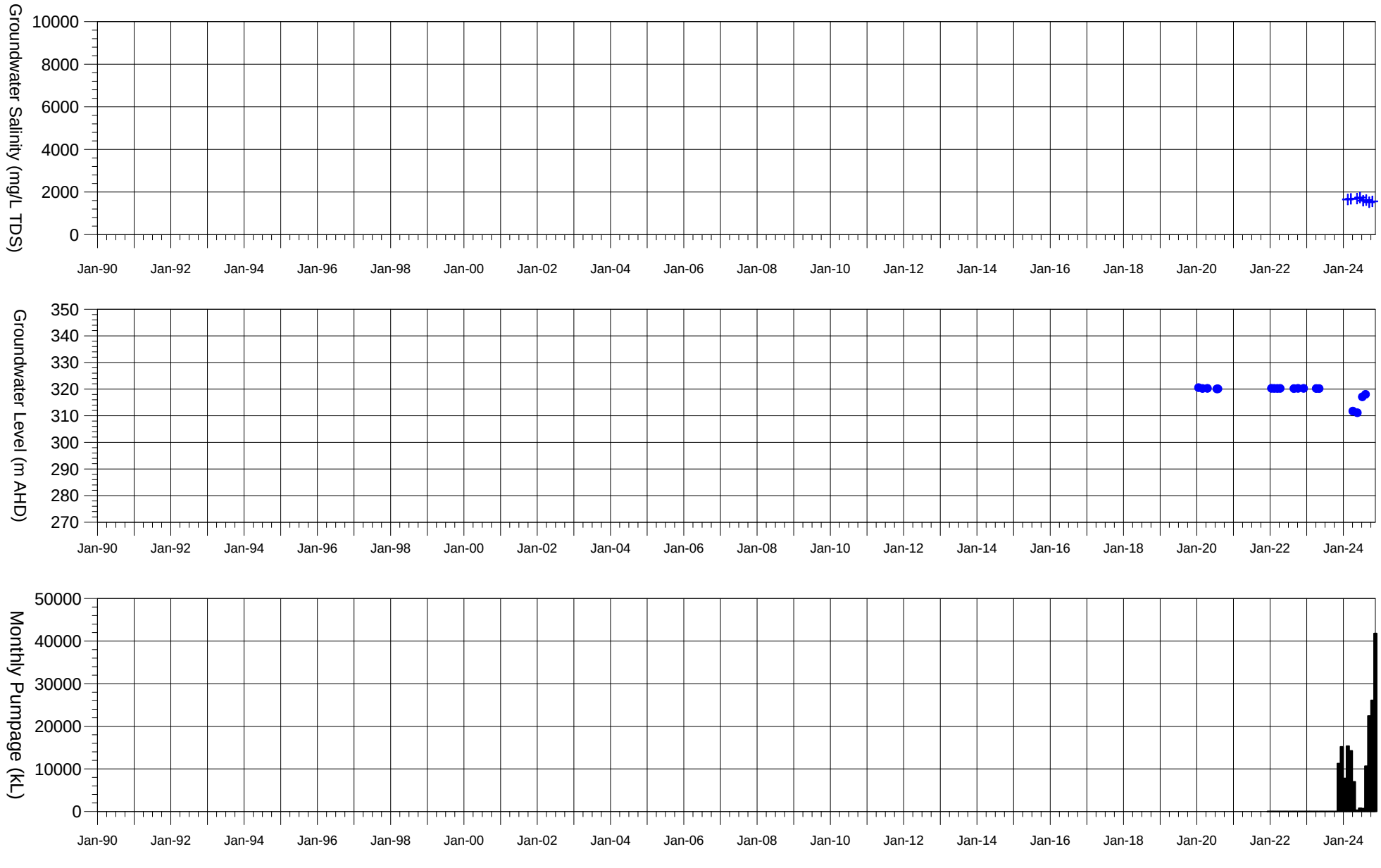

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LEGEND

- \+ Groundwater Salinity (mg/L TDS)
- ● Groundwater Level - GVW007P (m AHD)
- ■ Monthly Pumpage (kL)

Data source: Golden Grove Operations Pty Ltd

DEWATERING BORE GVW007P: MONTHLY PUMPAGE GROUNDWATER LEVEL AND SALINITY

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2024 GROUNDWATER MONITORING REVIEW GOLDEN GROVE MINE

Figure **14**

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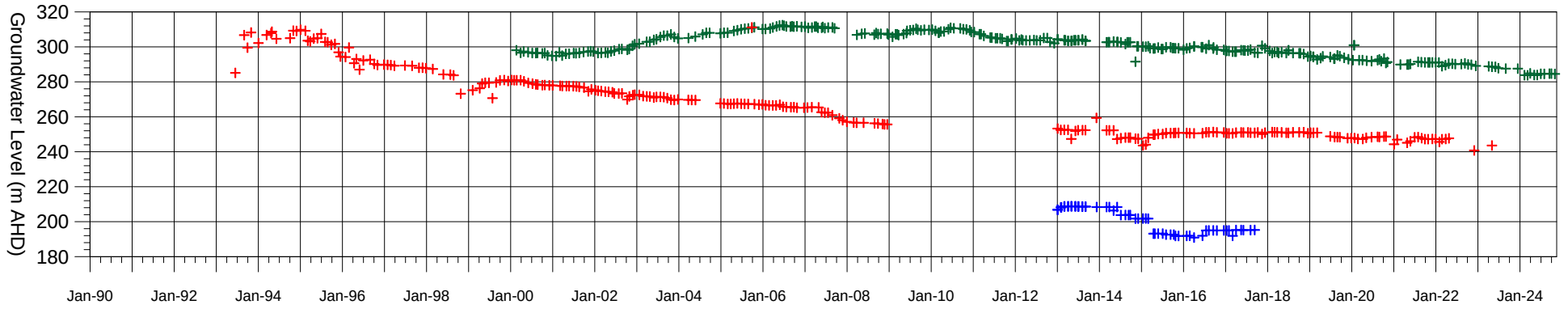

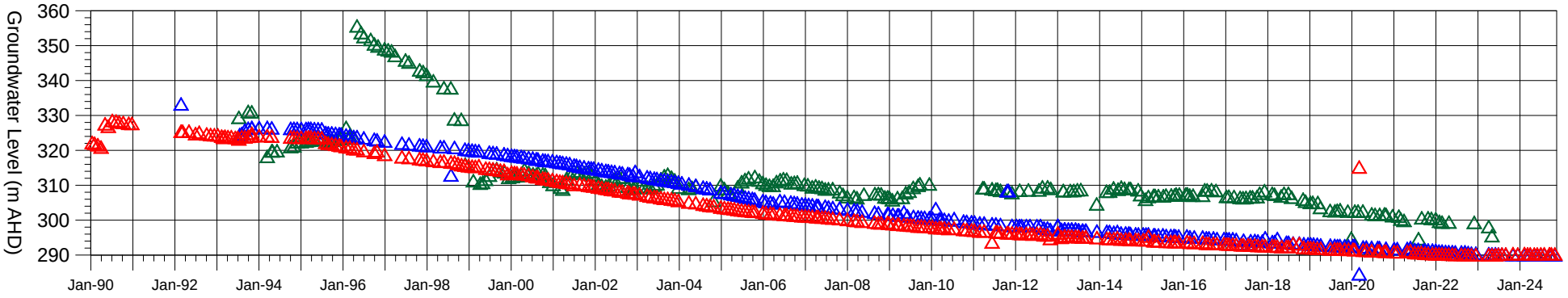

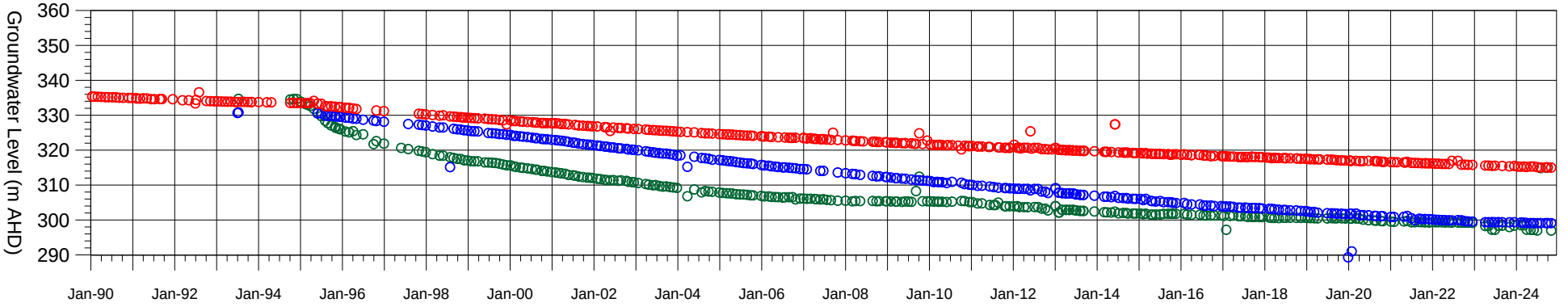

PROJECT ID	60747118
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APPROVED BY	RW
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LEGEND

+ Bore SC073	△ Bore GGW49	○ Bore GGW6A
+ Bore SC075	△ Bore GGW62	○ Bore GGW70
+ Bore SC080	△ Bore GGW69	○ Bore GGW74

Data source: Golden Grove Operations Pty Ltd

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HYDROGRAPHS FOR SCUDDLES AREA: MONITORING BORES SC073, 075, 080; GGW6A, 49, 62, 69, 70 & 74

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2024 GROUNDWATER MONITORING REVIEW GOLDEN GROVE MINE

Figure **15**

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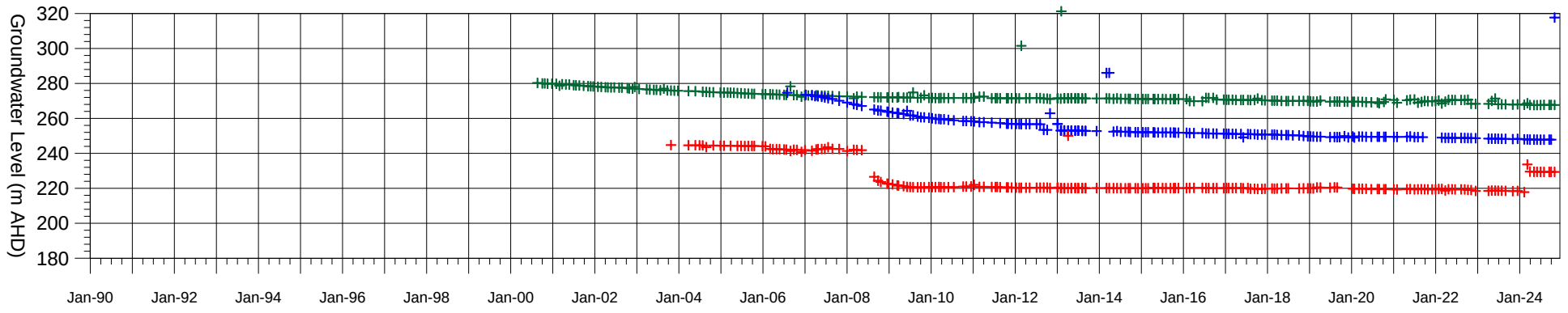

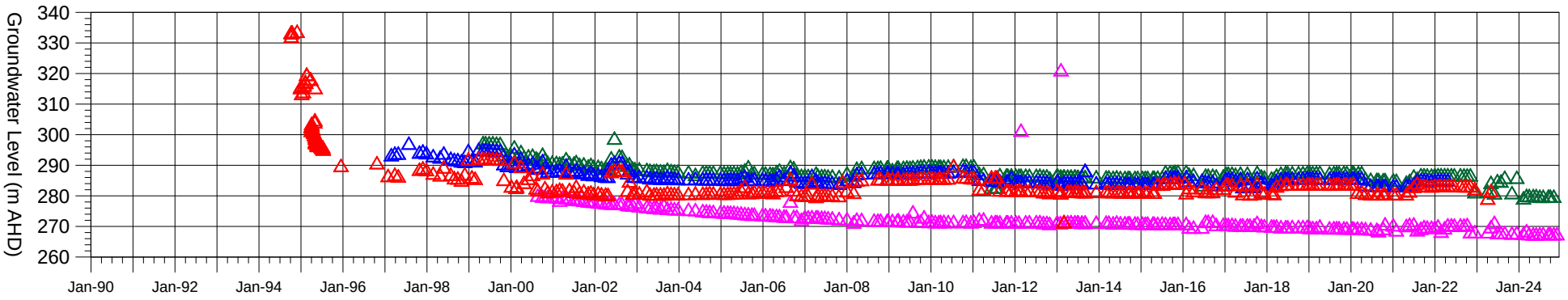

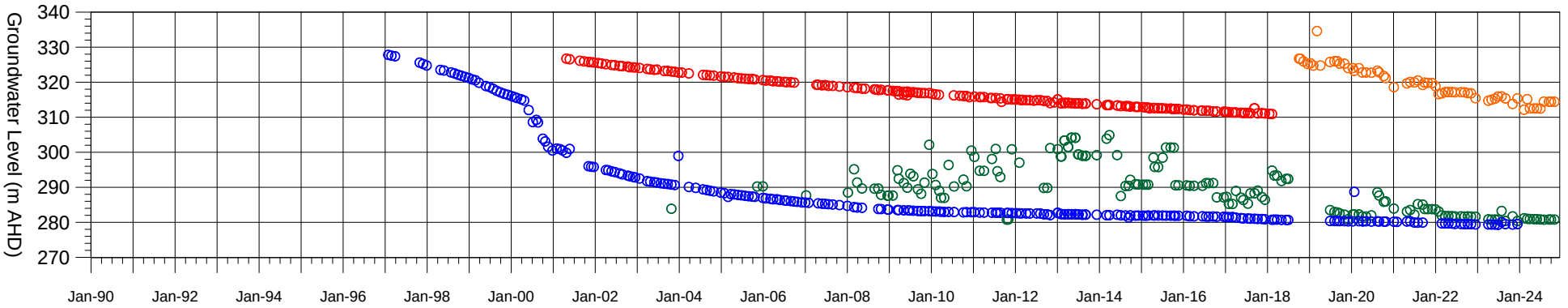

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APPROVED BY	RW
LAST MODIFIED	16/04/2025

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LEGEND

- Bore GGW83
- Bore GG280D2
- Bore GHDEC10R
- Bore GHDEC10R
- Bore GHDEC36R
- Bore GHDEC37R
- Bore GHDEC38R
- Bore GG102
- Bore GG290
- Bore GGW75A
- Bore GGW91

Data source: Golden Grove Operations Pty Ltd

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HYDROGRAPHS FOR GOSSAN HILL AREA: MONITORING BORES GG102, 280D2, 290; GGW75A, GGW91, GGW83; GHDEC10R, 36R, 37R, 38R

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2024 GROUNDWATER MONITORING REVIEW GOLDEN GROVE MINE

Figure **16**

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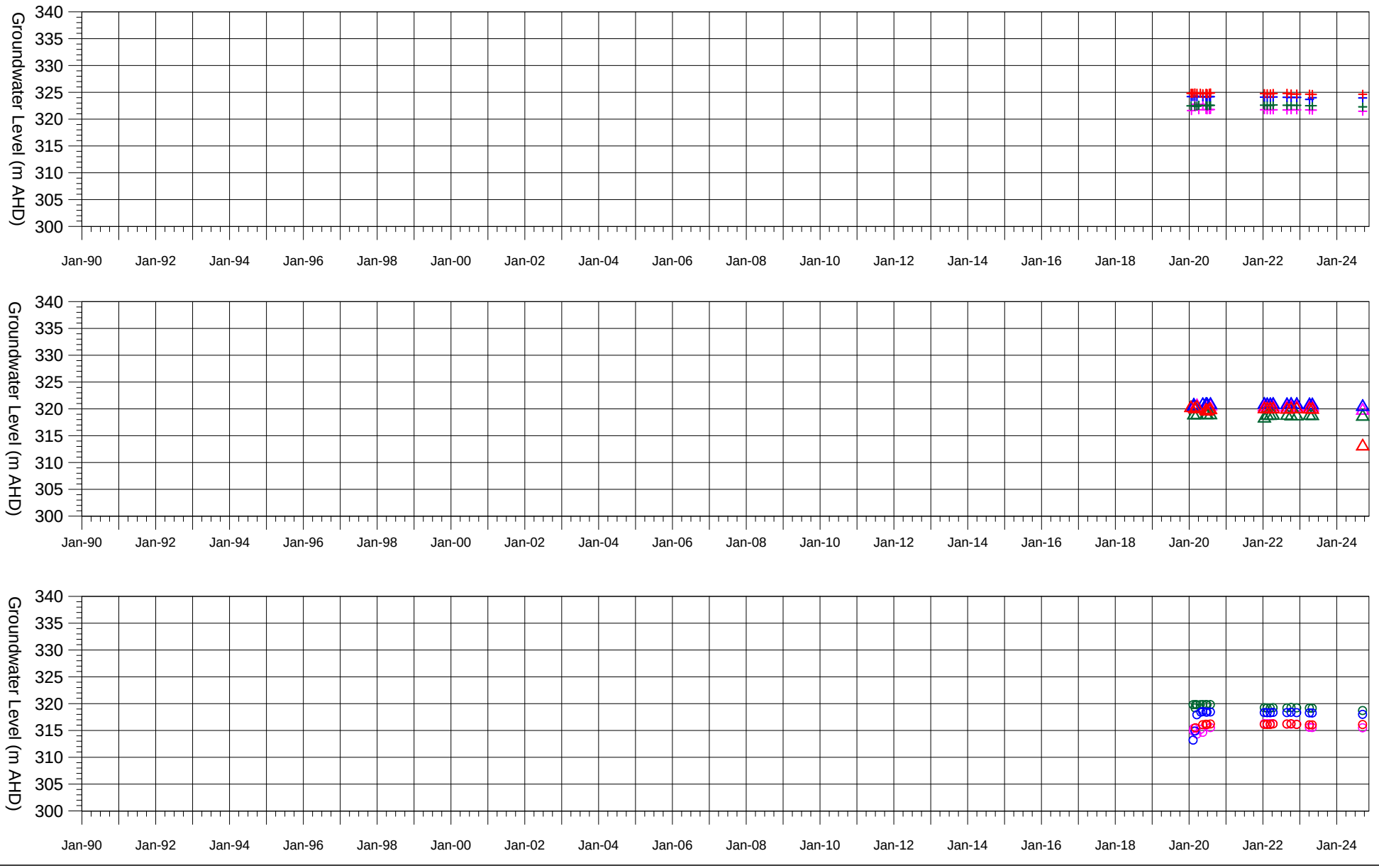

PROJECT ID	60747118
CREATED BY	JC
APPROVED BY	RW
LAST MODIFIED	29/04/2025

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LEGEND

+ Bore GVW001	△ Bore GVW009	○ Bore GVW010d
+ Bore GVW004	△ Bore GVW013	○ Bore GVW011d
+ Bore GVW005	△ Bore GVW014	○ Bore GVW012d
+ Bore GVW006	△ Bore GVW015	○ Bore HIRD008

Data source: Golden Golden Operations Pty Ltd

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HYDROGRAPHS FOR GOSSAN VALLEY AREA: MONITORING BORES GVW001, 004, 005, 006, 009 GVW010d, 011d, 012d, 013, 014 & 015

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2024 GROUNDWATER MONITORING REVIEW GOLDEN GROVE MINE

Figure **17**

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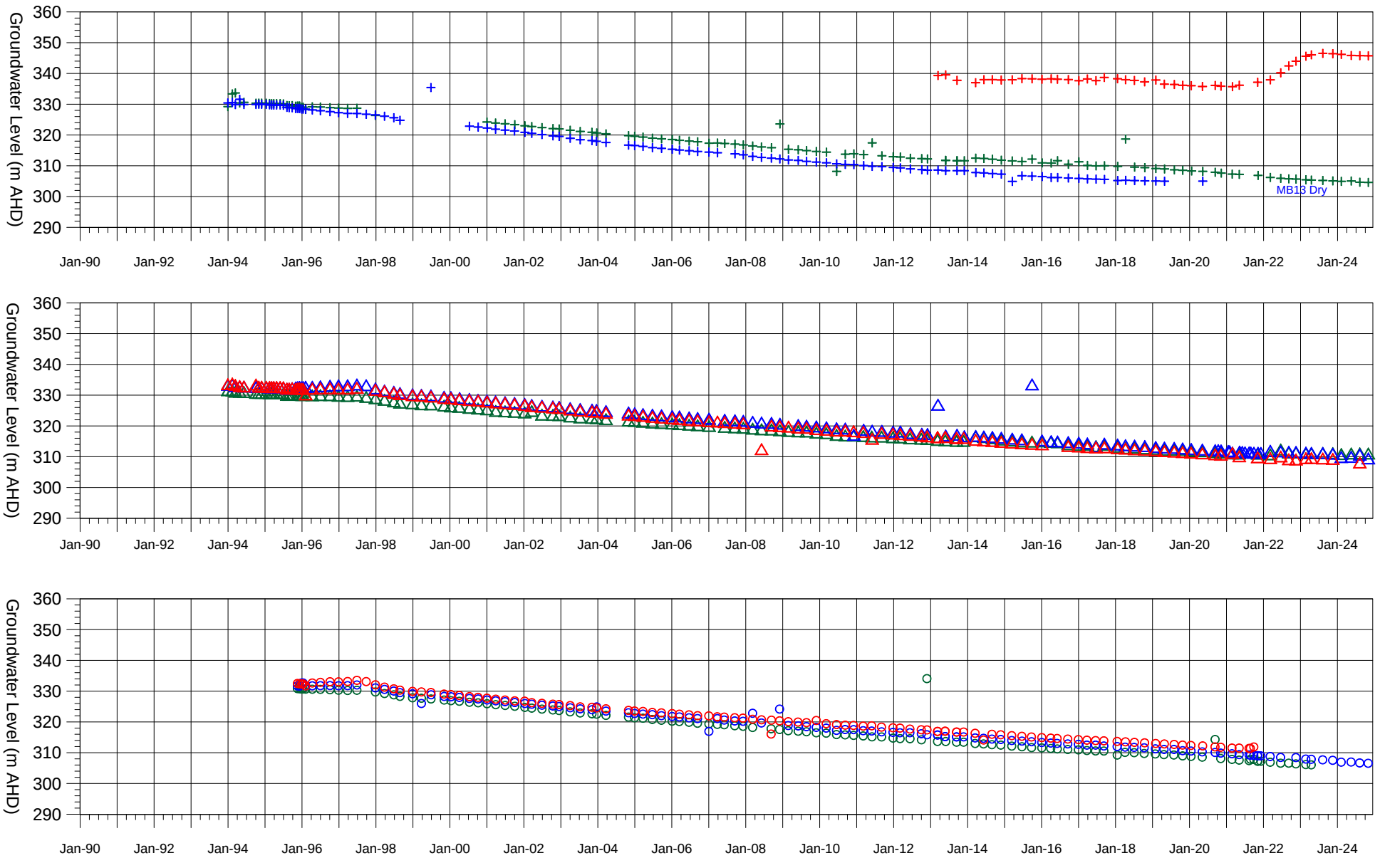

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APPROVED BY	RW		
LAST MODIFIED	16/04/2025		

Data source: Golden Grove Operations Pty Ltd

LEGEND

+ Bore MB12/MB12B	△ Bore MB15/MB15B	○ Bore MB19
+ Bore MB13	△ Bore MB16/MB16B	○ Bore MB21
+ Bore MB14/MB14B	△ Bore MB18/MB18B	○ Bore MB22

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HYDROGRAPHS FOR TSF1: MONITORING BORES MB12, MB13, MB14, MB15, MB16, MB18, MB19, MB21 & MB22

GOLDEN GROVE OPERATIONS PTY LTD

2024 GROUNDWATER MONITORING REVIEW GOLDEN GROVE MINE

Figure **18**

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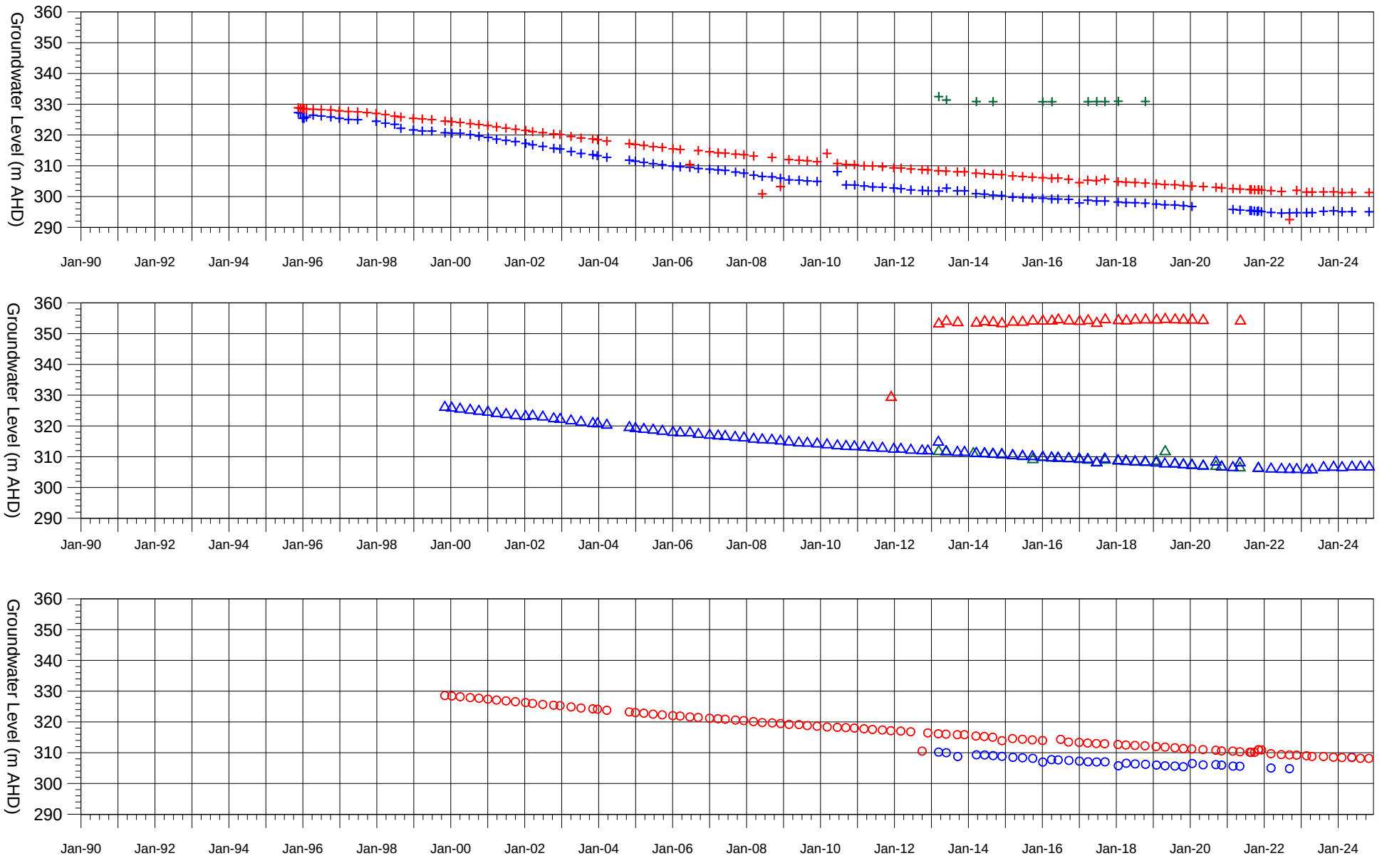

PROJECT ID	60747118
CREATED BY	JC
APPROVED BY	RW
LAST MODIFIED	16/04/2025

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LEGEND

- Bore MB23
- Bore MB24
- Bore MB33
- Bore MB34
- Bore MB44
- Bore MB45
- Bore MB47
- Bore MB75

Data source: Golden Grove Operations Pty Ltd

Projects\607x\60747118_GGO_2022-2024_GMR\400_Technical\432_Grapher

HYDROGRAPHS FOR TSF1: MONITORING BORES MB23, MB24, MB33, MB34, MB44, MB45, MB47 & MB75

GOLDEN GROVE OPERATIONS PTY LTD

2024 GROUNDWATER MONITORING REVIEW GOLDEN GROVE MINE

Figure **19**

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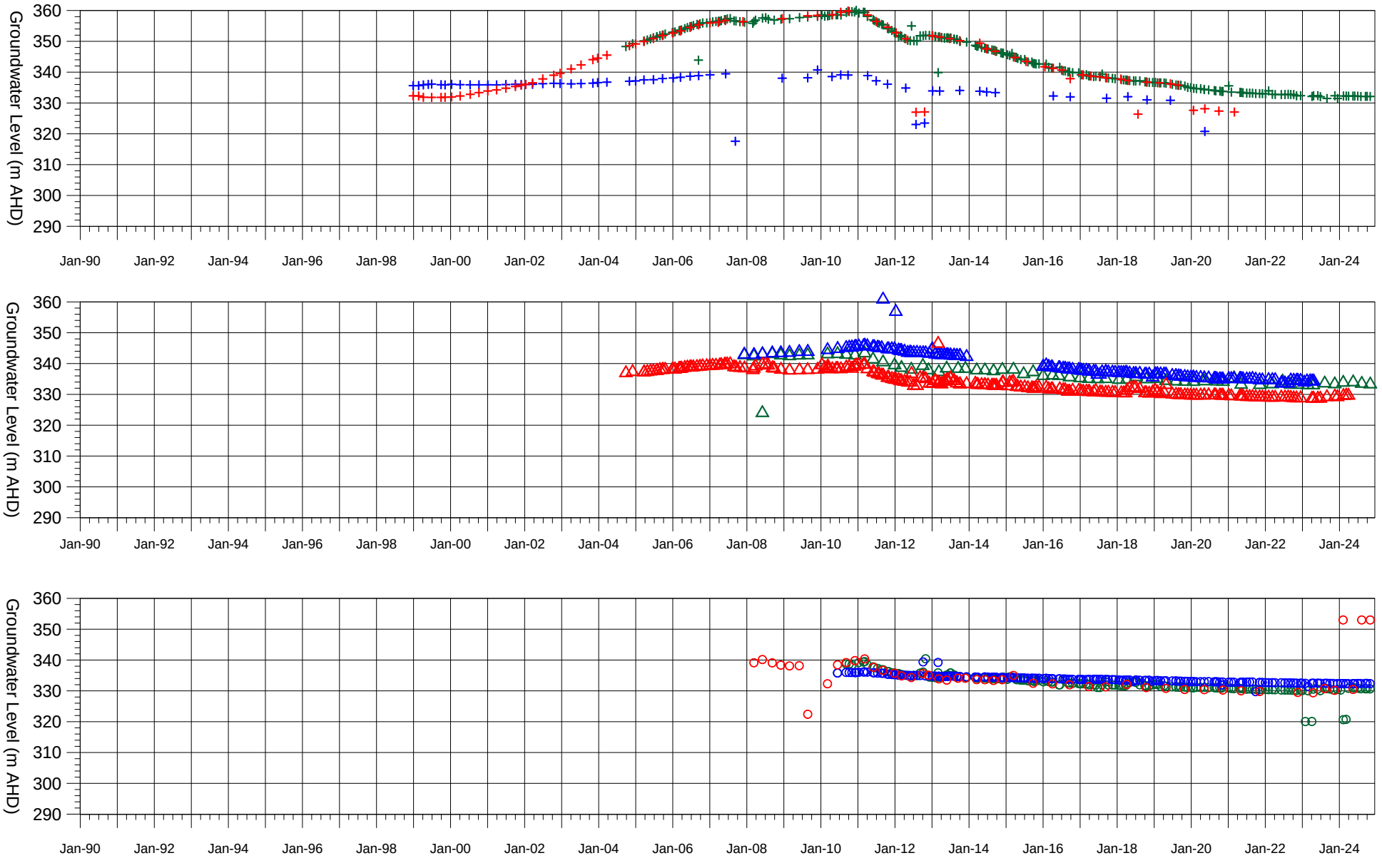

PROJECT ID	60747118
CREATED BY	JC
APPROVED BY	RW
LAST MODIFIED	16/04/2025

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LEGEND

+ Bore MB40	△ Bore MB52	○ Bore MB61
+ Bore MB41	△ Bore MB58	○ Bore MB64
+ Bore MB51	△ Bore MB59	○ Bore MB65

Data source: Golden Grove Operations Pty Ltd

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HYDROGRAPHS FOR TSF2 (NE): MONITORING BORES MB40, MB41, MB51, MB52, MB59, MB61, MB64 & MB65

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2024 GROUNDWATER MONITORING REVIEW GOLDEN GROVE MINE

Figure **20**

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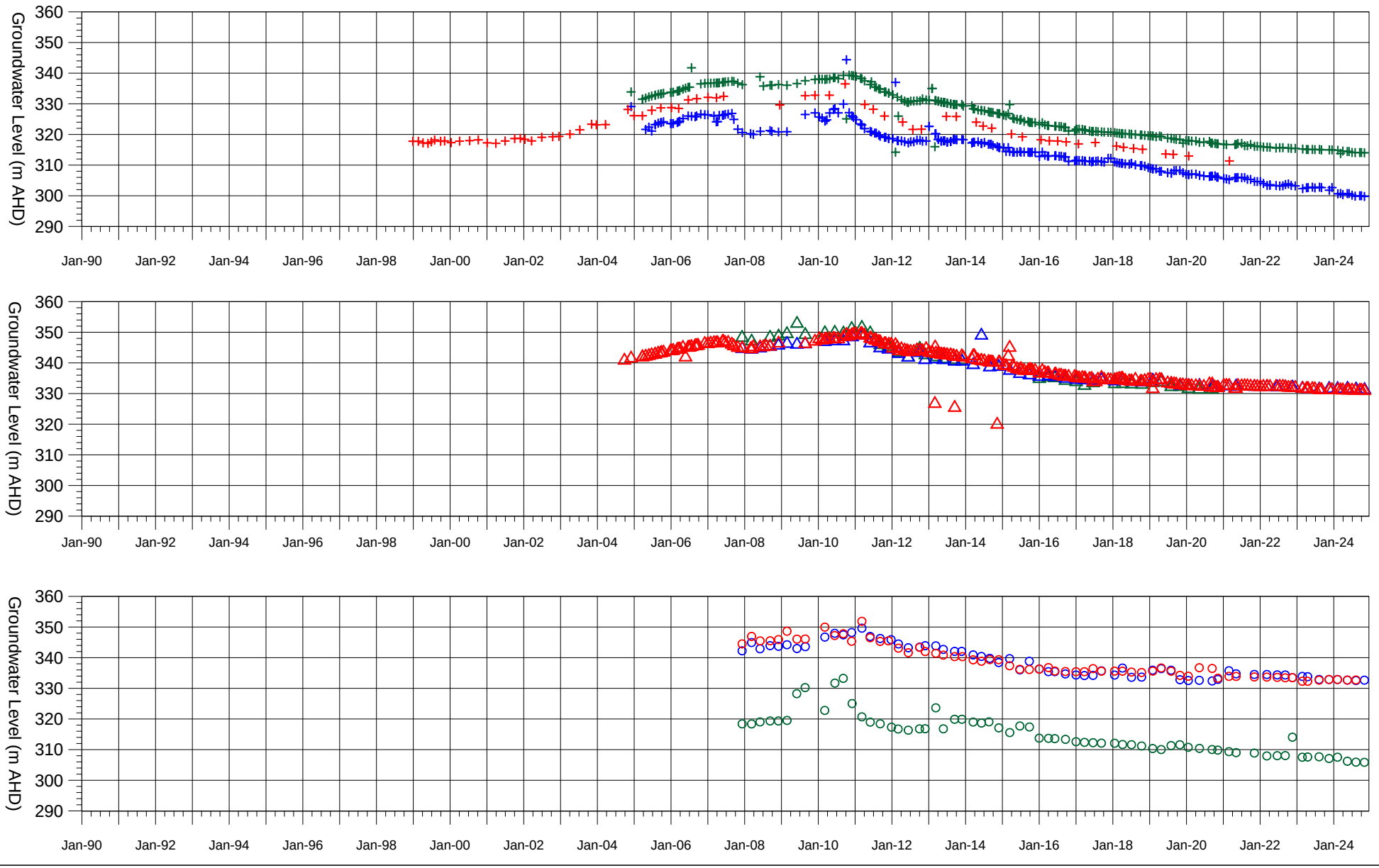

PROJECT ID	60747118
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APPROVED BY	RW
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LEGEND

+ Bore MB43	△ Bore MB50	○ Bore MB55
+ Bore MB48	△ Bore MB53	○ Bore MB56
+ Bore MB49	△ Bore MB54	○ Bore MB57

Data source: Golden Grove Operations Pty Ltd

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HYDROGRAPHS FOR TSF2 (SE): MONITORING BORES MB43, MB48, MB49, MB50, MB53, MB54, MB55, MB56 & MB57

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Figure

21

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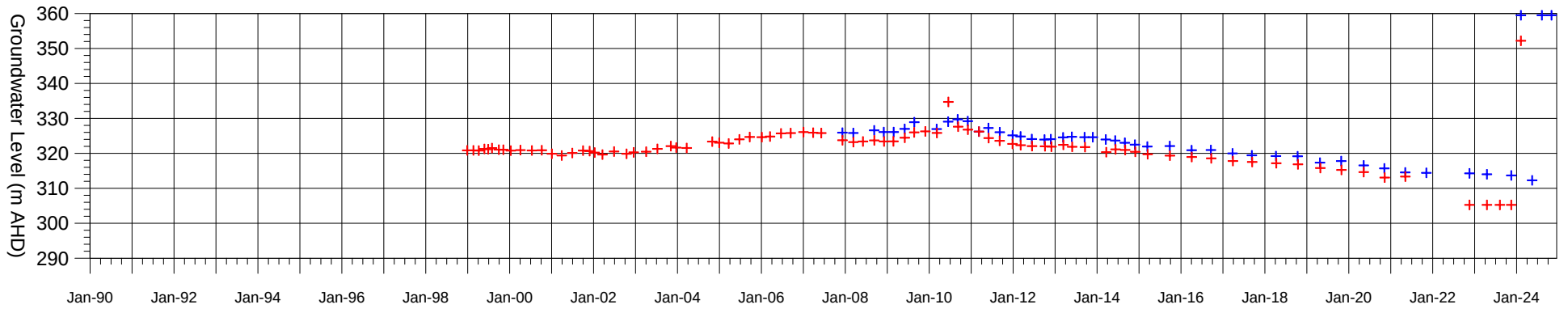

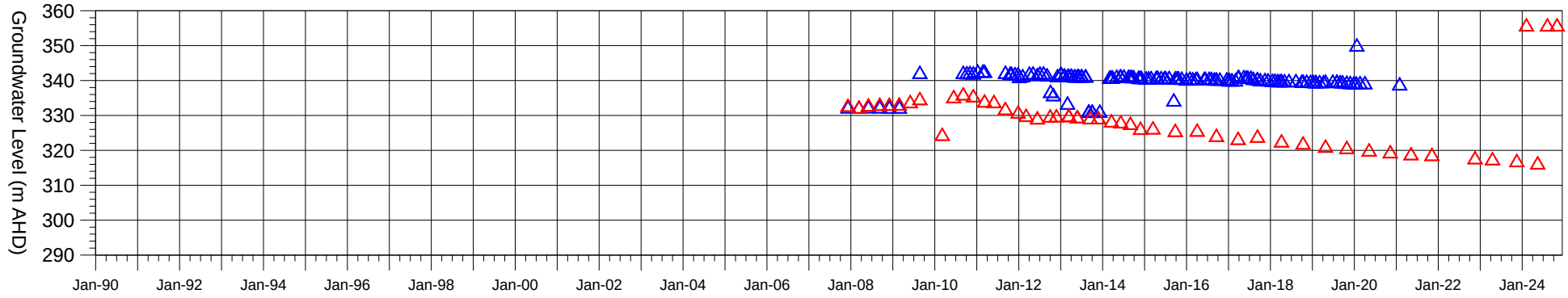

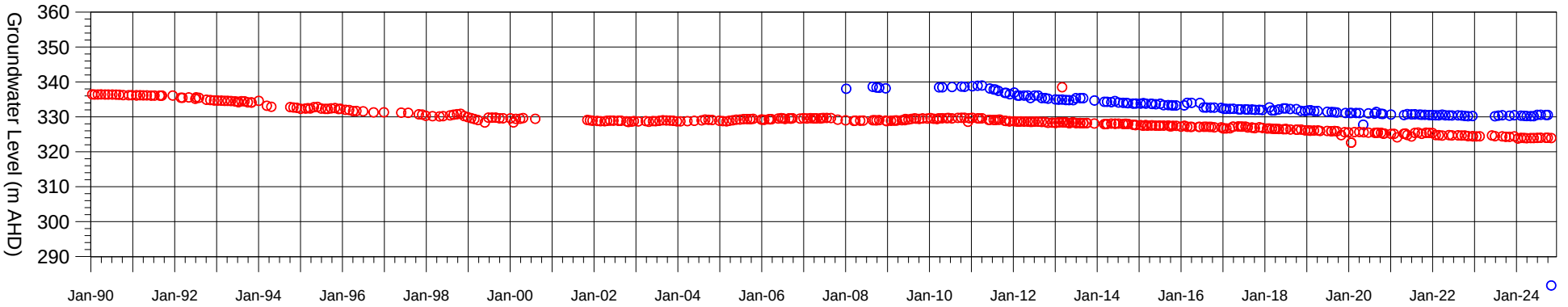

PROJECT ID	60747118
CREATED BY	JC
APPROVED BY	RW
LAST MODIFIED	16/04/2025

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LEGEND

- Bore MB42
- Bore MB60
- Bore MB62
- Bore MB63
- Bore GGW50
- Bore SC093

Data source: Golden Grove Operations Pty Ltd

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HYDROGRAPHS FOR TSF2 (NW): MONITORING BORES MB42, MB60, MB62, MB63, GGW50 & SC093

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GOLDEN GROVE MINE

Figure **22**

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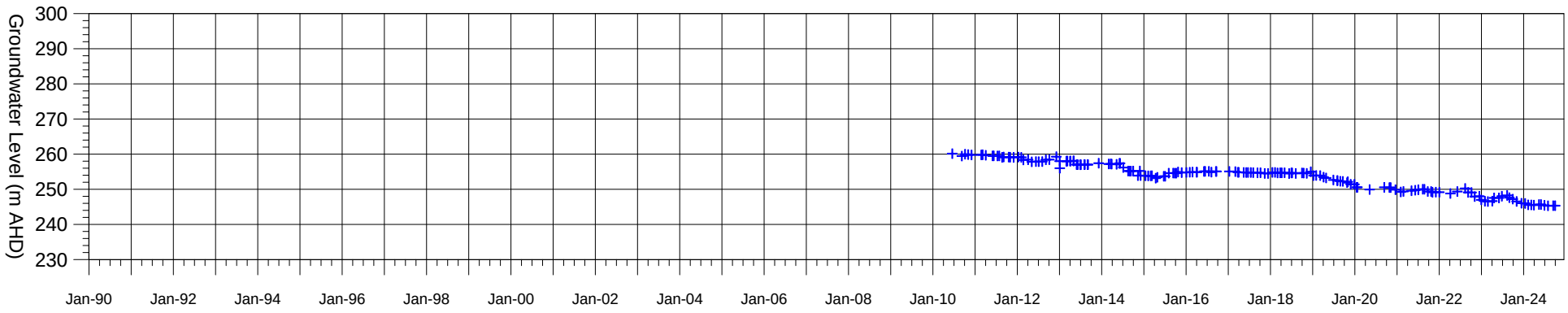

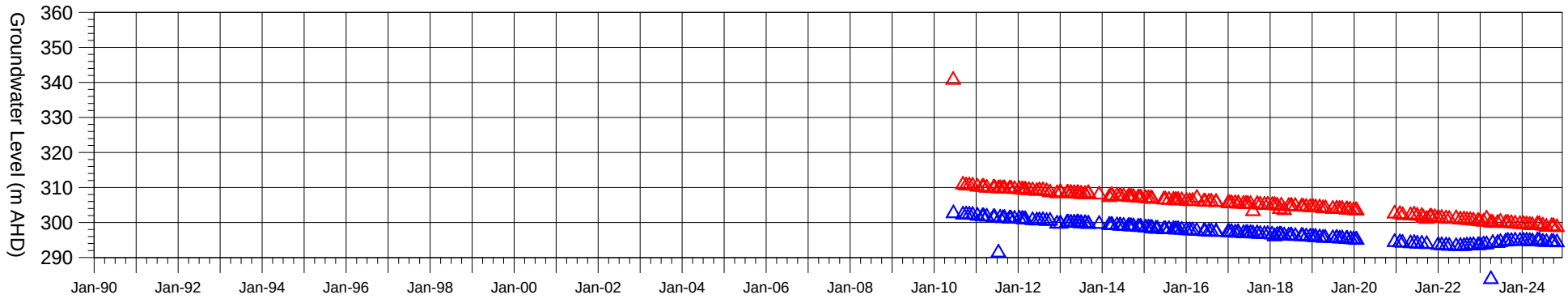

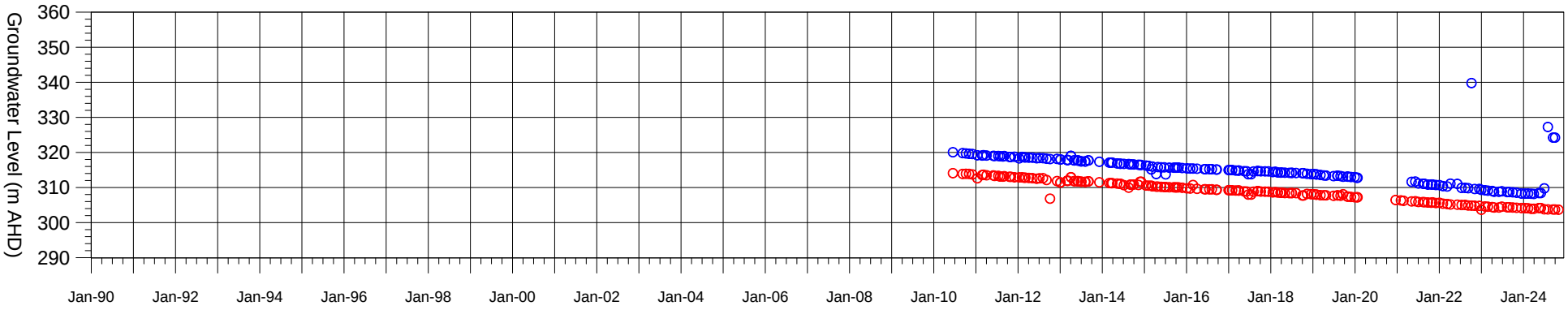

PROJECT ID	60747118
CREATED BY	JC
APPROVED BY	RW
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LEGEND

+ Bore MB70A

△ Bore MB67

△ Bore MB71A

○ Bore MB73A

○ Bore MB74

Data source: Golden Grove Operations Pty Ltd

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HYDROGRAPHS FOR TSF3: MONITORING BORES MB67, MB70A, MB71A, MB73A & MB74

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GOLDEN GROVE MINE

Figure

23

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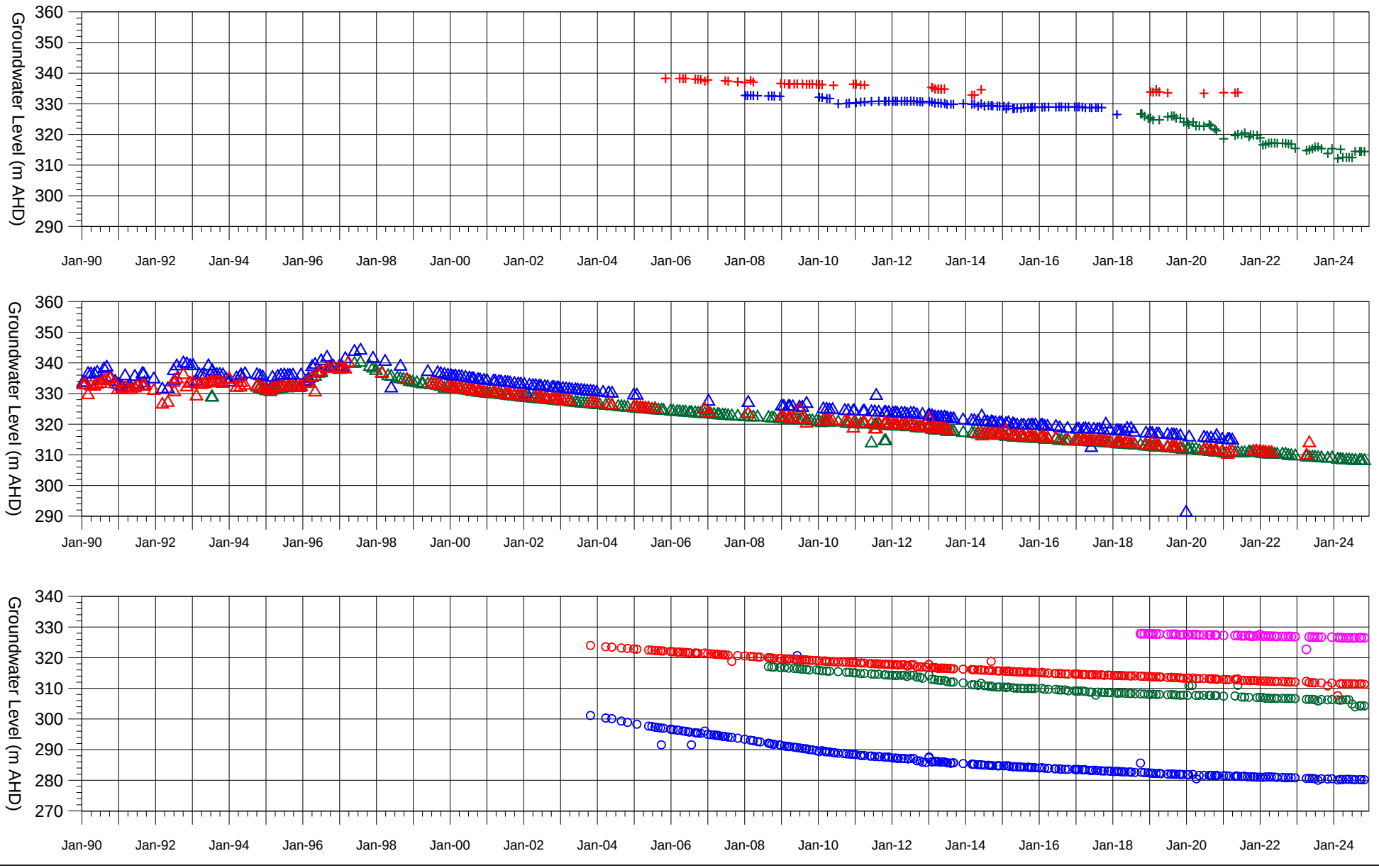

PROJECT ID	60678613
CREATED BY	JC
APPROVED BY	RW
LAST MODIFIED	16/04/2025

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LEGEND

- Bore BYDD003
- Bore BJDD004
- Bore GGW90
- Bore GGW53
- Bore GGW54
- Bore GGW73
- Bore GGW80
- Bore GGW81
- Bore CUDD001
- Bore GGW91

Data source: Golden Grove Operations Pty Ltd

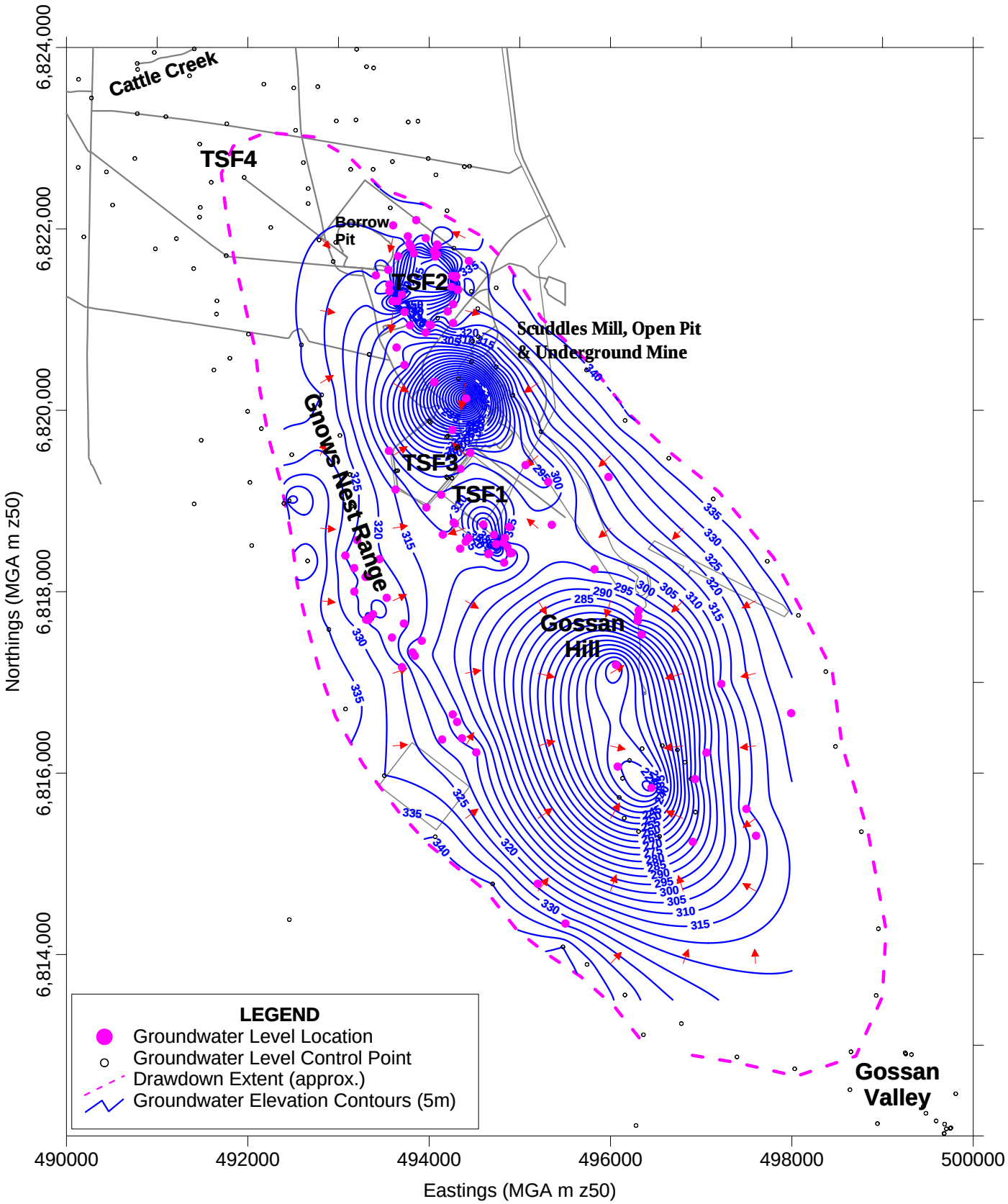
Projects\607x\60747118_GGO_2022-2024_GMR\400_Technical\432_Grapher

HYDROGRAPHS FOR REGIONAL AREAS: MONITORING BORES GGW90, BJDD004, GGW53, 54, 73, 80, 81, 90, 91 & CUDD001

GOLDEN GROVE OPERATIONS PTY LTD

2024 GROUNDWATER MONITORING REVIEW GOLDEN GROVE MINE

Figure **24**



Data source: GGO, 2025. Map grid: GDA 1994 MGA z50

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Chk'd By	GRB	28 Apr 25
Revision Indicator	0	

GOLDEN GROVE OPERATIONS PTY LTD

Golden Grove Groundwater Monitoring Review 2022-2024

INFERRED GROUNDWATER ELEVATIONS (Dec 2021)

Figure 25

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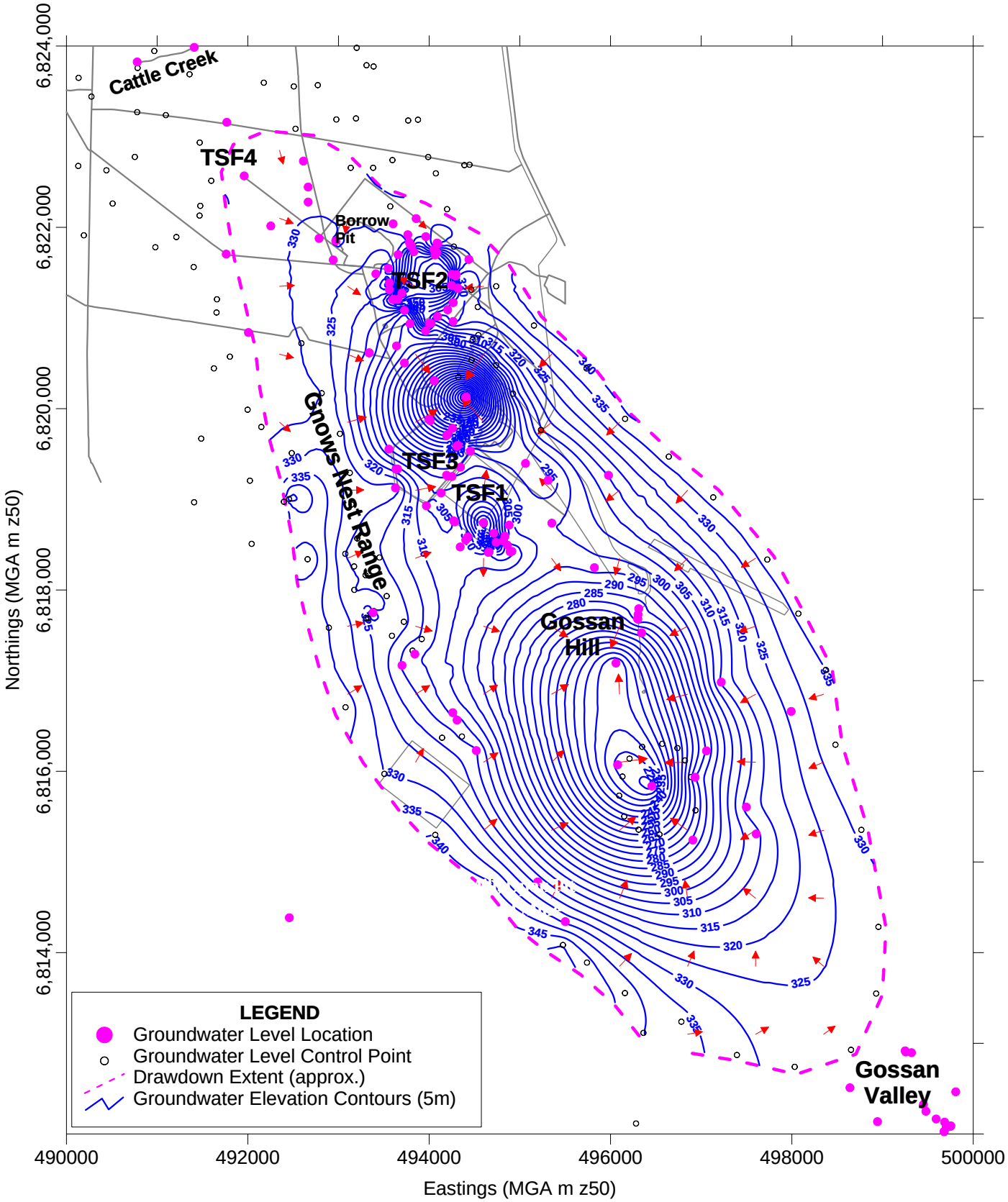
AECOM AUSTRALIA PTY LTD Perth Office

Site-Wide GWL Maps.srf (Dec 2021 SWL Map)



Data source: GGO, 2025. Map grid: GDA 1994 MGA z50

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GOLDEN GROVE OPERATIONS PTY LTD

Golden Grove Groundwater Monitoring Review 2022-2024

INFERRED CURRENT GROUNDWATER ELEVATIONS

Figure 26

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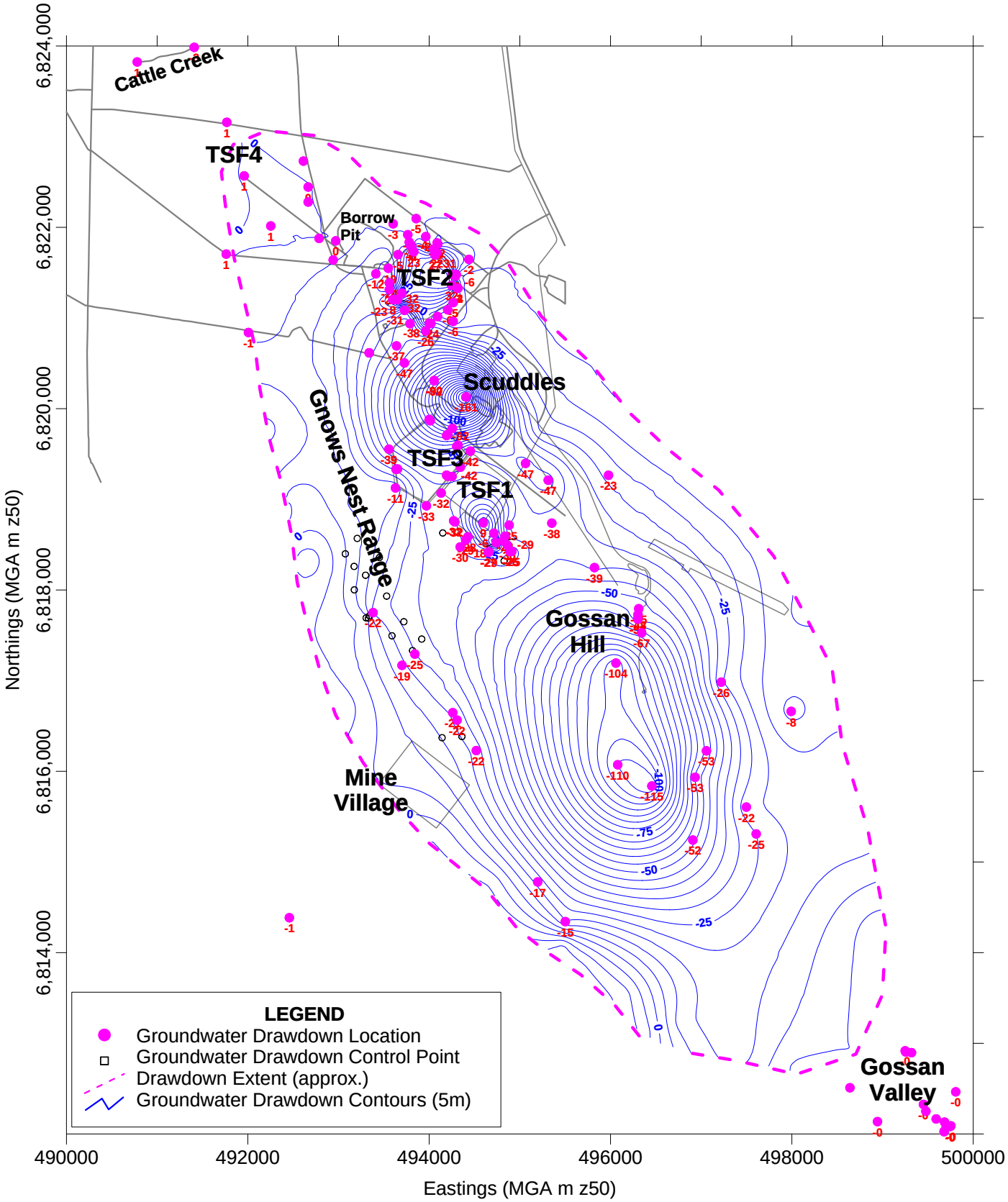
Site-Wide GWL Maps.srf (Current SWL Map)



Data source: GGO, 2025. Map grid: GDA 1994 MGA z50

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Revision Indicator	0	

GOLDEN GROVE OPERATIONS PTY LTD

Golden Grove Groundwater Monitoring Review 2022-2024

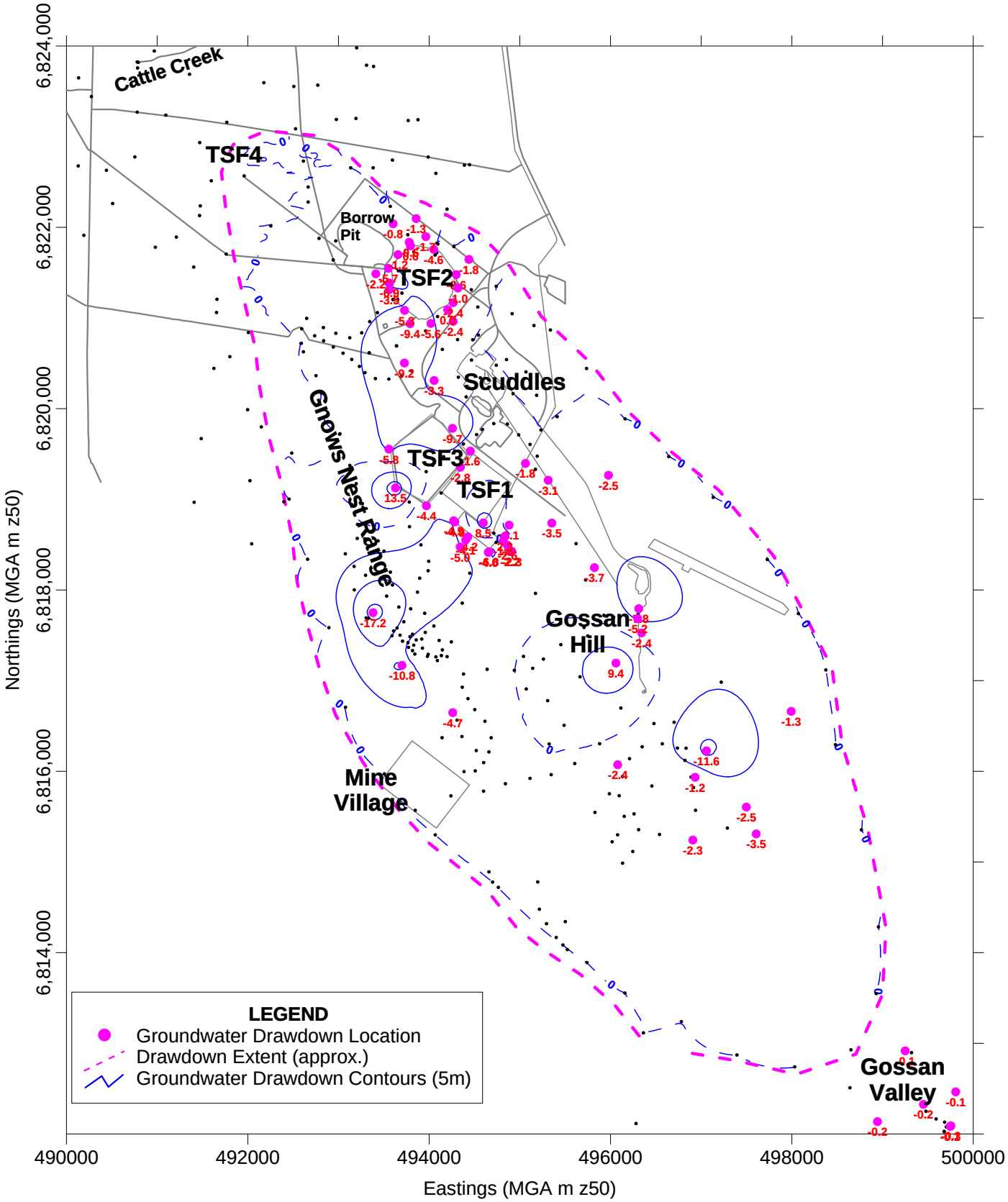
INFERRED DRAWDOWNS (1981-2024)

Figure 27

AECOM

AECOM AUSTRALIA PTY LTD Perth Office

Site-Wide GWL Maps.srf (Total DD Map)



Data source: GGO, 2025. Map grid: GDA 1994 MGA z50

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Revision Indicator	0	

GOLDEN GROVE OPERATIONS PTY LTD

Golden Grove Groundwater Monitoring Review 2022-2024

INFERRED DRAWDOWNS (2021-2024)

Figure 28

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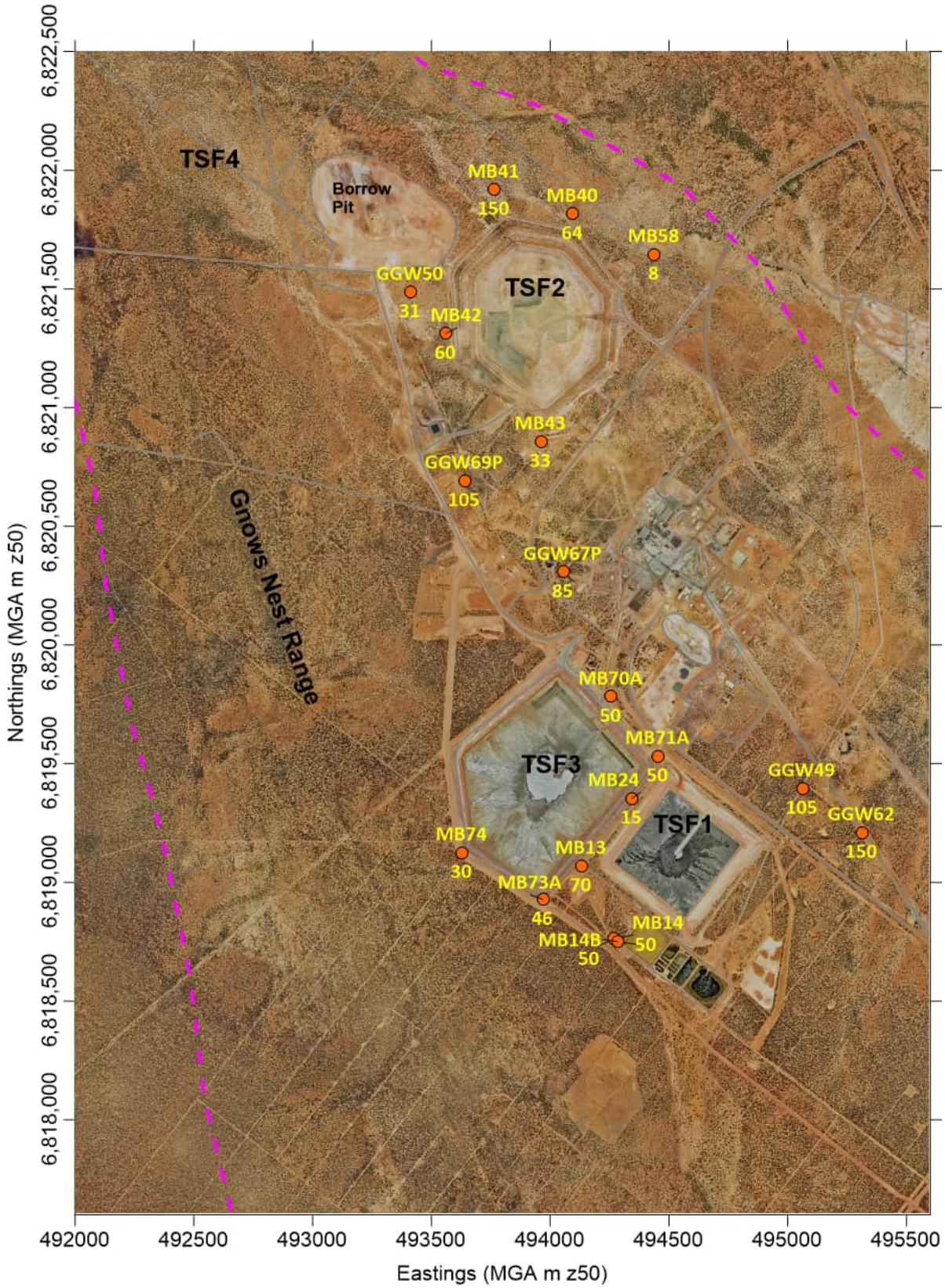
Site-Wide GWL Maps.srf (2021-24l DD Map)



LEGEND

- Sulphate Concentration Change (Baseline-2024)
- Historical Sulphate Concentration (contour control point)
- Inferred Sulphate Concentration Change Contour
- Current Drawdown Extent (approx.)

Data source: GGO, 2025. Imagery date: 29 Nov 2022. Map grid: GDA 1994 MGA z50

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GOLDEN GROVE OPERATIONS PTY LTD

Golden Grove Groundwater Monitoring Review 2022-2024

BASELINE SULPHATE CONCENTRATIONS

Figure 29

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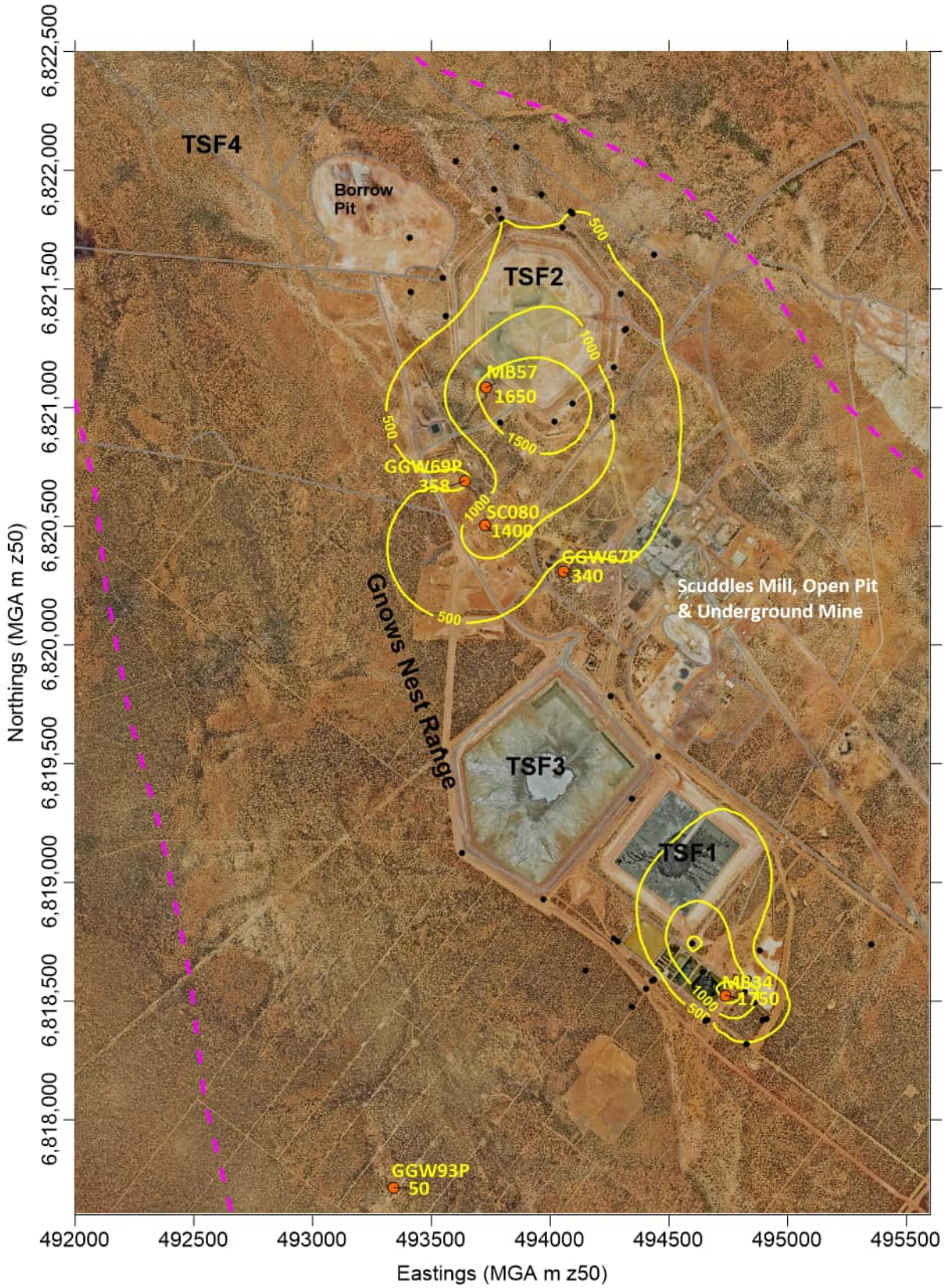
Local SO4 Maps.srf (Baseline SO4 Map)



LEGEND

- Recent Sulphate Concentration Location
- Historical Sulphate Concentration (contour control point)
- Inferred Recent Sulphate Concentration Contour
- Current Drawdown Extent (approx.)

Data source: GGO, 2025. Imagery date: 29 Nov 2022. Map grid: GDA 1994 MGA z50

Job No.	60747118	
Prep. By	RW	24 Apr 25
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GOLDEN GROVE OPERATIONS PTY LTD

Golden Grove Groundwater Monitoring Review 2022-2024

INFERRED RECENT SULPHATE CONCENTRATIONS

Figure 30

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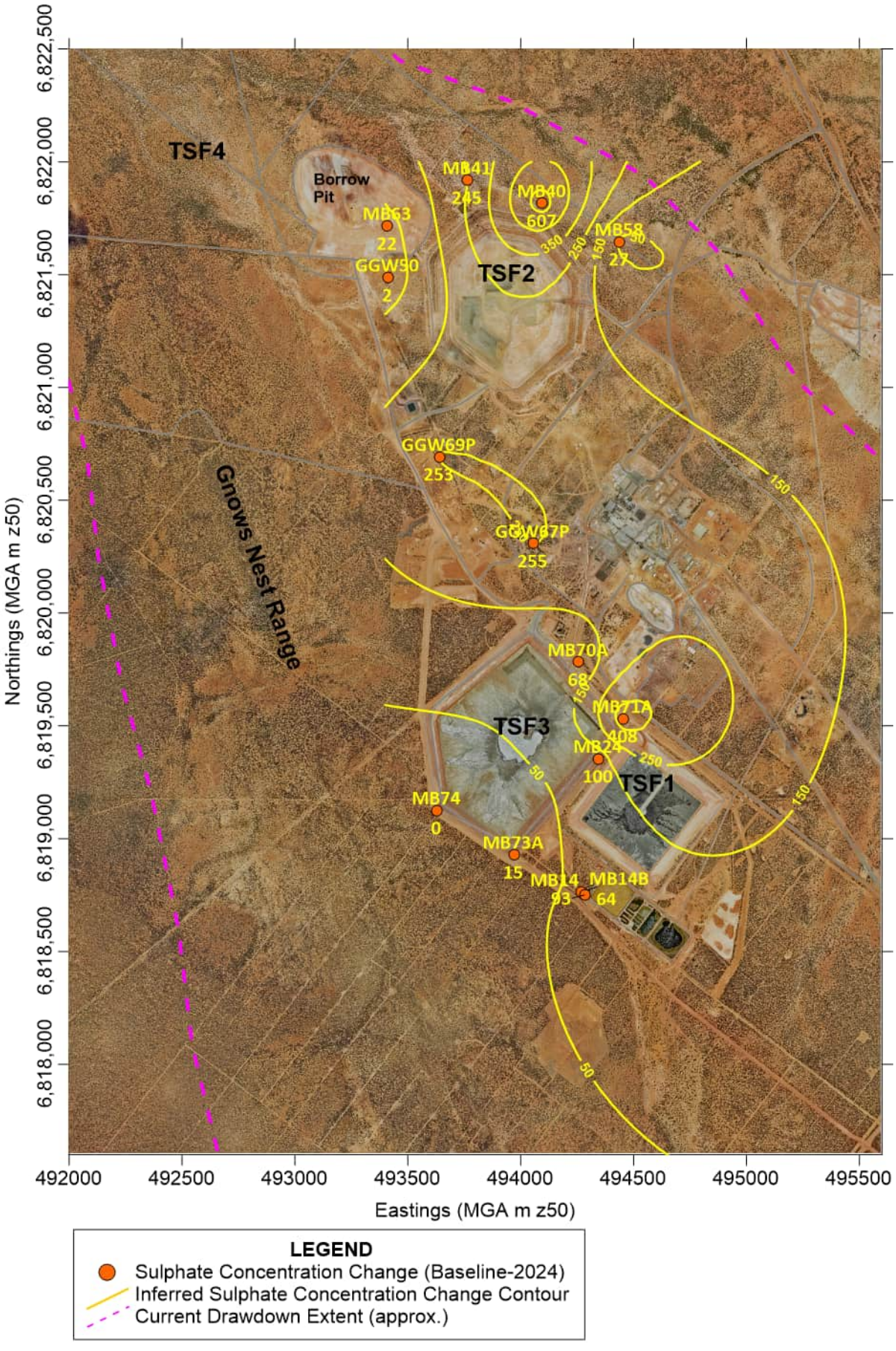
Local SO4 Maps.srf (Current SO4 Map)



LEGEND

- Sulphate Concentration Change (Baseline-2024)
- Inferred Sulphate Concentration Change Contour
- Current Drawdown Extent (approx.)

Data source: GGO, 2025. Imagery date: 29 Nov 2022. Map grid: GDA 1994 MGA z50

Job No.	60742206	
Prep. By	RW	24 Apr 25
Chk'd By	GRB	28 Apr 25
Revision Indicator	0	

GOLDEN GROVE OPERATIONS PTY LTD

Golden Grove Groundwater Monitoring Review 2022-2024

CHANGES IN SULPHATE CONCENTRATIONS (BASELINE - 2024)

Figure 31

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AECOM AUSTRALIA PTY LTD Perth Office

Local SO4 Maps.srf (Baseline-2024 Change SO4 Map)

Appendix A

Licence to Take Water and Environmental Licence

LICENCE TO TAKE WATER

Granted by the Minister under section 5C of the Rights in Water and Irrigation Act 1914

Licensee(s)	Golden Grove Operations Pty Ltd		
Description of Water Resource	Gascoyne Combined - Fractured Rock West - Fractured Rock	**Annual Water Entitlement**	3,510,000kL
Location of Water Source	M59/195 M59/227 M59/3 M59/362 M59/90 M59/91 M59/92		

Authorised Activities	**Taking of water for**	**Location of Activity**
	Dewatering for mining purposes	G59/19
		G59/20
		G59/21
		G59/22
		G59/23
		G59/24
		L59/22
		L59/26
		L59/28
		L59/29
		L59/41
		M59/143
		M59/195
		M59/227
		M59/3
		M59/361
		M59/362
		M59/363
		M59/480
		M59/543
		M59/88

This Licence is granted subject to the Rights in Water and Irrigation Regulations 2000.

LICENCE TO TAKE WATER

Granted by the Minister under section 5C of the Rights in Water and Irrigation Act 1914

		M59/89 M59/90 M59/91 M59/92 M59/93 M59/94 M59/95
	Dust suppression for earthworks and construction purposes	G59/19 G59/20 G59/21 G59/22 G59/23 G59/24 L59/22 L59/26 L59/28 L59/29 L59/41 M59/143 M59/195 M59/227 M59/3 M59/361 M59/362 M59/363 M59/480 M59/543 M59/88 M59/89

LICENCE TO TAKE WATER

Granted by the Minister under section 5C of the Rights in Water and Irrigation Act 1914

		M59/90
		M59/91
		M59/92
		M59/93
		M59/94
		M59/95
	Mineral ore processing and other mining purposes	G59/19
		G59/20
		G59/21
		G59/22
		G59/23
		G59/24
		L59/22
		L59/26
		L59/28
		L59/29
		L59/41
		M59/143
		M59/195
		M59/227
		M59/3
		M59/361
		M59/362
		M59/363
		M59/480
		M59/543
		M59/88
		M59/89
		M59/90

LICENCE TO TAKE WATER

Granted by the Minister under section 5C of the Rights in Water and Irrigation Act 1914

		M59/91
		M59/92
		M59/93
		M59/94
		M59/95
	Mining camp purposes	G59/19
		G59/20
		G59/21
		G59/22
		G59/23
		G59/24
		L59/22
		L59/26
		L59/28
		L59/29
		L59/41
		M59/143
		M59/195
		M59/227
		M59/3
		M59/361
		M59/362
		M59/363
		M59/480
		M59/543
		M59/88
		M59/89
		M59/90
		M59/91

LICENCE TO TAKE WATER

Granted by the Minister under section 5C of the Rights in Water and Irrigation Act 1914

		M59/92
		M59/93
		M59/94
		M59/95
	Recovery of water from mining	G59/19
		G59/20
		G59/21
		G59/22
		G59/23
		G59/24
		L59/22
		L59/26
		L59/28
		L59/29
		L59/41
		M59/143
		M59/195
		M59/227
		M59/3
		M59/361
		M59/362
		M59/363
		M59/480
		M59/543
		M59/88
		M59/89
		M59/90
		M59/91
		M59/92

LICENCE TO TAKE WATER

Granted by the Minister under section 5C of the Rights in Water and Irrigation Act 1914

		M59/93 M59/94 M59/95
Duration of Licence	From 3 December 2024 to 2 December 2034	

This Licence is subject to the following terms, conditions and restrictions:

1. The annual water year for water taken under this licence is defined as 1 January to 31 December.
2. The licensee must install an approved meter to each water draw-point through which water is taken under this licence.
3. The meter(s) must be installed in accordance with the provisions of the document entitled "Guidelines for Water Meter Installation 2009" before any water is taken under this licence.
4. The licensee must ensure the installed meter(s) accuracy is maintained to within plus or minus 5% of the volume metered, in field conditions.
5. The licensee must take and record the reading from each meter required under this licence at the beginning and another at the end of the water year defined on this licence.
6. The licensee shall submit combined abstraction volume within the annual report that is due 31 March each year.
7. The licensee must notify the Department of Water and Environmental Regulation in writing of any water meter malfunction within seven days of the malfunction being noticed.
8. The licensee must obtain authorisation from the Department of Water and Environmental Regulation before removing, replacing or interfering with any meter required under this licence.
9. The licensee shall comply with the commitments of the Golden Grove Water Operating Strategy 2024 as prepared by Golden Grove Operations Pty Ltd and approved by the Department of Water and Environmental Regulation on 29/11/2024, including any modifications to the commitments as approved during the term of the licence.
10. Every 12 Months the licensee shall provide to the Department of Water and Environmental Regulation a Groundwater Monitoring Summary for the preceding water year. The first report is due 31/03/2026.
11. Every 3 Years the licensee shall provide to the Department of Water and Environmental Regulation a Groundwater Monitoring Review. The first report is due 30/04/2025. A Groundwater Monitoring Summary need not be submitted in a year in which a Groundwater Monitoring Review is due.

End of terms, conditions and restrictions

Government of **Western Australia**
Department of **Water and Environmental Regulation**

LICENCE TO TAKE WATER

Granted by the Minister under section 5C of the Rights in Water and Irrigation Act 1914

Licensee(s)	Golden Grove Operations Pty Ltd		
Description of Water Resource	East Murchison Combined - Fractured Rock West - Fractured Rock	**Annual Water Entitlement**	750,000kL
Location of Water Source	M59/92		

Authorised Activities	**Taking of water for**	**Location of Activity**
	Mineral ore processing and other mining purposes	G59/19 G59/20 G59/21 G59/22 G59/23 G59/24 L59/22 L59/26 L59/28 L59/29 L59/41 M59/143 M59/195 M59/227 M59/3 M59/361 M59/362 M59/363 M59/480 M59/543 M59/88 M59/89 M59/90

This Licence is granted subject to the Rights in Water and Irrigation Regulations 2000.

LICENCE TO TAKE WATER

Granted by the Minister under section 5C of the Rights in Water and Irrigation Act 1914

		M59/91 M59/92 M59/93 M59/94 M59/95
Duration of Licence	From 3 December 2024 to 12 December 2033	

This Licence is subject to the following terms, conditions and restrictions:

1. The annual water year for water taken under this licence is defined as 1 January to 31 December.

2. The licensee shall comply with the commitments of the Golden Grove Water Operating Strategy 2024 as prepared by Golden Grove Operations Pty Ltd and approved by the Department of Water and Environmental Regulation on 29/11/2024, including any modifications to the commitments as approved during the term of the licence.

3. Every 12 Months the licensee shall provide to the Department of Water and Environmental Regulation a Groundwater Monitoring Summary for the preceding water year. The first report is due 31/03/2026.

4. Every 3 Years the licensee shall provide to the Department of Water and Environmental Regulation a Groundwater Monitoring Review. The first report is due 30/04/2025. A Groundwater Monitoring Summary need not be submitted in a year in which a Groundwater Monitoring Review is due.

5. The licensee shall submit combined abstraction volume within the annual report that is due 31 March each year.

End of terms, conditions and restrictions

Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L9423/2024/1
Licence holder	Golden Grove Operations Pty Ltd
ACN	114 868 325
Registered business address	Suite 1, 38 Colin Street West Perth WA 6005
DWER file number	DER2023/000822
Duration	28/03/2024 to 27/03/2044
Date of issue	27/03/2024
Premises details	Scuddles & Gossan Hill Mine YALGOO WA 6635 Legal description – Part of Mining Tenements: M59/3, M59/90, M59/195, M59/227, M59/361, M59/362, G59/19-23, G59/24, L59/22, L59/26 and L59/41 As defined by the premises maps in Schedule 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production capacity**
Category 5: Processing or beneficiation of metallic or non-metallic ore	2,100,000 tonnes per annual period
Category 6: Mine dewatering	3,500,000 tonnes per annual period
Category 54: Sewage facility	300 cubic metres (m^3) per day
Category 61: Liquid waste facility	5,000 tonnes per annual period
Category 89: Putrescible landfill site	Not more than 5,000 tonnes per annual period

This licence is granted to the licence holder, subject to the attached conditions, on 27 March 2024 by:

[redacted]

Licence history

Reference number	Date	Summary of changes
L9423/2024/1	27/03/2024	Licence issue

Interpretation

In this licence:

(a) the words ‘including’, ‘includes’ and ‘include’ in conditions mean “including but not limited to”, and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice in this works approval:

  (i) if dated, refers to that particular version; and

  (ii) if not dated, refers to the latest version and therefore may be subject to change over time;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

The Licence holder must ensure that the following conditions are complied with:

Construction phase

Infrastructure and equipment

1. The licence holder must install and undertake the works for the infrastructure:

(a) specified in Column 1;

(a) to the requirements specified in Column 2;

(b) prior to the date specified in Column 3; and

(c) at the location specified in Column 4 of Table 1 below.

Table 1: Infrastructure and equipment requirements table

Column 1	**Column 2**	**Column 3**	**Column 4**
Infrastructure	**Requirements (design and construction)**	**Completion date**	**Site plan reference**
Clay Borrow Pit Water Storage Dam including discharge and recovery pipelines	• Provided with a skid mounted pump capable of transferring 250 m^3/h of water with a 50 m head • Fitted with a 280 mm PN10 HDPE discharge pipeline from the Lake Wownaminya pipeline to the Clay Borrow Pit • Fitted with a 250 mm PN10 HDPE return pipeline from the skid mounted pump to the process plant water storage pond • Pipelines laid within a v-drain	Not specified	Schedule 1 Figure 2 and Figure 9
Coffer Dam 2 including discharge pipelines	• Constructed with a maximum embankment height of 1.5 m • Upstream embankment must be lined which meets the following properties: - Minimum thickness of 1.5 mm with a tolerance of 5%; - specific gravity of not less than 0.94 (ASTM D1505); - melt index of 0.05–0.30 g/10 minutes (ASTM D1238 condition E 190/2.16); - carbon black content of 2-3% (ASTM D1603); - minimum tensile strength at yield of 16 000 KN/m2 and at break 550 KN/m^2 (ASTM D638 type IV 2); - minimum elongation at yield of 10% and at break 300% (ASTM D638) • The liner must be fixed within an anchor trench at the crest of the dam • The upstream embankment liner must be fabricated to	Not specified	Schedule 1 Figure 2 and Figure 9 and Schedule 10

Table 1: Infrastructure and equipment requirements table			
Column 1	**Column 2**	**Column 3**	**Column 4**
Infrastructure	**Requirements (design and construction)**	**Completion date**	**Site plan reference**
	form the shape of excavation. All seams and joints made on site should be continuous. Panels of the liner should be overlapped by a minimum of 100 mm, prior to heat welding or mechanical jointing. • Designed to provide a minimum storage capacity of 15,000 m^3 • Designed to hold all runoff from the ROM pad for a 1 in 100 year 72 hour storm event while maintaining a minimum freeboard of 300 mm • Fitted with a pump to transfer any excess water to the Evaporation Pond C • The HDPE pipeline from the Coffer Dam 2 to the Evaporation Pond C must be laid within a v-drain and fitted with automatic shutoff valves • Constructed in accordance with the design drawings shown in Schedule 10		
TSF3 embankment raise 5	• A 3 m high upstream embankment raise to RL 384.0 m including: – Crest width of 6 m – Upstream slope of 1V:2.5H – Downstream slope of 1V:2.75H – Cut-off trench beneath the downstream toe of the Stage 5 embankment • Decant return system to incorporate: – Centreline raise of decant tower and decant accessway, including rock filter surrounding decant tower – A dedicated submersible pump installed in the decant tower – Two skid-mounted pumps in a duty / standby configuration at the decant hammerhead ramp end • Designed and constructed to temporarily store rainfall from a 1:100-year AEP, 72 hour storm event while maintaining a minimum total freeboard of 500 mm (combined 300 mm operational freeboard and 200 mm beach freeboard) • Constructed in accordance with the design drawings shown in Schedule 3	Not specified	Schedule 1 Figure 2 and Figure 9 and Schedule 3
TSF1 embankment raise 5	<u>Stage 5A:</u> • A 4 m high upstream raise to RL 376.0 m resulting in a maximum embankment height of 18 m including:	Up to 12 months from 5	TSF1 as shown in Schedule 1

Table 1: Infrastructure and equipment requirements table			
Column 1	**Column 2**	**Column 3**	**Column 4**
Infrastructure	**Requirements (design and construction)**	**Completion date**	**Site plan reference**
	– crest width of 19 m – upstream slope of 2H:1V – downstream slope of 2.75H:1V – cut-off trench beneath the downstream toe of the Stage 5A embankment • New decant access causeway to RL 376.0 m and width of 10 m with the decant area section having a diameter of 20 m • New decant structure raised to RL 376 m • Tailings discharge points at RL 375.5 m • Storage capacity 386,050 m^3 <u>Stage 5B:</u> • A further raise of 3 m to RL 379 m including: – crest width of 6 m – inclusion of a 2 m wide rock armouring including a geotextile separation layer – upstream slope of 2H:1V – downstream slope of 2.75H:1V • Access decant access causeway to RL 379 m and width 10 m with the decant area section having a diameter of 20 m • Decant structure raised to RL 379 m • Storage capacity 406,790 m^3 <u>Freeboard:</u> • Minimum tailings beach freeboard of 0.5 m <u>Construction material:</u> Stockpile material located on the top of TSF1 will be used to construct the tailings embankments. Stockpile material comprise of predominantly non-acid forming (NAF) waste rock excavated from the Scuddles open pit <u>TSF piezometers:</u> • 10 new vibrating wire piezometers • 8 survey prisms <u>Decant pump:</u> • Flow capacity 832 m^3/h <u>Tailings delivery system and decant return water pipelines:</u> • Tailings deposition ring consisting of 134 spigots	August 2021, which is the date the licence amendment was granted	and Schedule 4 Pipeline corridor in Figure 13

Table 1: Infrastructure and equipment requirements table			
Column 1	**Column 2**	**Column 3**	**Column 4**
Infrastructure	**Requirements (design and construction)**	**Completion date**	**Site plan reference**
	approximately 12 m apart • HDPE tailings slurry and decant return water pipelines – fitted with two flow meters • Bunded pipeline route between process plant and TSF1 <u>Toe drain:</u> • New toe drain to connect to existing toe drain • Toe drain to connect to TSF1 sump		
New Flotation Circuit	• Copper scavenger concentration distribution box -1.6 m^3 capacity • Copper rougher 2 flotation cell - 7 m^3 capacity • Three copper scavenger flotation cell - 70 m^3 capacity each • Copper cleaner flotation cell - 46.5 m^3 capacity • Dextrin storage tank - Ø5.1 m x 4.5 m, 80 kL PE100 HDPE tank (effective capacity 70 kL). Replaces existing CMC Storage Tank. • Copper concentrate surge tank -Ø 6.0 m x 7.6 m H		New Flotation circuit as shown in Schedule 1 and Schedule 5

2. The licence holder must:

(a) construct and/or install the infrastructure/equipment;

(b) in accordance with the corresponding design and construction/installation requirements; and

(c) at the corresponding infrastructure/equipment location,

as set out in Schedule 9.

3. The licence holder must design and construct/install new groundwater monitoring wells in accordance with the requirements specified in Table 2.

Table 2: Infrastructure requirements – groundwater monitoring wells

Infrastructure	Design and construction/installation requirements	Monitoring well location(s)	Timeframe
Groundwater monitoring well(s): ROM groundwater monitoring wells: ROM 11, ROM 12, ROM 13, ROM 14, ROM 15 and ROM 16	<u>Well design and construction:</u> Designed and constructed in accordance with *ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring wells*. Well screens must target the part, or parts, of the aquifer most likely to be affected by contamination[1]. Where temporary/seasonal perched features are present, wells must be nested, and the perched features individually screened. <u>Logging of borehole:</u> Soil samples must be collected and logged during the installation of the monitoring wells. A record of the geology encountered during drilling must be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS1726. Any observations of staining/odours or other indications of contamination must be included in the bore log. <u>Well construction log:</u> Well construction details must be documented within a well construction log to demonstrate compliance with *ASTM D5092/D5092M-16*. The construction logs shall include elevations of the top of casing position to be used as the reference point for water-level measurements, and the elevations of the ground surface protective installations. <u>Well development:</u> All installed monitoring wells must be developed after drilling to remove fine sand, silt, clay and any drilling mud residues from around the well screen to ensure the hydraulic functioning of the well. A detailed record should be kept of well development activities and included in the well construction log. <u>Installation survey:</u> The vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor. <u>Well network map:</u> A well location map (using aerial image overlay) must be prepared and include the location of all monitoring wells in the monitoring network and their respective identification numbers.	Monitoring wells as shown in Figure 5 of Schedule 1	Must be constructed, developed (purged) and determined to be operational by no later than 15 calendar days prior to the use of the ROM pad expansion area
Clay Borrow Pit Water Storage Dam monitoring bores: MB76, MB77 and MB78			Must be constructed, developed (purged) and determined to be operational by no later than 15 calendar days prior to the use of the Clay Borrow Pit Water Storage Dam

Note[1]: refer to Section 8 of Schedule B2 of the Assessment of Site Contamination NEPM for guidance on well screen depth and length.

Compliance reporting

4. The licence holder must within 60 calendar days of an item of infrastructure or equipment required by conditions 1 and 2 being constructed and/or installed:

(a) undertake an audit of their compliance with the requirements of conditions 1 and 2; and

(a) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

5. The Environmental Compliance Report required by condition 4, must include as a minimum the following:

(a) certification by a suitably qualified geotechnical engineer that the items of infrastructure or component(s) thereof, as specified in conditions 1 and 2, have been constructed in accordance with the relevant requirements specified in conditions 1 and 2;

(b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in conditions 1 and 2;

(c) evidence that the relocated paste plant and associated infrastructure has been installed as per the manufacturer's design specifications;

(d) photographic evidence of the installation of the infrastructure;

(e) be signed by a person authorised to represent the licence holder and contains the printed name and position of that person;

(f) monitoring data indicating the baseline ambient environmental conditions at the premises prior to and immediately following construction of the item(s) of infrastructure; and

(g) a quality assurance/quality control (QA/QC) certificate from an independent third party which demonstrates that the permeability of the Coffer Dam 2 meets the requirements specified in Table 6.

6. The licence holder must, within 30 calendar days of the monitoring wells being constructed, submit to the CEO a well construction report evidencing compliance with the requirements of condition 3.

Operational requirements

7. The licence holder may only commence operations for an item of infrastructure identified in conditions 1 and 2 where the Environmental Compliance Report as required by condition 4 has been submitted by the licence holder for that item of infrastructure.

8. The licence holder shall only accept waste on to the premises if:

(a) it is of a type listed in Table 3;

(b) the quantity accepted is below any quantity limit listed in Table 3; and

(c) it meets any specification listed in Table 3.

Table 3: Waste acceptance

Waste	Waste code	Quantity limit	Specification[1]
Industrial wash water	L150	5,000 tonnes per annual period	Tankered into the premises and discharged into concrete lined sump in bunded processing plant via an enclosed pipeline.

Note [1]: Additional requirements for the acceptance of controlled waste are set out in the Environmental Protection (Controlled Waste) Regulations 2004.

9. The licence holder shall ensure that where wastes produced on the premises are not taken off-site for lawful use or disposal, they are managed according with the requirements in Table 4.

Table 4: Waste processing

Waste type	Process(es)	Process limits[1]
Inert Waste Type 1 Putrescible waste	Receipt, handling, and disposal by landfilling	<u>All waste types</u> No more than 5,000 tonnes per annual period of all waste types cumulatively shall be disposed of by landfilling. Disposal of waste by landfilling shall only take place within the landfill area shown on the landfill area map defined in Figure 11 Schedule 1. The separation distance between the base of the landfill and the highest groundwater level shall not be less than 3 m. No waste shall be stored/buried within 100 m of any surface water body. <u>Putrescible waste</u> No putrescible waste shall be burnt.
Inert Waste Type 2		<u>Inert Waste Type 2</u> Tyres shall only be landfilled[2]: • in batches separated from each other by at least 100 mm of soil and each consisting of not more than 40 m^3 of tyres reduced to pieces; or • in batches separated from each other by at least 100 mm of soil and each consisting of not more than 1,000 whole tyres.
Special Waste Type 2		<u>Special Waste Type 2</u> • Biomedical and related waste generated on the premises; • Disposal of Special Waste Type 2 shall only take place within the medical waste trench area defined in Figure 12, Schedule 1; • Waste shall not be excavated or uncovered during subsequent landfill operations; and

Table 4: Waste processing		
Waste type	**Process(es)**	**Process limits[1]**
		• Access to the landfill site where the waste is buried shall be restricted to authorised personnel only.
Sewage	Biological, physical and chemical treatment	Not more than 300 m^3 per day. Accepted through sewer inflow only.

Note [1]: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the Environmental Protection (Controlled Waste) Regulations 2004.

Note [2]: Requirements for landfilling tyres are set out in Part 6 of the Environmental Protection Regulations 1987.

10. The licence holder shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 5 and that sufficient stockpiles of cover are maintained on site at all times.

Table 5: Cover requirements[1]			
Waste Type	**Material**	**Depth**	**Timescales**
Special Waste Type 2 (Biomedical and related waste)	Clean fill	1000 mm	Immediately
Putrescible waste		200 mm	Weekly

Note [1]: Additional requirements for the covering of tyres are set out in Part 6 of the Environmental Protection Regulations 1987.

11. The licence holder shall ensure that material as specified in Table 6 is only discharged into containment infrastructure with the relevant infrastructure requirements as specified in Table 6 and at the corresponding containment infrastructure location specified in Table 6.

Table 6: Containment infrastructure			
Containment point reference	**Material**	**Infrastructure requirements**	**Containment infrastructure location**
Coffee Dam 2	ROM Pad seepage water and rainfall runoff	Lined to achieve a coefficient of permeability of less than 2 x 10^{-10} m/s	Coffee Dam 2 as shown in Figure 2 and Figure 9 in Schedule 1
Clay Borrow Pit Water Storage Dam	Treated dewatering effluent	None specified	Borrow Pit Water Storage Dam as shown in Figure 2 and Figure 9 in Schedule 1.

Table 6: Containment infrastructure			
Containment point reference	**Material**	**Infrastructure requirements**	**Containment infrastructure location**
TSF3	Tailings	Decant tower fitted with submersible pump for the recovery of water. Two skid-mounted pumps in a duty/standby configuration at the decant hammerhead ramp end for the recovery of water. Cut off trench beneath the downstream toe of the embankment.	TSF3 as shown in Figure 2 and Figure 9 in Schedule 1.
TSF1	Tailings	New decant structure Cut off trench at the base of perimeter embankment New toe drain around TSF1	TSF1 as shown in Figure 2 and Figure 9 in Schedule 1.
TSF2	Reclaimed tailings from TSF2 (tailings deemed not suitable for paste plant)	Requirements as per Schedule 6	TSF2 as shown in Figure 2 and Figure 9 in Schedule 1.
Concrete sump (CW1)	Industrial wash water	Contained within concrete plant bunding	CW1 as shown in the site plan and Figure 10 in Schedule 1.
Evaporation pond C and process water pond	• Contaminated water from the storage pond; and • TSF1, TSF2 and/or TSF3: ○ Decant water; ○ Recovered seepage; and ○ Toe drainage water.	Lined to achieve a permeability of at least $<10^{-9}$ m/s or equivalent	Evaporation Pond C as shown in Figure 2 and Figure 9 in Schedule 1. Process Dam and Process Pond as shown in Figure 14 and 15 in Schedule 1.
Reclaimed tailings storage pad	Reclaimed tailings from TSF2	Requirements as per Schedule 6.	Tailings Pad as shown in Figure 15 in Schedule 1.
Storage pond	Contaminated water from the reclaimed tailings storage pad		SWP as shown in Schedule 1.

12. The licence holder shall manage containment infrastructure in Table 6 such that:

(a) a minimum total freeboard of 500 mm (combined 300 mm operational freeboard and 200 mm beach freeboard) is maintained for TSF3;

(b) a minimum operational freeboard of 500 mm is maintained for TSF1;

(c) a minimum operational freeboard of 300 mm is maintained for TSF2;

(d) a minimum top of embankment freeboard of 500 mm is maintained for the concrete sump (CW1), process water pond and evaporation pond C;

(e) stormwater run-off is diverted from the tailings dam/s to prevent flooding or erosion;

(f) a perimeter drain is maintained downstream of the external toe of the tailings dam/s to recover any liquid matter resulting from seepage or breach of the embankment;

(g) a minimum top of embankment freeboard of 500 mm is maintained for the reclaimed tailings storage pad and storage pond;

(h) stormwater diversion bunds and/or culverts are maintained to safely divert surface water flows around the paste plant, reclaimed tailings storage pad and storage pond;

(i) a minimum top of pit embankment freeboard of 6.0 m is maintained for the Clay Borrow Pit Water Storage Dam; and

(j) a minimum top of embankment freeboard of 300 mm is maintained for the Coffer Dam 2.

13. The licence holder shall manage the irrigation of wastewater treated at the wastewater treatment plant (WWTP) such that:

(a) no irrigation generated run-off, spray drift or discharge occurs beyond the boundary of the defined irrigation area;

(b) treated wastewater is evenly distributed over the irrigation area;

(c) no soil erosion occurs;

(d) irrigation does not occur on land that is waterlogged; and

(e) vegetation cover is maintained over the irrigation area.

14. The licence holder shall:

(a) undertake inspections as detailed in Table 7;

(b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and

(c) maintain a record of all inspections undertaken.

Table 7: Inspection of infrastructure

Scope of inspection	Type of inspection	Frequency of inspection
Clay Borrow Pit Water Storage Dam	Visual integrity and to confirm required freeboard capacity is available	Daily
Coffer Dam 2	Visual integrity and to confirm required freeboard capacity is available	Daily

Table 7: Inspection of infrastructure		
Scope of inspection	**Type of inspection**	**Frequency of inspection**
Coffer Dam 2 pipeline to Evaporation Pond C (when in use)	Visual integrity	Daily
Tailings pipelines	Visual integrity	Daily
Return water pipelines	Visual integrity	Daily
TSF1 and TSF3 embankment freeboard and decant pond	Visual to confirm required freeboard capacity is available	Daily
Seepage collection trenches/sumps	Visual to confirm capacity is available	Daily
Mine dewater pipelines	Visual integrity	Daily
Discharge pipeline to lake	Visual integrity	Weekly
Controlled waste concrete sump (CW1)	Visual integrity and to confirm required freeboard capacity is available	Daily during periods of discharge
Reclaimed tailings storage pad	Visual integrity and to confirm required freeboard capacity is available	Daily
Storage pond	Visual integrity and to confirm required freeboard capacity is available	Daily
Evaporation pond C and process water pond	Visual integrity and to confirm required freeboard capacity is available	Daily

15. The licence holder shall ensure that all pipelines containing environmentally hazardous substances are equipped with:

(a) telemetry systems and pressure sensors along pipelines to allow the detection of leaks and failures; and/or

(b) automatic cut-outs in the event of a pipe failure; and/or

(c) secondary containment sufficient to contain any spill for a period equal to the time between inspections.

16. The licence holder must effectively wet down:

(a) reclaimed tailings prior to transportation; and

(b) dust generating areas as required.

17. The licence holder must ensure that the premises infrastructure and equipment listed in Table 8 is maintained and operated in accordance with the corresponding operational requirements set out in Table 8.

Table 8: Infrastructure and equipment requirements during operations		
Item	**Infrastructure and equipment**	**Operational requirements**
1.	Mobile equipment (e.g. vehicles, screening plant, haulage trucks	• Maintain all mobile equipment as per manufacturer's design specifications; and

Table 8: Infrastructure and equipment requirements during operations		
Item	**Infrastructure and equipment**	**Operational requirements**
	and dewatering pumps etc.)	• Keep suitably stocked spill response equipment close to where spills may occur;
2.	Reclaimed tailings storage pad – automatic dust suppression system	Automatic dust suppression system must be: • available and operational to effectively wet down dust generating areas within the reclaimed tailings storage pad as required; and • serviced regularly by on site technician.

18. The licence holder shall operate TSF3 in accordance with the conditions of this licence, and TSF1 following submission of the construction compliance reports required under condition 4.

19. The licence holder shall undertake a monthly water balance for TSF3 and TSF1. The water balance shall as a minimum record the following:

(a) Site rainfall;

(b) Volume of tailings deposited;

(c) Evaporation rate;

(d) Decant water recovery volumes;

(e) Seepage recovery volumes;

(f) Estimate of seepage losses;

(g) toe drainage recovery volumes;

(h) Tailings level (RL) start of the month and end of the month; and

(i) Tailings solid content (w/w%) and density.

Emissions and discharges

General

20. The licence holder shall record and investigate the exceedance of any descriptive or numerical limit specified within this licence.

Point source emissions to surface water

21. The licence holder shall ensure that where waste is emitted to surface water from the emission points in Table 9 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this licence.

Table 9: Emission points to surface water			
Emission point reference	**Emission point reference on Map of emission points**	**Description**	**Source including abatement**
D1	D1	Discharge to Lake Wownaminya	Treated dewatering effluent

22. The licence holder shall not cause or allow point source emissions to surface water that do not comply with the limits listed in Table **10**.

Table 10: Point source emission limits to surface water			
Emission point reference	**Parameter**	**Limit (including units)**	**Averaging period**
D1	Arsenic	<0.5 mg/L	Monthly
	Cadmium	<0.01 mg/L	
	Chromium	<1.0 mg/L	
	Copper	<0.4 mg/L	
	Lead	<0.1 mg/L	
	Mercury	-	
	pH[1]	≥ 6.0 ≤ 9.0	
	Selenium	<0.02 mg/L	
	Sulphate	<3800 mg/L	
	Total recoverable hydrocarbons (TRH)	<15 mg/L	
	Total suspended solids	<100 mg/L	
	Total acidity ($CaCO_3$)	<40 mg/L	
	Zinc	<20 mg/L	

Note [1]: In-field non-NATA accredited analysis permitted.

Emissions to land

23. The licence holder shall ensure that where waste is emitted to land from the emission points in Table 11 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this licence.

Table 11: Emissions to land		
Emission point reference on Map of emission points	**Description**	**Source including abatement**
L1	Effluent irrigation area	WWTP treated effluent.
L2	Dewatering discharge to clay borrow pit	Treated dewatering effluent

24. Decant water, recovered seepage and toe drainage water from TSF1, TSF2 and/or TSF3 shall be collected and transferred to evaporation pond C and/or process water pond.

Monitoring

General monitoring

25. The licence holder shall ensure that:

(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;

(b) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;

(c) all surface water sampling is conducted in accordance with AS/NZS 5667.4;

(d) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and

(e) all laboratory samples are submitted to and tested by a laboratory with current National Association of Testing Authorities (NATA) accreditation for the parameters being measured unless indicated otherwise in the relevant table.

26. The licence holder shall ensure that:

(a) monthly monitoring is undertaken at least 15 days apart;

(b) quarterly monitoring is undertaken at least 45 days apart;

(c) six monthly monitoring is undertaken at least 5 months apart; and

(d) annual monitoring is undertaken at least 9 months apart.

27. The licence holder shall ensure that all monitoring equipment used on the premises comply with the conditions of this licence and is calibrated in accordance with the manufacturer's specifications.

Monitoring of point source emissions to surface water

28. The licence holder shall undertake the monitoring in Table 12 according to the specifications in that table.

Table 12: Monitoring of point source emissions to surface water

Emission point reference	Parameter	Units	Averaging period	Frequency
D1	Volumetric flow rate	m^3/day	-	Continuous
	pH[1]	pH units	Spot sample	Monthly
	Electrical Conductivity (EC)	µS/cm		
	Total aluminium	mg/L		
	Arsenic			
	Cadmium			
	Chromium			
	Copper			
	Total iron			
	Lead			
	Manganese			
	Mercury			
	Nickel			

Table 12: Monitoring of point source emissions to surface water				
Emission point reference	**Parameter**	**Units**	**Averaging period**	**Frequency**
	Total Nitrogen (as N)			
	Nitrate (as NO_3)			
	Total Phosphorus (as P)			
	Selenium			
	Sulphate			
	TRH			
	Total suspended solids			
	Total dissolved solids			
	Total acidity ($CaCO_3$)			
	Zinc			

Note [1]: In-field non-NATA accredited analysis permitted.

Monitoring of emissions to land

The licence holder shall undertake the monitoring in Table 13 according to the specifications in that table.

Table 13: Monitoring of emissions to land				
Emission point reference	**Parameter**	**Units**	**Averaging period**	**Frequency**
L1	Volumetric flow rate	m^3/day	-	Continuous
	Biochemical oxygen demand	mg/L	Spot sample	Quarterly
	Total suspended solids	mg/L		
	pH[1]	pH units		
	Total nitrogen	mg/L		
	Total phosphorus	mg/L		
	E.coli	cfu/100 mL		
L2	Volumetric flow rate	m^3/day	-	Continuous
	pH[1]	pH units	Spot sample	Monthly
	Electrical Conductivity (EC)	µS/cm		
	Total aluminium	mg/L		
	Arsenic			
	Cadmium			
	Chromium			
	Copper			
	Total iron			
	Lead			

Table 13: Monitoring of emissions to land				
Emission point reference	**Parameter**	**Units**	**Averaging period**	**Frequency**
	Manganese			
	Mercury			
	Nickel			
	Total Nitrogen (as N)			
	Nitrate (as NO_3)			
	Total Phosphorus (as P)			
	Selenium			
	Sulphate			
	TRH			
	Total suspended solids			
	Total dissolved solids			
	Total acidity ($CaCO_3$)			
	Zinc			

Note [1]: In-field non-NATA accredited analysis permitted.

Monitoring of inputs and outputs

29. The licence holder shall undertake the monitoring in Table 14 according to the specifications in that table.

Table 14: Monitoring of inputs and outputs

Input/Output	Parameter	Units	Averaging period	Frequency
Controlled waste	Industrial wash water	Metric tonnes	Month	Monthly
Waste inputs	Inert Waste Type 1 Putrescible waste Inert Waste Type 2 Special Waste Type 2	m^3 (where no weighbridge is present)	N/A	Each load disposed at the premises
Processing of reclaimed tailings	• Volumes of tailings reclaimed from TSF2; • Volumes of screened material (reclaimed tailings from TSF2); • Volumes of material (reclaimed tailings from TSF2) used within the paste plant; and • Volumes of material (reclaimed tailings deemed unsuitable for the paste plant) disposed back into TSF2.	Metric tonnes	Month	Monthly
Recovery of stored dewatering effluent	Volumes of dewatering effluent recovered from the Clay Borrow Pit Water Storage Dam	Metric tonnes	Monthly	Continuous

Ambient environmental quality monitoring

30. The licence holder shall undertake the monitoring specified in Table 15 and Table 16 and record and investigate the exceedance of any limit or trigger specified.

Table 15: Monitoring of ambient groundwater quality			
Emission point reference	**Parameter**	**Limit (including units)**	**Averaging period**
MB11, MB13, MB16, MB18, MB19, MB21, MB22, MB23, MB24, MB46, MB47, GGW50, MB58, MB64, MB65, MB67, MB68A, MB69, MB70A, MB71A, MB73A, MB74 PP01 MB76, MB77 and MB78	Arsenic	0.5 mg/L	Quarterly
	Cadmium	0.01 mg/L	
	Chromium	1.0 mg/L	
	Copper	0.4 mg/L	
	Lead	0.1 mg/L	
	Mercury	-	
	Total nitrogen (as N)	-	
	Nitrate (as NO_3)	-	
	pH[1]	≥ 6.0 ≤ 9.0	
	Selenium	0.02 mg/L	
	Standing water level (SWL)	5 mbgl	Monthly
	Sulphate	1000 mg/L	Quarterly
	Total dissolved solids	5,000 mg/L	
	Total acidity (CaCO3)	40 mg/L	
	Zinc	20 mg/L	
ROM11, ROM12, ROM13, ROM14, ROM15 and ROM16	Standing water level (SWL)	5 mbgl	Monthly
	Arsenic	0.5 mg/L	Quarterly
	Cadmium	0.01 mg/L	
	Chromium	1.0 mg/L	
	Copper	0.4 mg/L	
	Lead	0.1 mg/L	
	Mercury	-	
	Total nitrogen (as N)	-	
	Nitrate (as NO_3)	-	
	pH[1]	≥ 6.0 ≤ 9.0	
	Selenium	0.02 mg/L	
	Sulphate	3,000 mg/L	
	Total dissolved solids	5,000 mg/L	
	Total acidity (CaCO3)	40 mg/L	
	Zinc	20 mg/L	

Table 16: Monitoring of ambient groundwater quality			
Emission point reference	**Parameter**	**Trigger value (including units)**	**Averaging period**
ROM9	Standing water level (SWL)	5 mbgl	Monthly
	Arsenic	0.5 mg/L	Quarterly
	Cadmium	-	
	Chromium	1.0 mg/L	
	Copper	0.4 mg/L	
	Lead	0.1 mg/L	
	Mercury	-	
	Total nitrogen (as N)	-	
	Nitrate (as NO_3)	-	
	pH[1]	≥ 6.0 ≤ 9.0	
	Selenium	0.02 mg/L	
	Sulphate	3,000 mg/L	
	Total dissolved solids	-	
	Total acidity (CaCO3)	40 mg/L	
	Zinc	20 mg/L	

Note [1]: In-field non-NATA accredited analysis permitted.

31. The licence holder must monitor the parameters in Table 15 and in the event of SWL exceeding the limit in Table 15, undertake the management action(s) as specified in Table 17 and provide a report including the investigation conducted to the CEO within 6 months of the initial notification.

Table 17: Management actions required for SWL exceedances		
Parameter	**Trigger**	**Management actions**
Vegetation health; efflorescence 5 fixed point vegetation photos – taken monthly	vegetation stressed or dying; or signs of stress in many individuals or several species.	Notify the CEO immediately and provide: – photographic evidence – size of area affected – historical SWL logs for the monitoring bore(s) in the vicinity of the affected area Within three months, a qualified botanist must investigate and assess the area to determine if vegetation health decline around monitoring bore is related to SWL exceedance. If mounding is confirmed to be causing vegetation decline, immediately adjust seepage recovery until improvement in vegetation health is evident. Continue to assess vegetation health against groundwater level and maintain a record of all management actions.

32. During the first 30 days after the new flotation plant reached steady state, the licence holder must collect at least 10 individual representative tailings samples to determine the geotechnical behaviour of the tailings, and may include, but not be limited to:

- geotechnical characterisation of tailings including: particle size distribution, volume of solids, settling test (drained and undrained), air drying test and hydraulic conductivity.

All test results shall be collated and provided in a report to the CEO after laboratory results are available.

Records and reporting

Records

33. All information and records required by the licence shall:

(a) be legible;

(b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;

(c) except for records listed in 33(d) be retained for at least 6 years from the date the records were made or until the expiry of the licence or any subsequent licence; and

(d) for those following records, be retained until the expiry of the licence and any subsequent licence:

(i) off-site environmental effects; or

(ii) matters which affect the condition of the land or waters.

34. The licence holder must submit to the CEO within 90 days after the end of the annual period, an Annual Audit Compliance Report (AACR) indicating the extent to which the licence holder has complied with the conditions in this licence for the annual period.

35. The licence holder shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the premises and any action taken in response to the complaint.

Reporting

36. The licence holder shall submit to the CEO an Annual Environmental Report within 90 calendar days after the end of the annual period. The report shall contain the information listed in Table 18 in the format or form specified in that table.

Table 18: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 12	Specified monitoring of point source emissions and	WR1

Table 18: Annual Environmental Report		
Condition or table (if relevant)	**Parameter**	**Format or form**
	limit exceedances to surface water	
Table 13	Monitoring of emissions to land	LR1 and LR2
Table 14	Monitoring of inputs and outputs	None specified
Table 15	Monitoring of ambient groundwater quality and limit exceedances	GR1
Table 17	Vegetation health monitoring	None specified
Condition 34	Compliance	AACR
Condition 35	Complaints summary	None specified
Conditions 27 and 30	Calibration information, data comparison against previous monitoring results and licence limits	None specified

37. The licence holder shall ensure that the Annual Environmental Report also contains:

(a) any relevant process, production or operational data recorded under conditions 8, 9 and 10;

(b) an assessment of the information contained within the report against previous monitoring results and licence triggers and limits;

(c) water balance data required under condition 19; and

(d) a review of the conceptual hydrogeological model for the site with an assessment of the potential impacts of TSF3 and the Clay Borrow Pit Water Storage Dam on groundwater within and outside of the premises boundary.

(e) a monthly water balance for the Clay Borrow Pit Water Storage Dam. The water balance shall as a minimum record the following:

(i) rainfall at the Premises;

(ii) volume of dewatering effluent discharged;

(iii) volume of water recovered;

(iv) volume of water used onsite for dust suppression and processing;

(v) evaporation rate;

(vi) estimate of seepage losses; and

(vii) stored water level (RL) start of the month and end of the month.

Notification

38. The licence holder shall ensure that the items listed in Table 19 are notified to the CEO in accordance with the notification requirements of the table.

Table 19: Notification requirements

Condition or table (if relevant)	Item	Notification requirement[1]	Format or form[2]
31 table 15	Breach of any limit specified in the licence	Part A: As soon as practicable but no later than 5pm of the next usual working day.	N1
		Part B: As soon as practicable	
–	Production ceasing for an unspecified period of time	As soon as practicable after the decision has been made	None Specified
–	Production recommencing	At least 28 days prior to production recommencing	None specified

Note [1]: Notification requirements in the licence shall not negate the requirement to comply with s72 of the EP Act

Note [2]: Forms are in Schedule 2

Definitions

In this licence, the terms in Table 20 have the meanings defined.

Table 20: Definitions

Term	Definition
ACN	Australian Company Number
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the department's website).
annual period	a 12 month period commencing from 1 January until 31 December in that year.
AS1726	means the Australian Standard AS1726 *Geotechnical Site Investigations.*
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.*
AS/NZS 5667.4	means the Australian Standard AS/NZS 5667.4 *Water Quality – Sampling – Guidance on sampling from lakes, natural and man-made.*
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.10 *Water quality - Sampling Guidance on sampling of waste waters*
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 *Water quality - Sampling - Guidance on sampling of groundwaters*
Assessment of Site Contamination NEPM	means the *National Environment Protection (Assessment of Site Contamination) Measure 1999.*
ASTM D638	means the ASTM international standard for *Standard Test Method for Tensile Properties of Plastics*
ASTM1238	means the ASTM international standard for *Standard Test Method for Melt Flow Rates of Thermoplastics*
ASTM D1505	means the ASTM international standard for *Standard test method for density of plastics by the density-gradient technique*
ASTM1603	means the ASTM international standard for *Standard test method for evaluating Carbon Black Content in Olefinic Materials*
ASTM D5092/D5092M-16	means the ASTM international standard for *Standard practice for design and installation of groundwater monitoring wells (Designation: ASTM D5092/D5092M-16).*
ASTM D5299/D5299M-18	means the ASTM international standard for *Decommissioning of Groundwater Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities (Designation: D5299/D5299M–18).*
books	has the same meaning given to that term under the EP Act.
Category /	categories of prescribed premises as set out in Schedule 1 of the *Environmental*

Term	Definition
categories	*Protection Regulations 1987* (WA) (EP Regulations).
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
cfu/100 mL	number of colonies counted per 100 millilitres
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
Guideline: Assessment and management of contaminated sites	means the document titled *Assessment and management of contaminated sites, Contaminated sites guidelines* (Department of Environment Regulation, December 2014), as amended from time to time.
HDPE	High Density Poly Ethylene
kL	kilolitre
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
m	metre
mbgl	Metres below ground level
mg/L	milligrams per litre
m^3	cubic metre
m^3/day	cubic meter per day
m^3/h	cubic meter per hour
mm	millimetre

Term	Definition
µS/cm	microsiemens per centimetre
m/s	metres per second
N/A	Not applicable
NAF	non-acid forming
NATA	National Association of Testing Authorities
NATA accreditation	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis.
quarterly period	means the 4 inclusive periods from 1 April to 30 June, 1 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
QA/QC	quality assurance/quality control
RL	reduced level
suitably qualified geotechnical	means a person who: (a) holds a Bachelor of Engineering recognised by the Institute of Engineers; and (b) has a minimum of five years of experience working in the area of geotechnical engineering or is otherwise approved by the CEO to act in this capacity.
suitably qualified surveyor	means a surveyor licenced through the Land Surveyors Licensing Board of Western Australia.
SWL	standing water level
TSF1	Tailings storage facility 1
TSF2	Tailings storage facility 2
TSF3	Tailings storage facility 3
waste	has the same meaning given to that term under the EP Act.
WWTP	wastewater treatment plant

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).

M59/3, M59/90, M59/195, M59/227, M59/361, M59/362, G59/19-23, G59/24, L59/22, L59/26 and L59/41.

The premises is shown in the map below. The red line depicts the premises boundary.

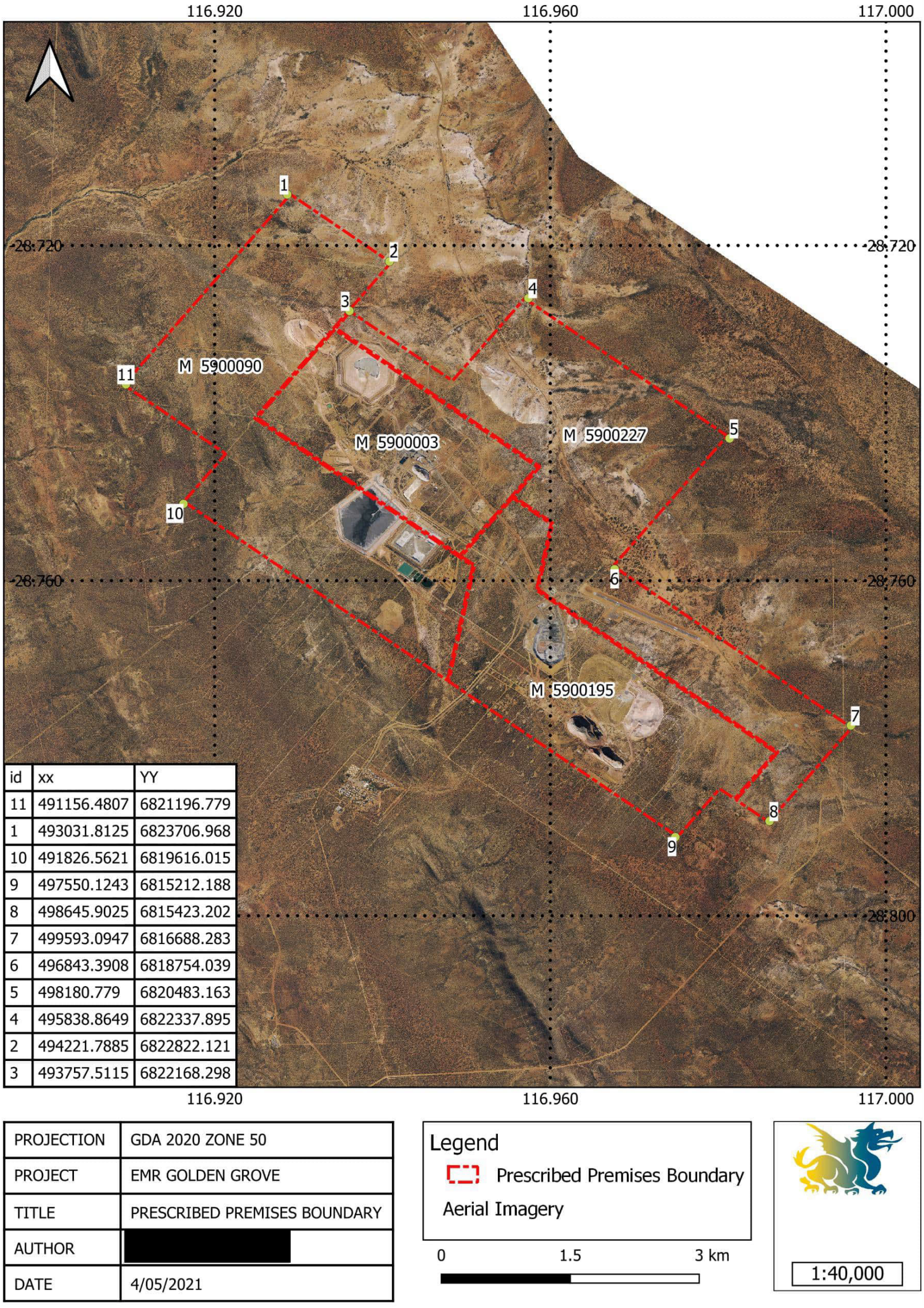


Figure 1: Map of the boundary of the prescribed premises

Site plan

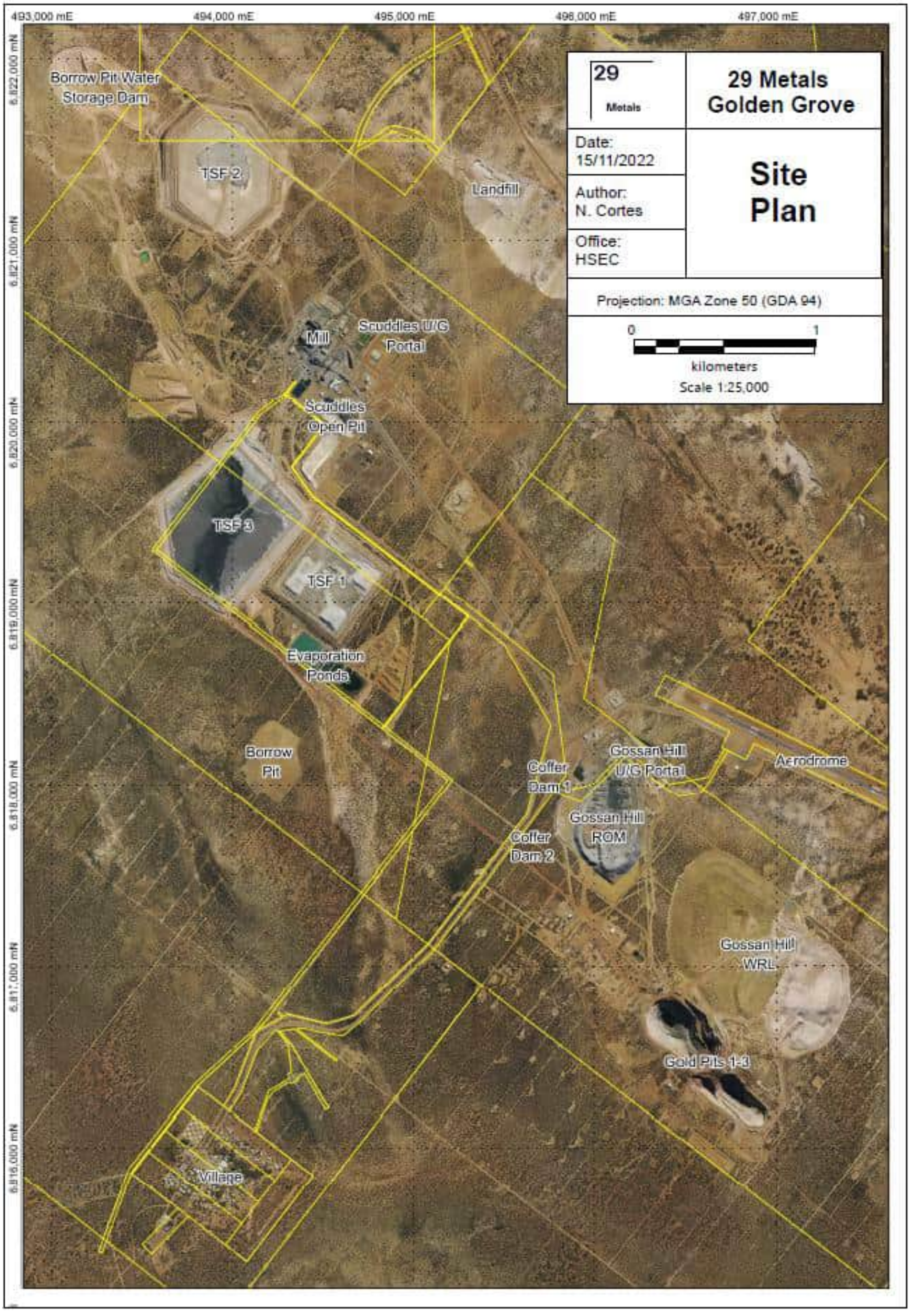


Figure 2 – Site plan

Map of emission points and monitoring locations

The locations of the emission points defined in Table 9 and Table 11, and the monitoring points defined in Table 12 and Table 13 are shown in the maps below.

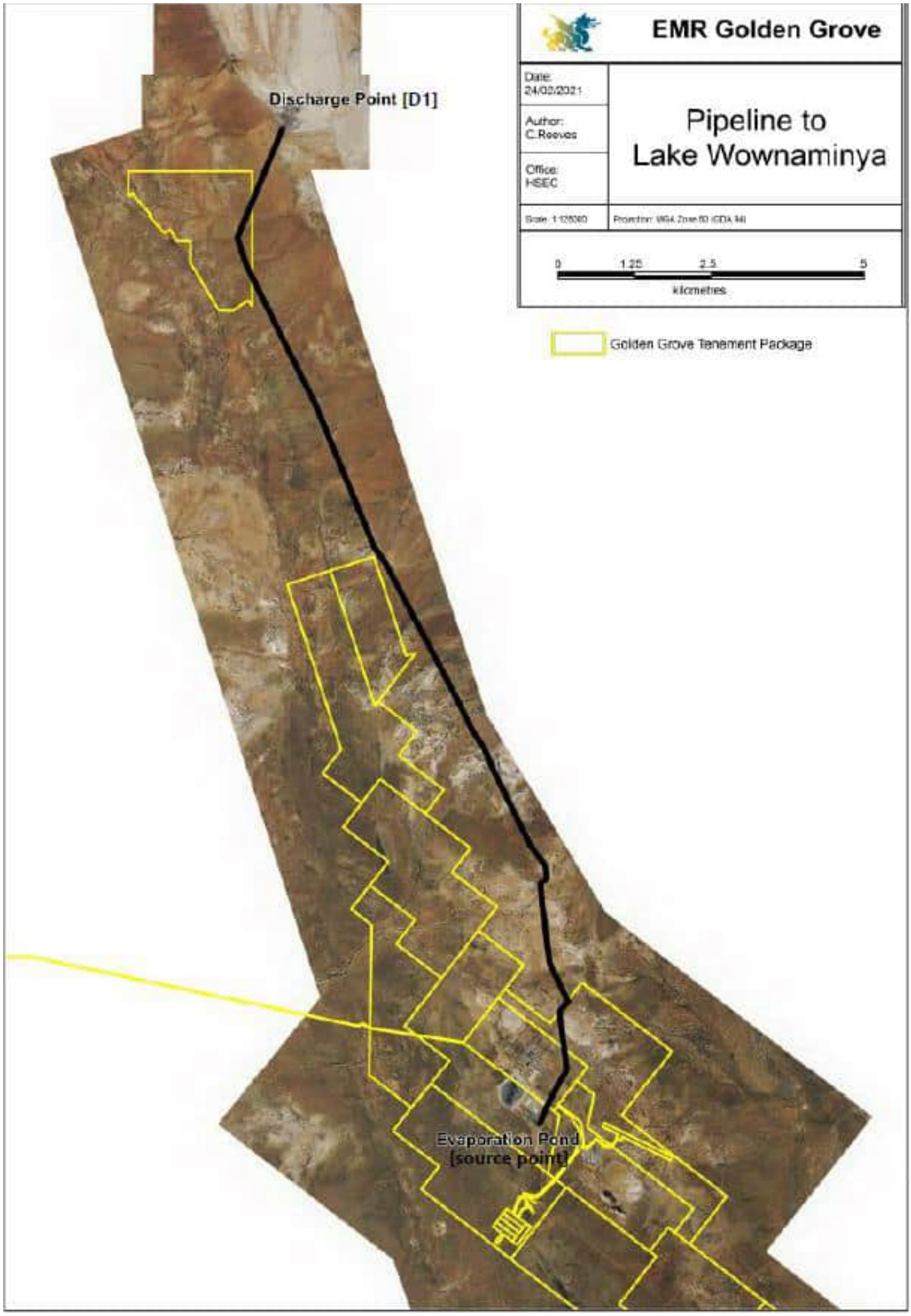


Figure 3 – Emission point to surface water (D1). Monitoring location D1

Figure 4 – Emission point to land (L1). Monitoring location L1

Figure 4A – Emission point to land (L2). Monitoring location L2

Map of ambient groundwater monitoring locations

The locations of the ambient groundwater monitoring points defined in Table 15 are shown below.

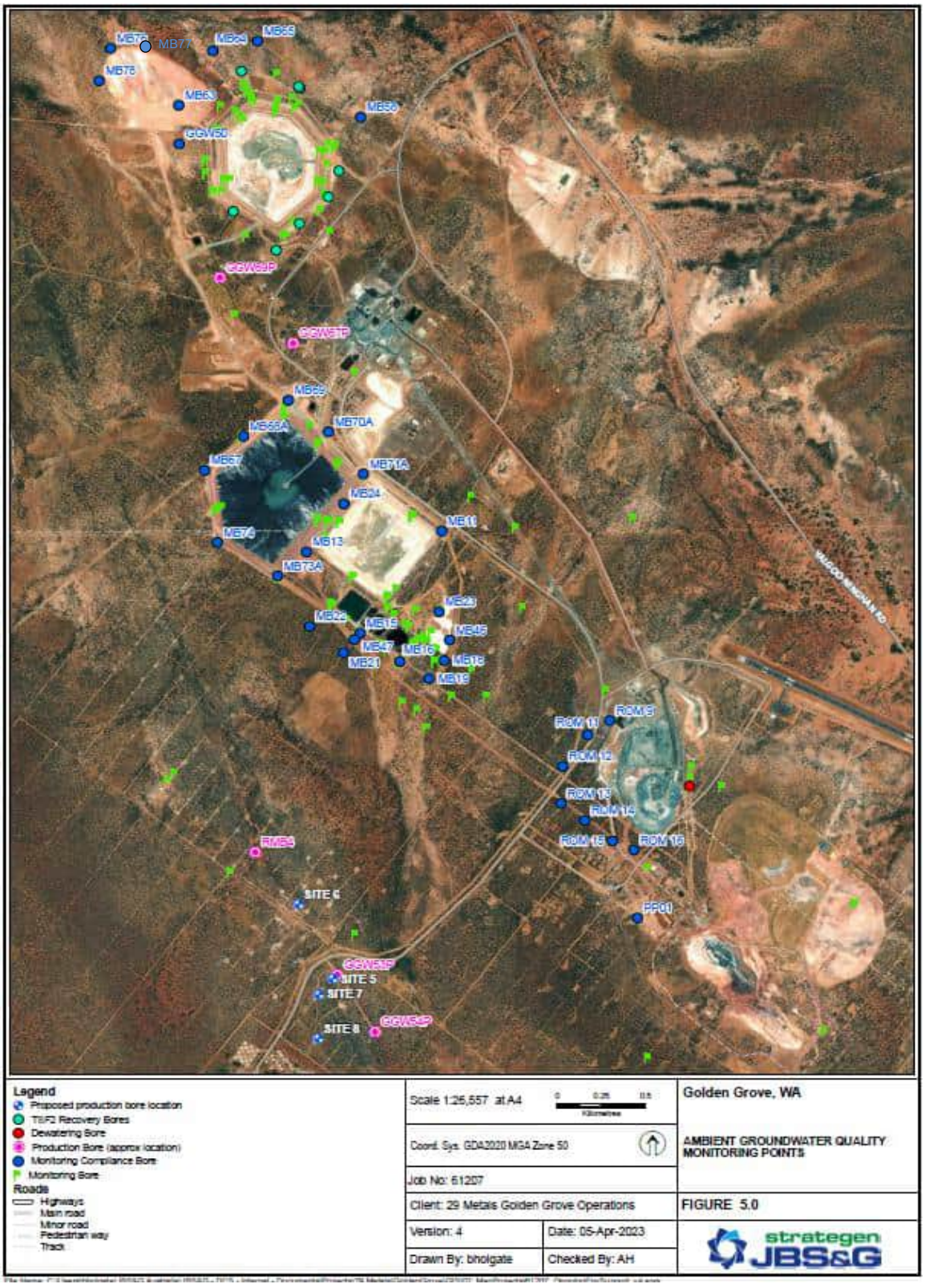


Figure 5 – Ambient groundwater quality monitoring points

Figure 6 - Locations of existing ROM seepage monitoring wells

Figure 7 - Locations of proposed ROM monitoring bores

Figure 8 – Ambient groundwater quality monitoring point – paste plant facility and associated infrastructure

Map of containment infrastructure locations

The location of the containment infrastructure areas defined in Table 6 are shown below.

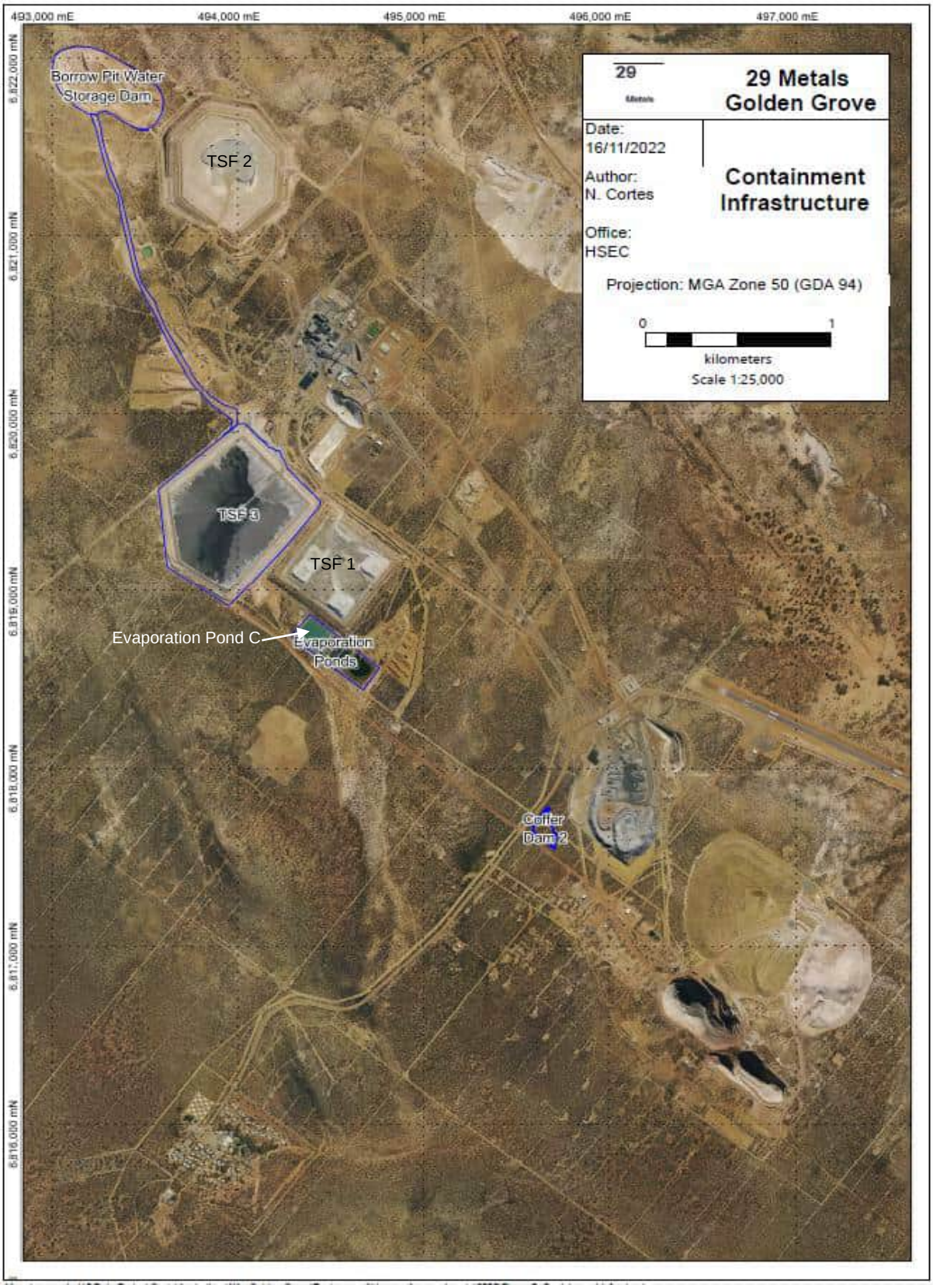


Figure 9 – Containment infrastructure

Figure 10 – Containment infrastructure – concrete sump (CW1)

Landfill area maps

The location of the landfill areas referred to in Table 4 are shown below.

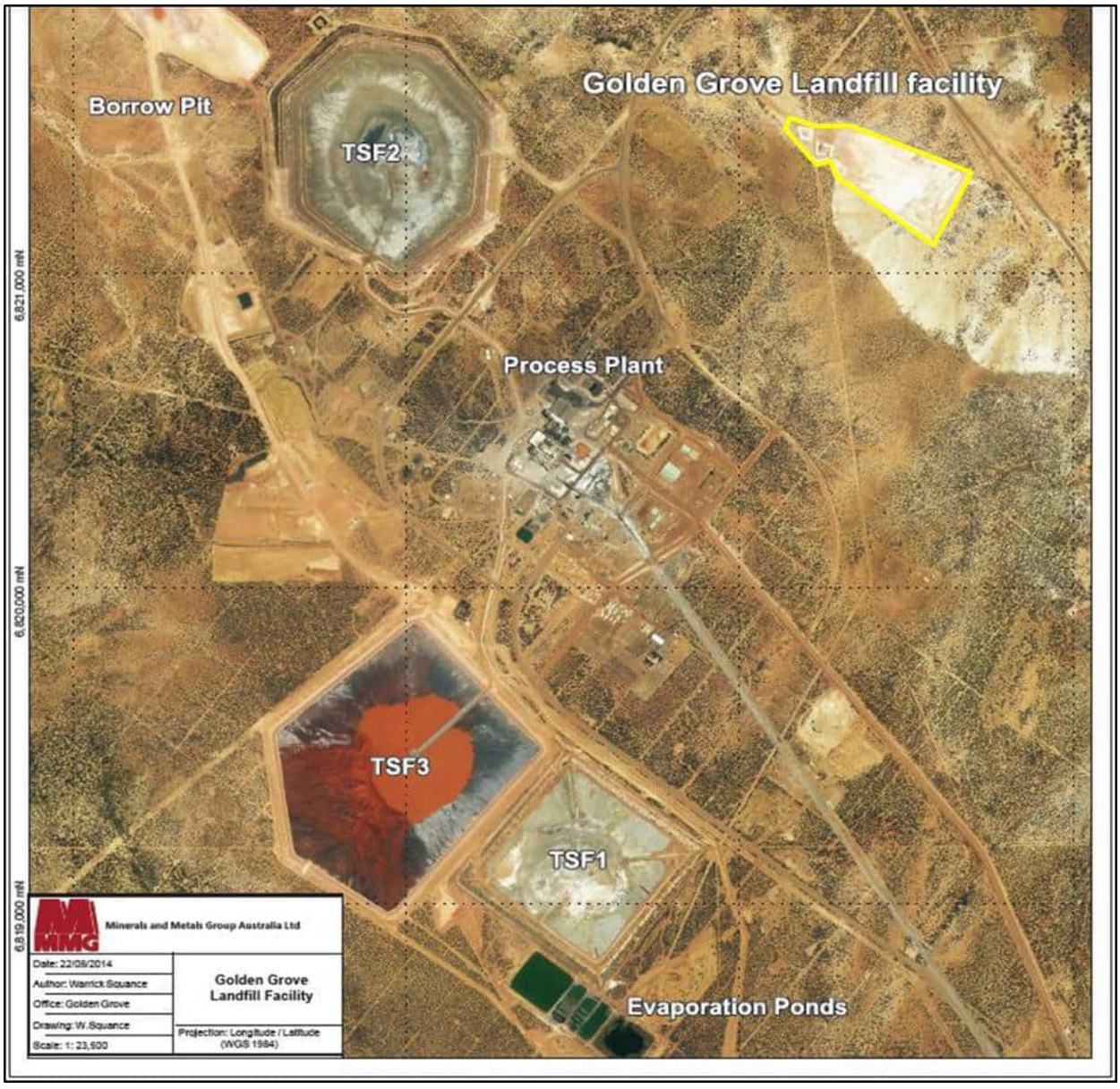


Figure 11– Landfill area map

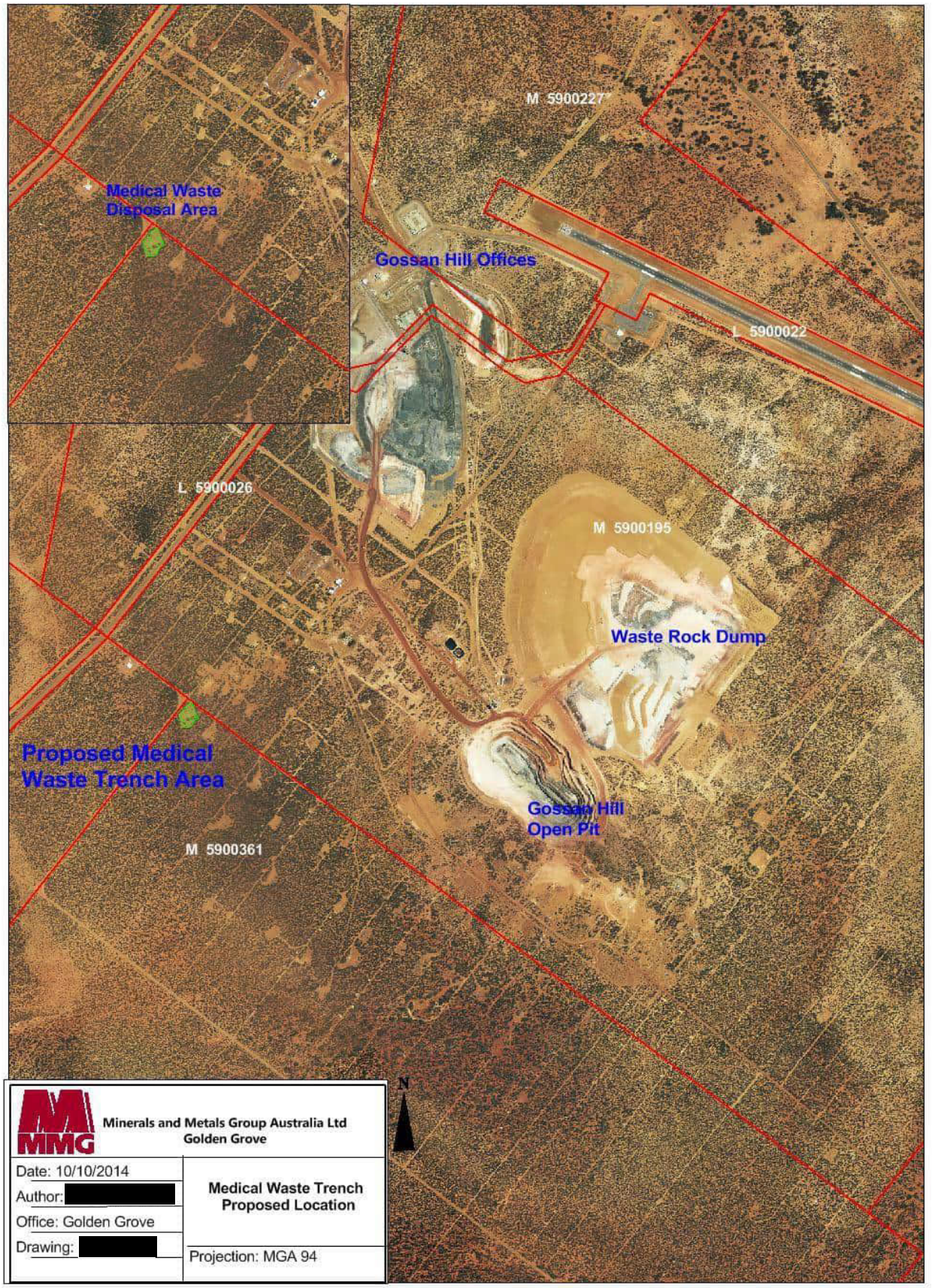


Figure 12 – Medical waste trench location

Pipeline arrangements

Pipeline arrangements are shown below.

Figure 13 – TSF1 new pipeline corridor

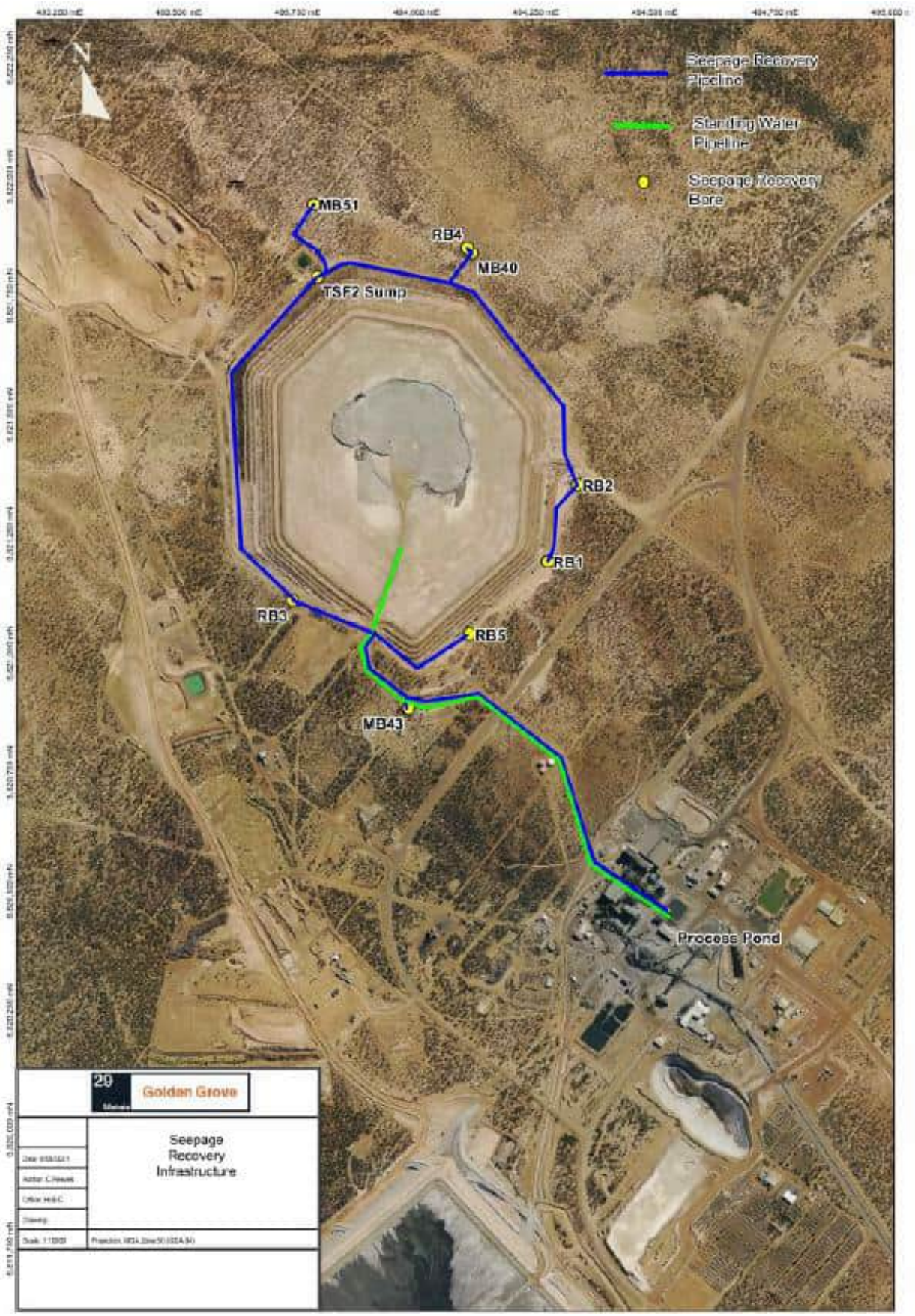


Figure 14 – Existing TSF2 seepage recovery infrastructure

Paste plant facility and associated infrastructure map

The location of the paste plant and associated infrastructure (including the reclaimed tailings storage pad and storage pond) are shown in the map below (Figure).

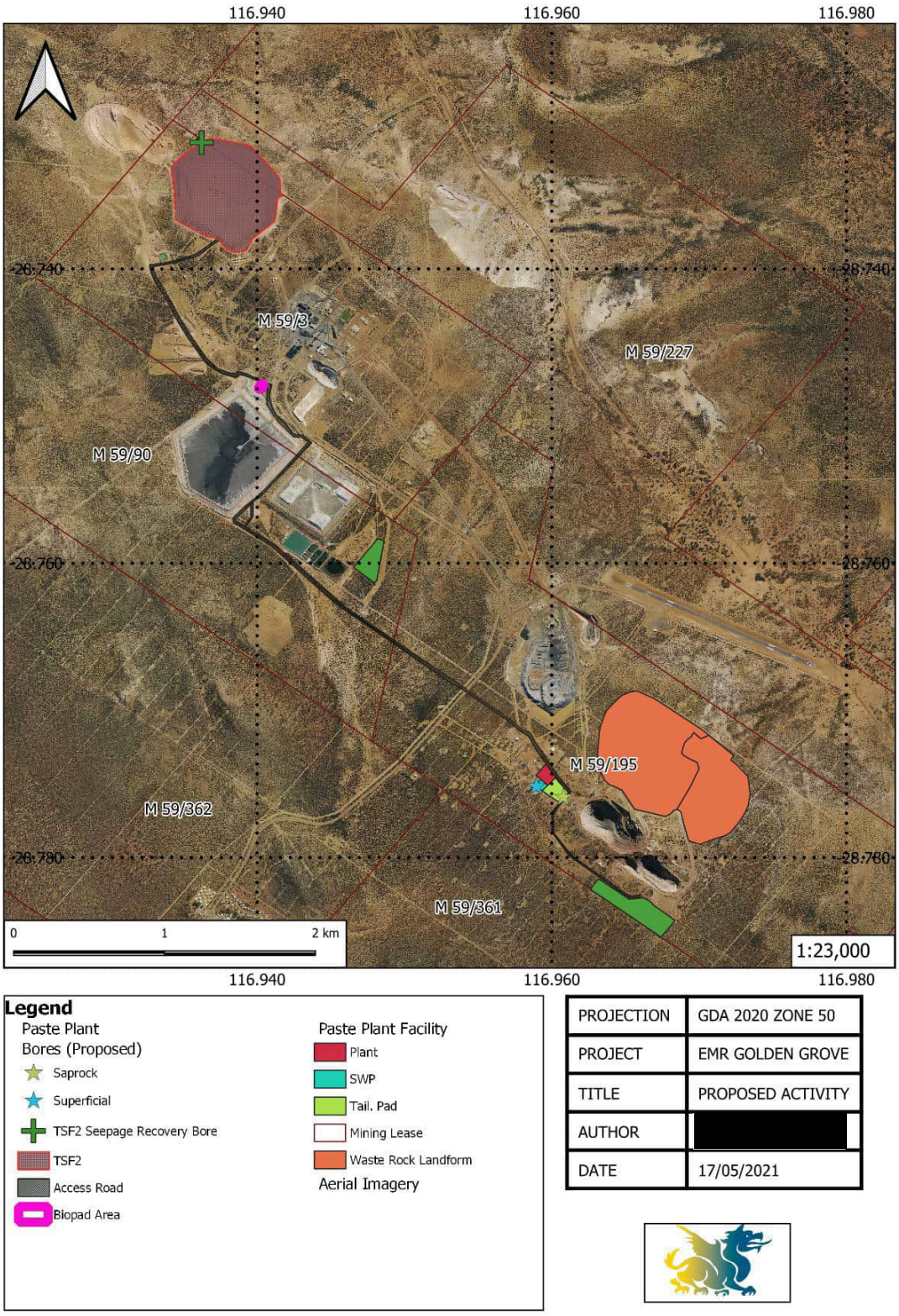


Figure 15 – Paste plant facility and associated infrastructure

Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the licence. They can be requested in an electronic format.

Licence:	L9423/2024/1	Licence Holder:	Golden Grove Operations Pty Ltd
Form:	WR1	Period:	
Name:	Monitoring of point source emissions to surface water		

Form WR1: Monitoring of point source emissions to surface water

Emission point	Parameter	Limit	Result	Sample date & times
D1	Volumetric flow rate	Not specified		
	pH[1]	≥ 6.0 ≤ 9.0		
	Electrical Conductivity	N/A		
	Total aluminium	N/A		
	Arsenic	<0.5 mg/L		
	Cadmium	<0.01 mg/L		
	Chromium (Total)	<1.0 mg/L		
	Chromium III	N/A		
	Chromium VI	N/A		
	Copper	<0.4 mg/L		
	Total iron	N/A		
	Lead	<0.1 mg/L		
	Manganese	N/A		
	Mercury	-		

	Nickel	N/A		
	Selenium	<0.02 mg/L		
	Total Nitrogen (as N)	N/A		
	Nitrate (as NO_3)	N/A		
	Total phosphorus (as P)	N/A		
	Sulphate	<3800 mg/L		
	TRH	<15 mg/L		
	Total suspended solids	<100 mg/L		
	Total dissolved solids	N/A		
	Total acidity ($CaCO_3$)	<40 mg/L		
	Zinc	<20 mg/L		

Signed on behalf of Golden Grove Operations Pty Ltd: …….. Date: …….

Licence: L9423/2024/1 Licence Holder: Golden Grove Operations Pty Ltd

Form: LR1 Period:

Name: Monitoring of emissions to land

Form LR1: Monitoring of emissions to land					
Emission point	**Parameter**	**Result[1]**	**Averaging period**	**Method**	**Sample date & times**
L1	Volumetric flow rate	m^3/day	-	-	
	pH	mg/L	Spot sample	AS/NZS 5667.10	
	Biochemical oxygen demand	mg/L			
	Total suspended solids	pH units			
	Total nitrogen	mg/L			
	Total phosphorus	mg/L			
	E.coli	cfu/100 mL			

Signed on behalf of Golden Grove Operations Pty Ltd: …….. Date: …….

Licence: L9423/2024/1 Licence Holder: Golden Grove Operations Pty Ltd

Form: LR2 Period:

Name: Monitoring of emissions to land

Form LR2: Monitoring of emissions to land					
Emission point	Parameter	Result[1]	Averaging period	Method	Sample date & times
L2	Volumetric flow rate	m^3/day	-	-	
	pH[1]		Spot sample	AS/NZS 5667.10	
	Electrical Conductivity (EC)				
	Total aluminium				
	Arsenic				
	Cadmium				
	Chromium				
	Copper				
	Total iron				
	Lead				
	Manganese				
	Mercury				

	Nickel				
	Total Nitrogen (as N)				
	Nitrate (as NO_3)				
	Total Phosphorus (as P)				
	Selenium				
	Sulphate				
	TRH				
	Total suspended solids				
	Total dissolved solids				
	Total acidity ($CaCO_3$)				
	Zinc				

Signed on behalf of Golden Grove Operations Pty Ltd: …….. Date: ……..

Department of Water and Environmental Regulation

Licence: L9423/2024/1 Licence Holder: Golden Grove Operations Pty Ltd

Form: GR1 Period:

Name: Monitoring of groundwater

Emission point	Parameter	Limit	Result	Averaging period	Method	Sample date & times
MB11, MB13, MB16 MB18, MB19, MB21 MB22, MB23, MB24 MB46, MB47, GGW50, MB58, MB63, MB64, MB65, MB67,MB68A, MB69, MB70A, MB71A, MB73A, MB74, MB76, MB77 and MB78 PP01	Arsenic	0.5 mg/L			AS/NZX 5667.11	
	Cadmium	0.01 mg/L				
	Chromium	1.0 mg/L				
	Copper	0.4 mg/L				
	Lead	0.1 mg/L				
	Mercury	-				
	Total nitrogen (as N)	-				
	Nitrate (as NO_3)	-				
	pH[1]	≥ 6.0 ≤ 9.0				
	Selenium	0.02 mg/L				
	Sulphate	1000 mg/L				
	Total dissolved solids	5000 mg/L				
	Total acidity ($CaCO_3$)	40 mg/L				
	Zinc	20 mg/L				

Signed on behalf of Golden Grove Operations Pty Ltd: …….. Date: …….

Department of Water and Environmental Regulation

Licence: L9423/2024/1 Licence Holder: Golden Grove Operations Pty Ltd

Form: GR2 Period:

Name: Monitoring of groundwater

Emission point	Parameter	Limit	Result	Averaging period	Method	Sample date & times
ROM11, ROM12, ROM13, ROM14, ROM15 AND ROM16	Arsenic	0.5 mg/L			AS/NZX 5667.11	
	Cadmium	0.01 mg/L				
	Chromium	1.0 mg/L				
	Copper	0.4 mg/L				
	Lead	0.1 mg/L				
	Mercury	-				
	Total nitrogen (as N)	-				
	Nitrate (as NO_3)	-				
	pH[1]	≥ 6.0 ≤ 9.0				
	Selenium	0.02 mg/L				
	Sulphate	3,000 mg/L				
	Total dissolved solids	5,000 mg/L				
	Total acidity ($CaCO_3$)	40 mg/L				
	Zinc	20 mg/L				

(continued over page)

Emission point	Parameter	Trigger level	Result	Averaging period	Method	Sample date & times
ROM9	Arsenic	0.5 mg/L			AS/NZX 5667.11	
	Cadmium	-				
	Chromium	1.0 mg/L				
	Copper	0.4 mg/L				
	Lead	0.1 mg/L				
	Mercury	-				
	Total nitrogen (as N)	-				
	Nitrate (as NO_3)	-				
	pH[1]	≥ 6.0 ≤ 9.0				
	Selenium	0.02 mg/L				
	Sulphate	3,000 mg/L				
	Total dissolved solids	-				
	Total acidity ($CaCO_3$)	40 mg/L				
	Zinc	20 mg/L				

Signed on behalf of Golden Grove Operations Pty Ltd: …….. Date: …….

Government of **Western Australia**
Department of **Water and Environmental Regulation**

Licence: Licence holder:

Form: N1 Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence number	
Name of operator	
Location of premises	
Time and date of the detection	

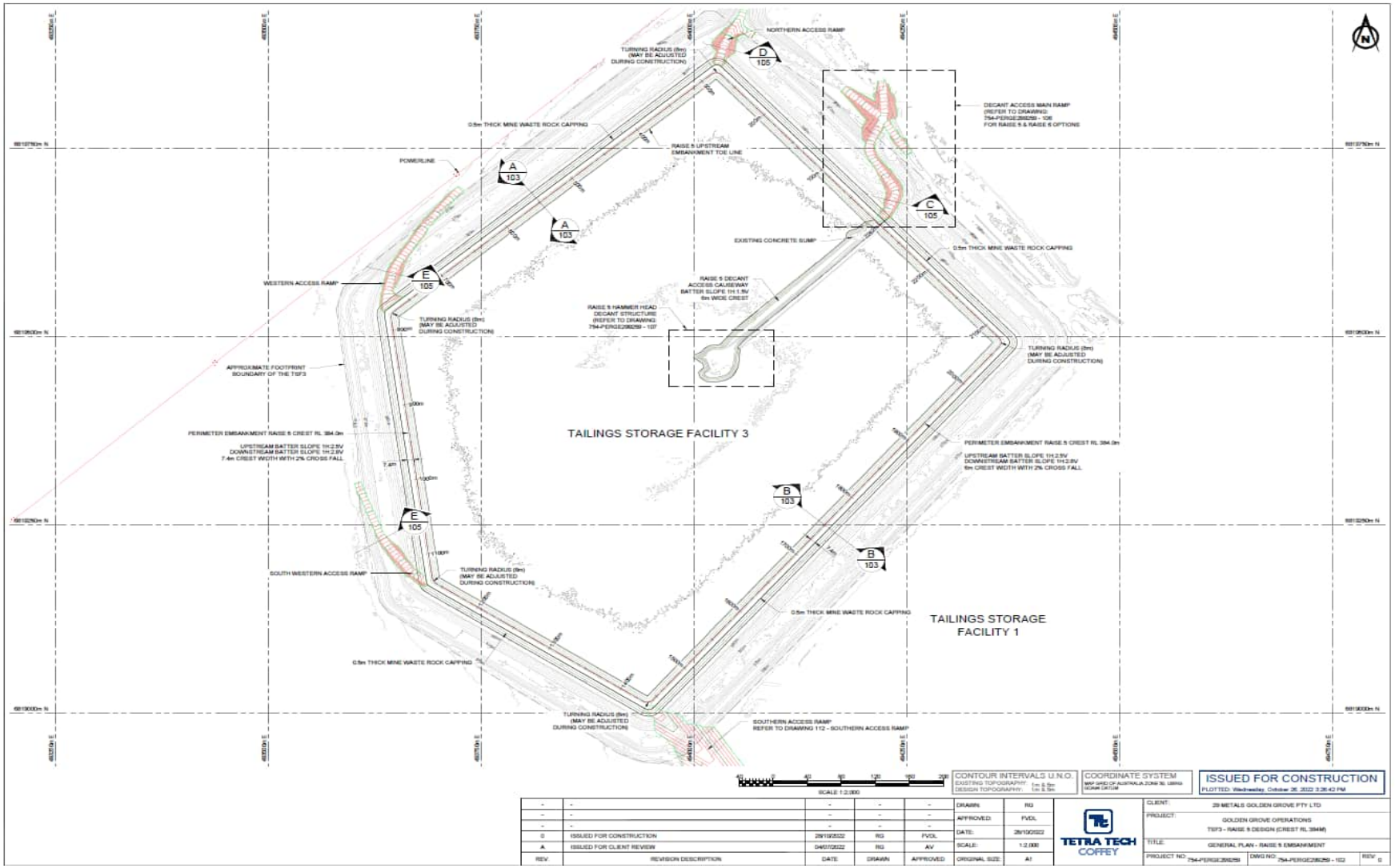
Notification requirements for the breach of a limit	
Emission point reference/source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

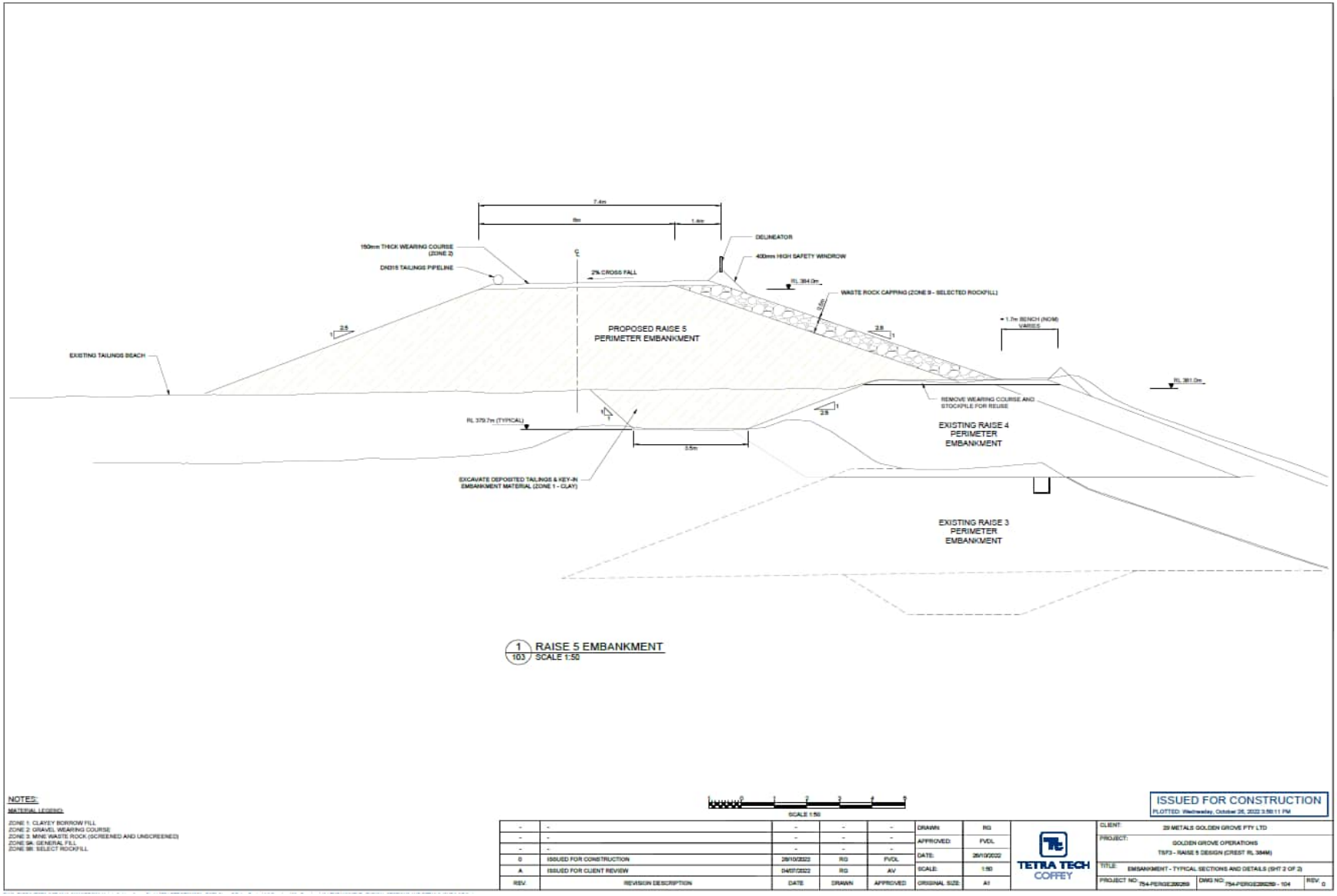
Part B

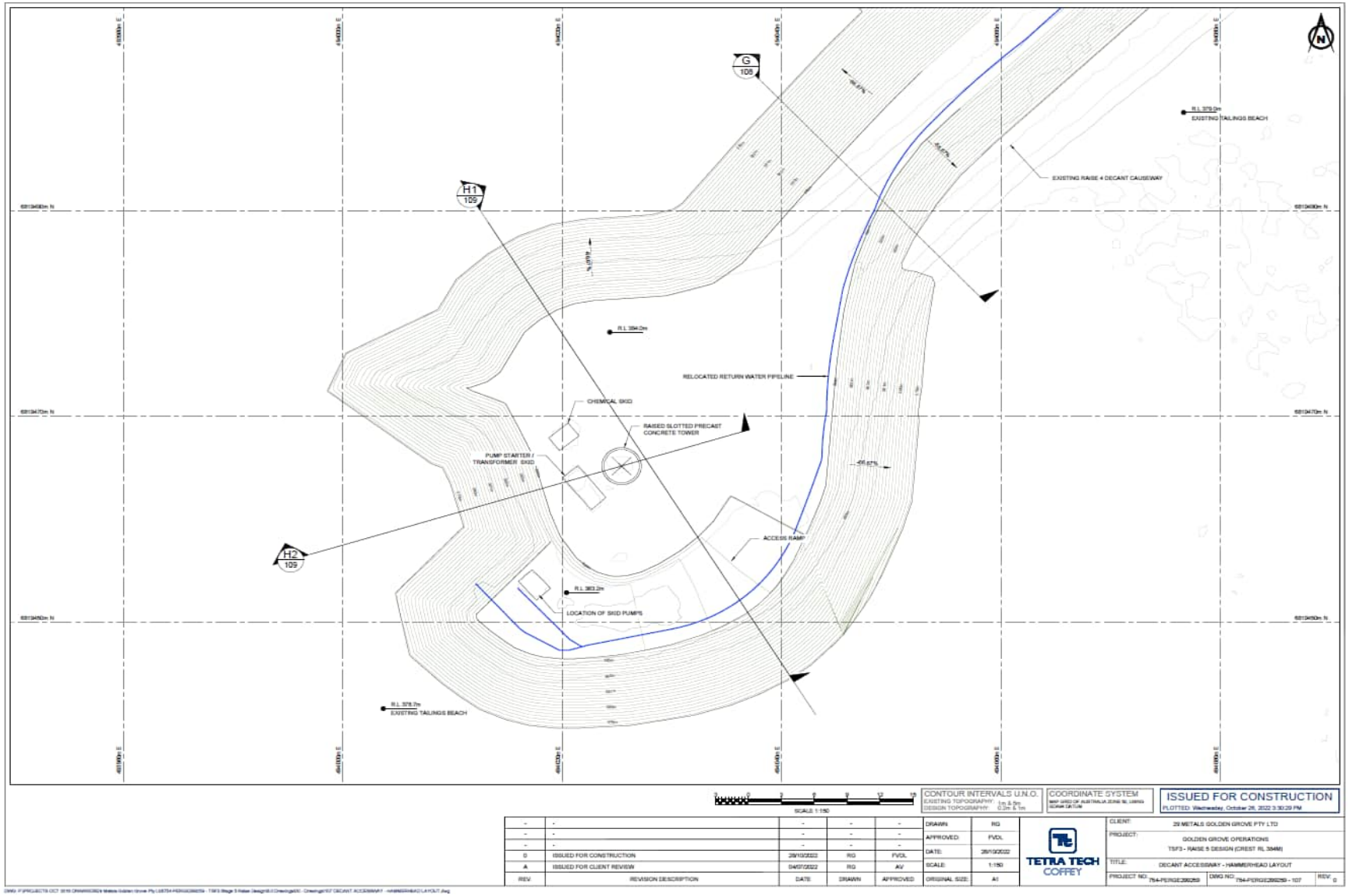
Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

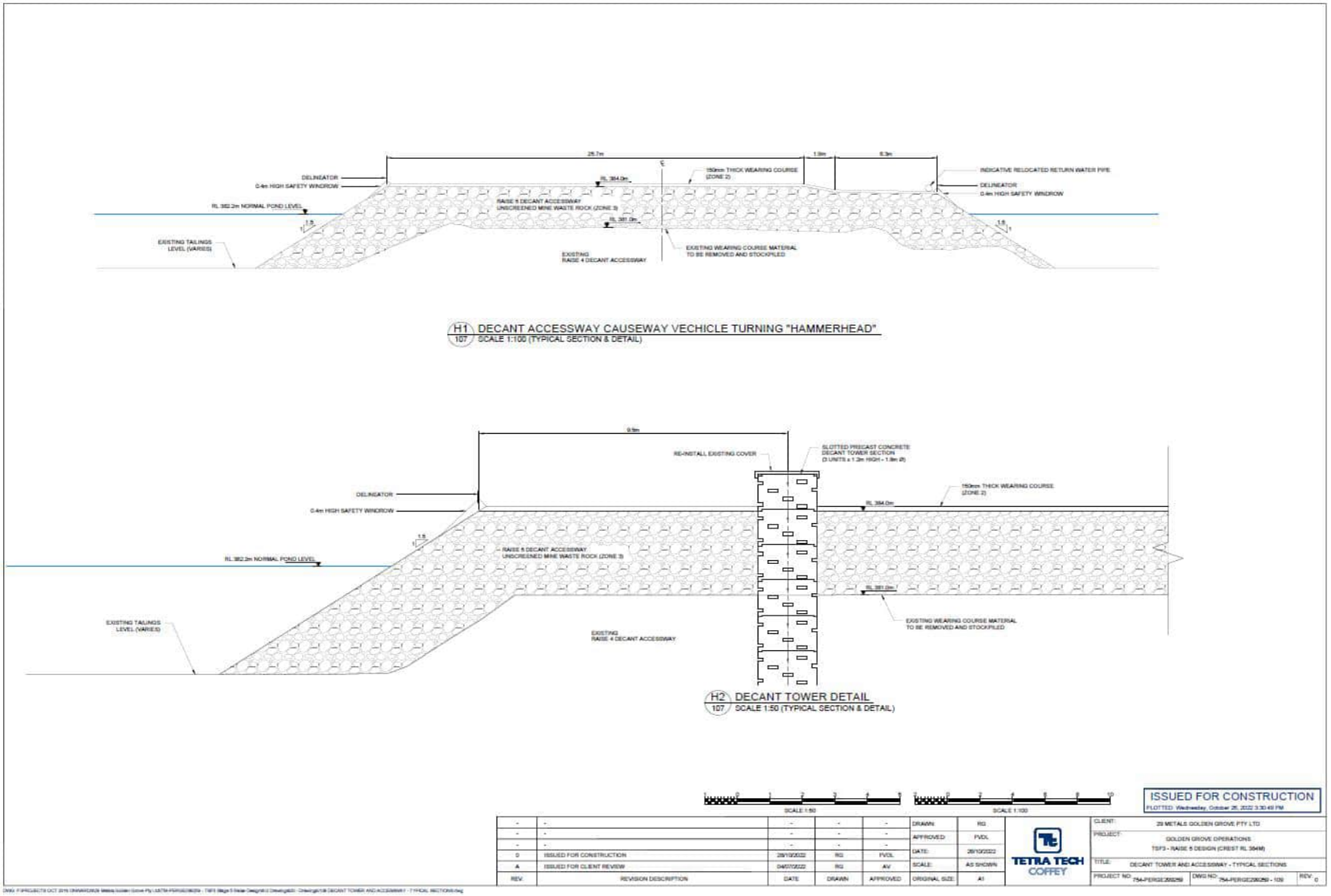
Name	
Post	
Signature on behalf of licence holder	
Date	

Schedule 3: TSF3 Raise 5 design upgrade drawings and specifications

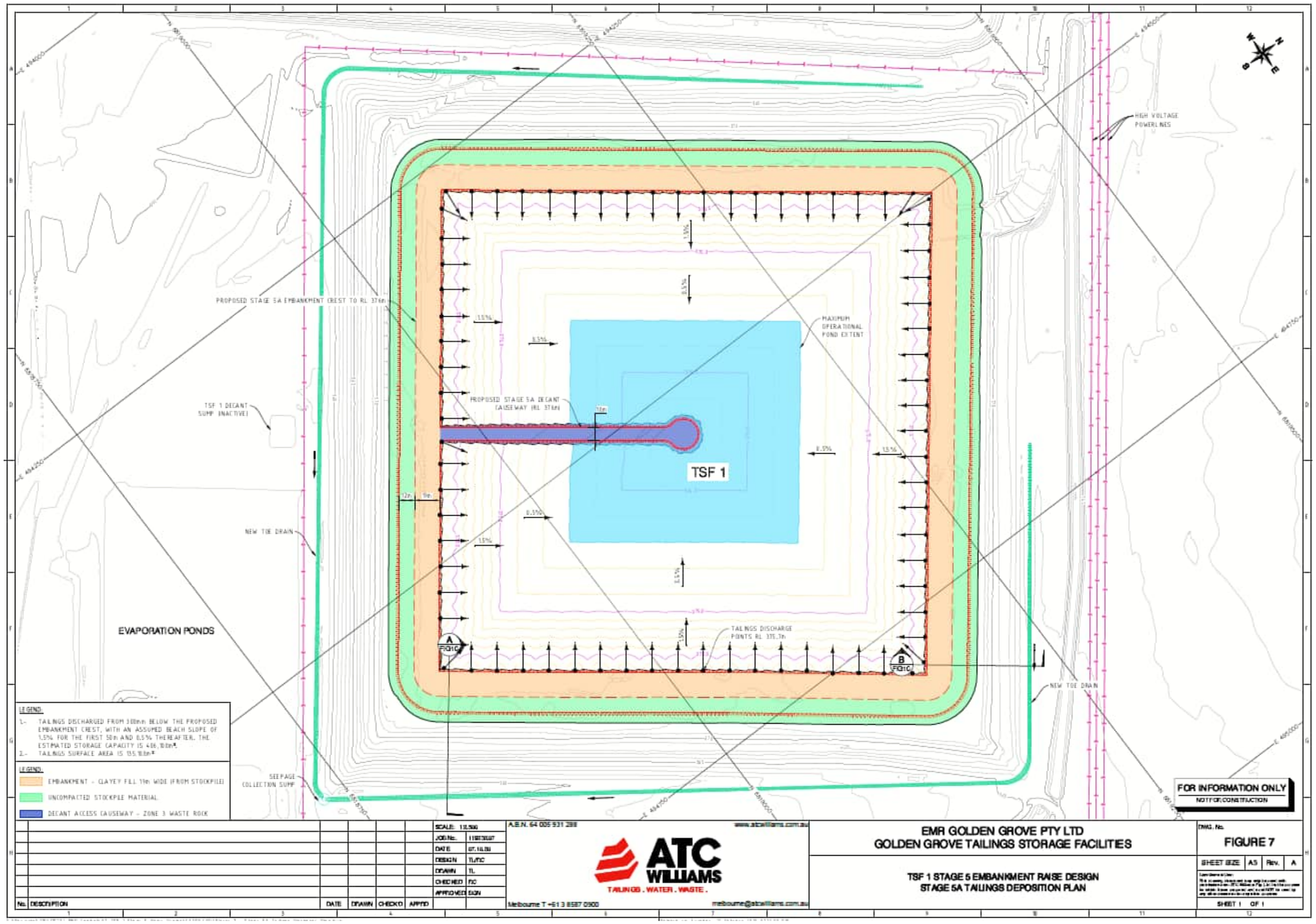


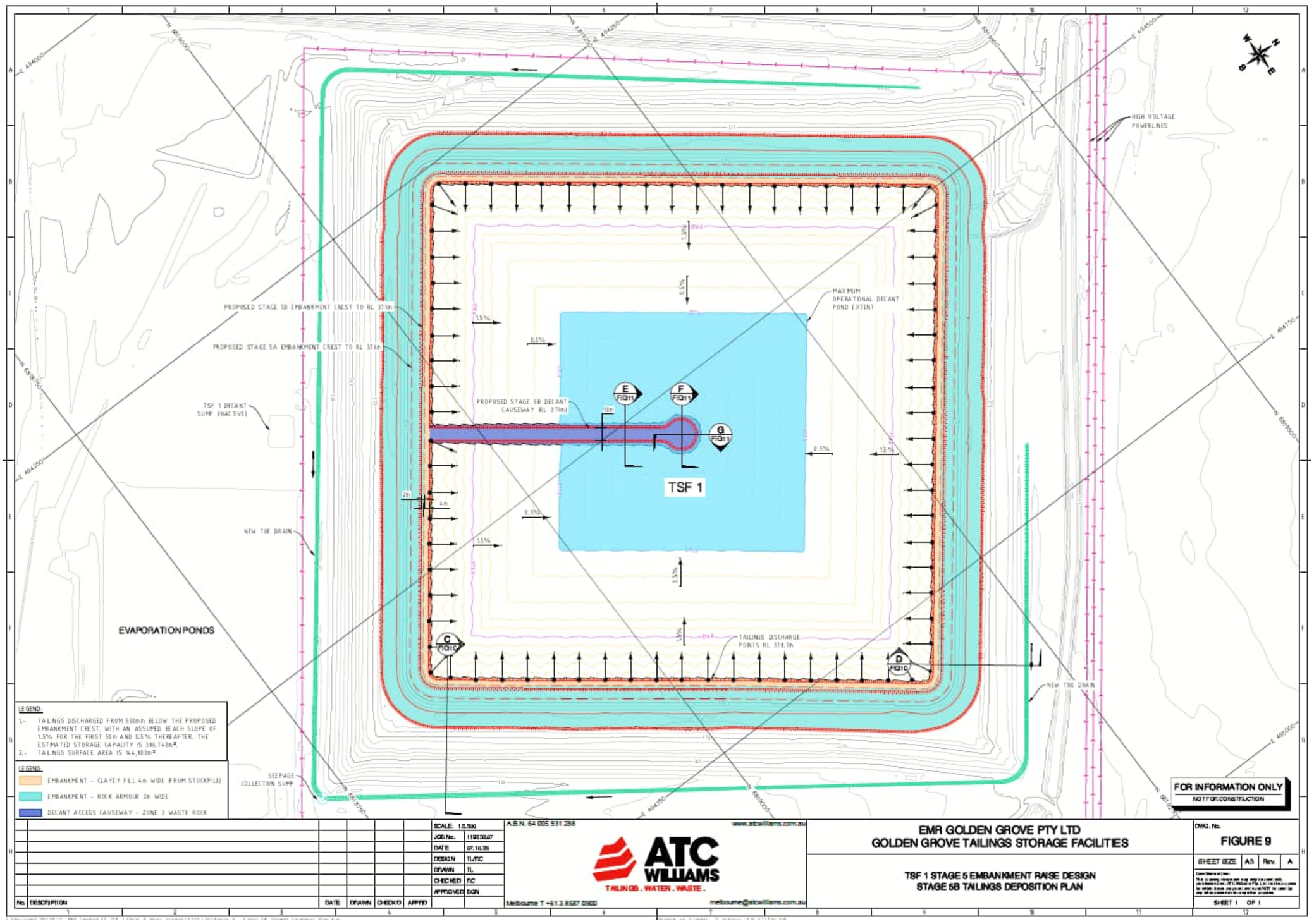

7.4m
8m
1.4m
DELINEATOR
400mm HIGH SAFETY WINDROW
150mm THICK WEARING COURSE (ZONE 2)
DN315 TAILINGS PIPELINE
2% CROSS FALL
RL 384.0m
WASTE ROCK CAPPING (ZONE 9 - SELECTED ROCKFILL)
3.6m
2.5
1
2.5
1
1.7m BENCH (NOM) VARIES
PROPOSED RAISE 5 PERIMETER EMBANKMENT
EXISTING TAILINGS BEACH
RL 381.0m
REMOVE WEARING COURSE AND STOCKPILE FOR REUSE
1
2.5
RL 379.7m (TYPICAL)
3.5m
EXISTING RAISE 4 PERIMETER EMBANKMENT
EXCAVATE DEPOSITED TAILINGS & KEY-IN EMBANKMENT MATERIAL (ZONE 1 - CLAY)
EXISTING RAISE 3 PERIMETER EMBANKMENT
1
103
RAISE 5 EMBANKMENT
SCALE 1:50
NOTES:
MATERIAL LEGEND:
ZONE 1: CLAYEY BORROW FILL
ZONE 2: GRAVEL WEARING COURSE
ZONE 3: MINE WASTE ROCK (SCREENED AND UNSCREENED)
ZONE 9A: GENERAL FILL
ZONE 9B: SELECT ROCKFILL
SCALE 1:50
ISSUED FOR CONSTRUCTION
PLOTTED: Wednesday, October 26, 2022 3:50:11 PM
DRAWN: RG
APPROVED: FVDL
DATE: 26/10/2022
SCALE: 1:50
ORIGINAL SIZE: A1
- - - - - -
- - - - - -
- - - - - -
0 ISSUED FOR CONSTRUCTION 26/10/2022 RG FVDL
A ISSUED FOR CLIENT REVIEW 04/07/2022 RG AV
REV. REVISION DESCRIPTION DATE DRAWN APPROVED
TETRA TECH COFFEY
CLIENT: 29 METALS GOLDEN GROVE PTY LTD
PROJECT: GOLDEN GROVE OPERATIONS
TSF3 - RAISE 5 DESIGN (CREST RL 384M)
TITLE: EMBANKMENT - TYPICAL SECTIONS AND DETAILS (SHT 2 OF 2)
PROJECT NO: 754-PERGE280259
DWG NO: 754-PERGE280259 - 104
REV: 0

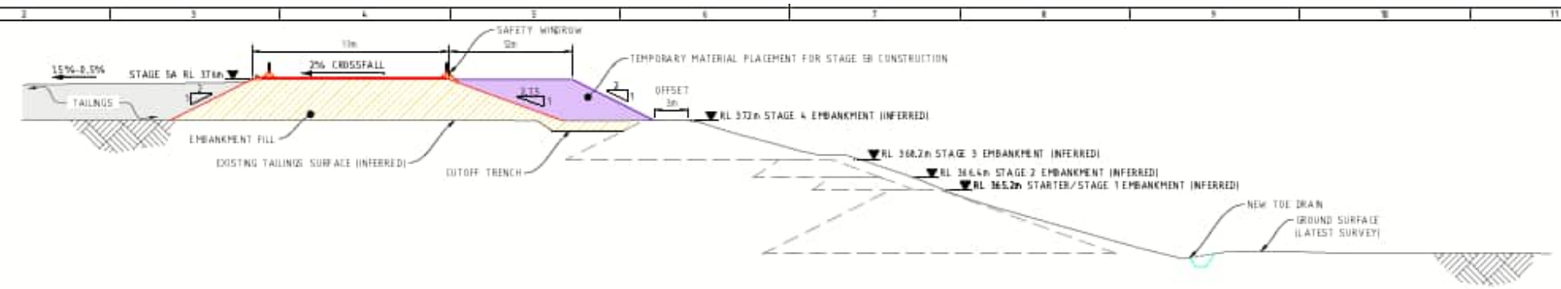

G
108
H1
109
H2
109
R.L. 379.0m
EXISTING TAILINGS BEACH
EXISTING RAISE 4 DECANT CAUSEWAY
R.L. 384.0m
RELOCATED RETURN WATER PIPELINE
CHEMICAL SKID
RAISED SLOTTED PRECAST CONCRETE TOWER
PUMP STARTER / TRANSFORMER SKID
ACCESS RAMP
R.L. 383.2m
LOCATION OF SKID PUMPS
R.L. 378.7m
EXISTING TAILINGS BEACH
SCALE 1:150
CONTOUR INTERVALS U.N.O.
EXISTING TOPOGRAPHY: 1m & 5m
DESIGN TOPOGRAPHY: 0.2m & 1m
COORDINATE SYSTEM
ISSUED FOR CONSTRUCTION
PLOTTED: Wednesday, October 26, 2022 3:30:29 PM
REV
REVISION DESCRIPTION
DATE
DRAWN
APPROVED
0
ISSUED FOR CONSTRUCTION
26/10/2022
RG
FVDL
A
ISSUED FOR CLIENT REVIEW
04/07/2022
RG
AV
DRAWN
RG
APPROVED
FVDL
DATE
26/10/2022
SCALE
1:150
ORIGINAL SIZE
A1
TETRA TECH COFFEY
CLIENT:
29 METALS GOLDEN GROVE PTY LTD
PROJECT:
GOLDEN GROVE OPERATIONS
TSF3 - RAISE 5 DESIGN (CREST RL 394M)
TITLE:
DECANT ACCESSWAY - HAMMERHEAD LAYOUT
PROJECT NO:
754-PERGE266259
DWG NO:
754-PERGE266259 - 107
REV:
0


DELINEATOR
0.4m HIGH SAFETY WINDROW
RL 382.2m NORMAL POND LEVEL
EXISTING TAILINGS LEVEL (VARIES)
RAISE 5 DECANT ACCESSWAY
UNSCREENED MINE WASTE ROCK (ZONE 3)
150mm THICK WEARING COURSE (ZONE 2)
INDICATIVE RELOCATED RETURN WATER PIPE
EXISTING WEARING COURSE MATERIAL TO BE REMOVED AND STOCKPILED
EXISTING RAISE 4 DECANT ACCESSWAY
H1 DECANT ACCESSWAY CAUSEWAY VECHICLE TURNING "HAMMERHEAD"
107 SCALE 1:100 (TYPICAL SECTION & DETAIL)
RE-INSTALL EXISTING COVER
SLOTTED PRECAST CONCRETE DECANT TOWER SECTION
H2 DECANT TOWER DETAIL
107 SCALE 1:50 (TYPICAL SECTION & DETAIL)
ISSUED FOR CONSTRUCTION
TETRA TECH COFFEY
CLIENT: 29 METALS GOLDEN GROVE PTY LTD
PROJECT: GOLDEN GROVE OPERATIONS
TSF3 - RAISE 5 DESIGN (CREST RL 394M)
TITLE: DECANT TOWER AND ACCESSWAY - TYPICAL SECTIONS

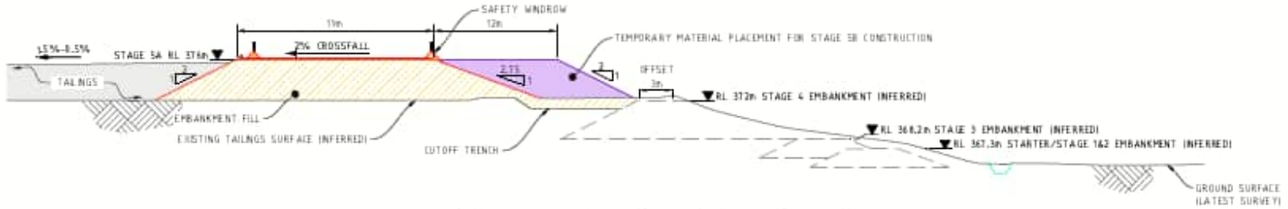
Schedule 4: TSF1 Raise 5 design drawings



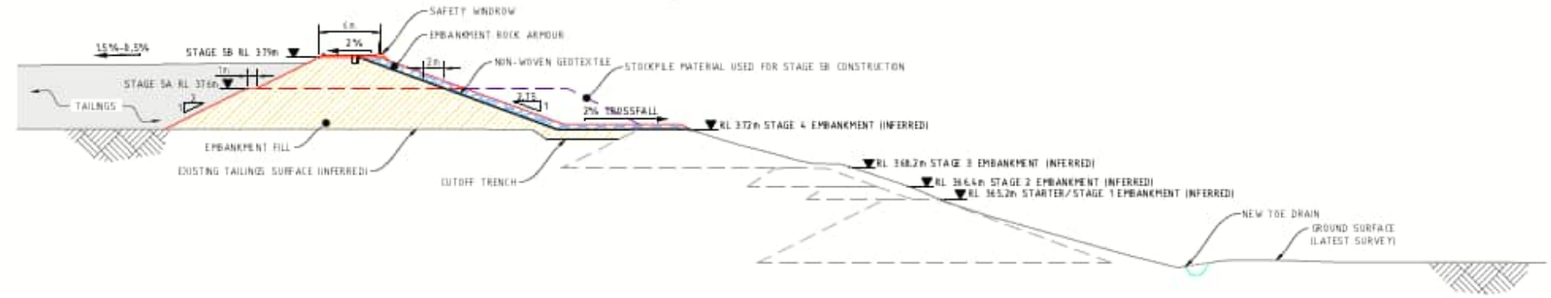

HIGH VOLTAGE POWERLINES
PROPOSED STAGE 5B EMBANKMENT CREST TO RL 379m
PROPOSED STAGE 5A EMBANKMENT CREST TO RL 376m
MAXIMUM OPERATIONAL DECANT POND EXTENT
TSF 1 DECANT SUMP (INACTIVE)
PROPOSED STAGE 5B DECANT CAUSEWAY (RL 379m)
TSF 1
NEW TOE DRAIN
EVAPORATION PONDS
TAILINGS DISCHARGE POINTS RL 378.7m
SEEPAGE COLLECTION SUMP
LEGEND:
1.- TAILINGS DISCHARGED FROM 500m BELOW THE PROPOSED EMBANKMENT CREST, WITH AN ASSUMED BEACH SLOPE OF 1.5% FOR THE FIRST 50m AND 0.5% THEREAFTER. THE ESTIMATED STORAGE CAPACITY IS 386,740m³.
2.- TAILINGS SURFACE AREA IS 144,800m².
LEGEND:
EMBANKMENT - CLAYEY FILL 4m WIDE (FROM STOCKPILE)
EMBANKMENT - ROCK ARMOUR 2m WIDE
DECANT ACCESS CAUSEWAY - ZONE 3 WASTE ROCK
FOR INFORMATION ONLY
NOT FOR CONSTRUCTION
SCALE: 1:5,500
JOB No.: 11973007
DATE: 07.11.23
DESIGN: TL/TC
DRAWN: TL
CHECKED: TC
APPROVED: BGN
A.B.N. 64 005 931 288
www.atcwilliams.com.au
ATC WILLIAMS
TAILINGS . WATER . WASTE .
Melbourne T +61 3 8527 0900
melbourne@atcwilliams.com.au
EMR GOLDEN GROVE PTY LTD
GOLDEN GROVE TAILINGS STORAGE FACILITIES
TSF 1 STAGE 5 EMBANKMENT RAISE DESIGN
STAGE 5B TAILINGS DEPOSITION PLAN
DWG. No.
FIGURE 9
SHEET SIZE: A3
Rev.: A
SHEET 1 OF 1



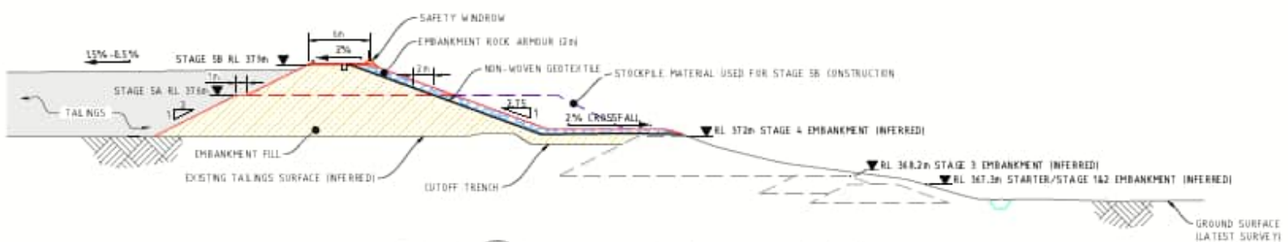
SECTION A STAGE 5A EMBANKMENT - SOUTHERN SECTION
SCALE 1:500 FIG7



SECTION B STAGE 5A EMBANKMENT - NORTHERN SECTION
SCALE 1:500 FIG7



SECTION C STAGE 5B EMBANKMENT - SOUTHERN SECTION
SCALE 1:500 FIG9



SECTION D STAGE 5B EMBANKMENT - NORTHERN SECTION
SCALE 1:500 FIG9

FOR INFORMATION ONLY
NOT FOR CONSTRUCTION

No.	DESCRIPTION	DATE	DRAWN	CHECKED	APPRD

SCALE: 1:500
JOB No.: 11303JUT
DATE: 07.10.20
DESIGN: TL
DRAWN: TL
CHECKED: FIC
APPROVED: EGN

A.B.N. 64 005 931 288
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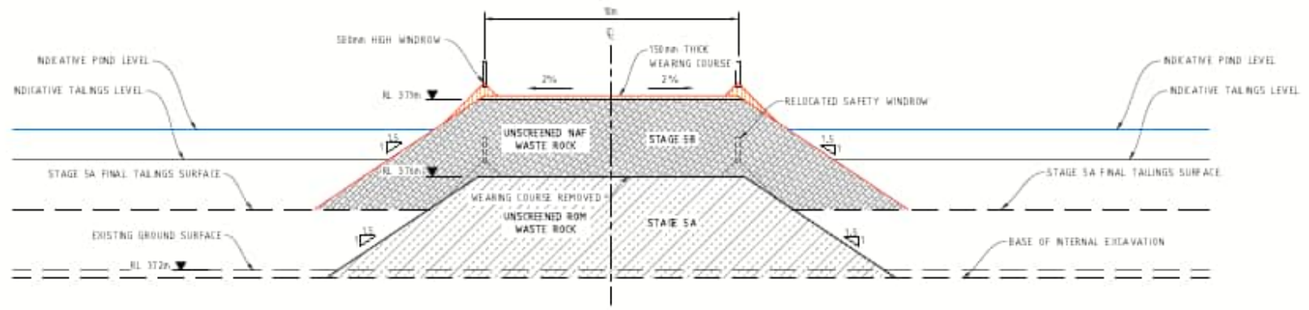
ATC WILLIAMS
TAILINGS . WATER . WASTE .
Melbourne T +61 3 8587 0500
melbourne@atcwilliams.com.au

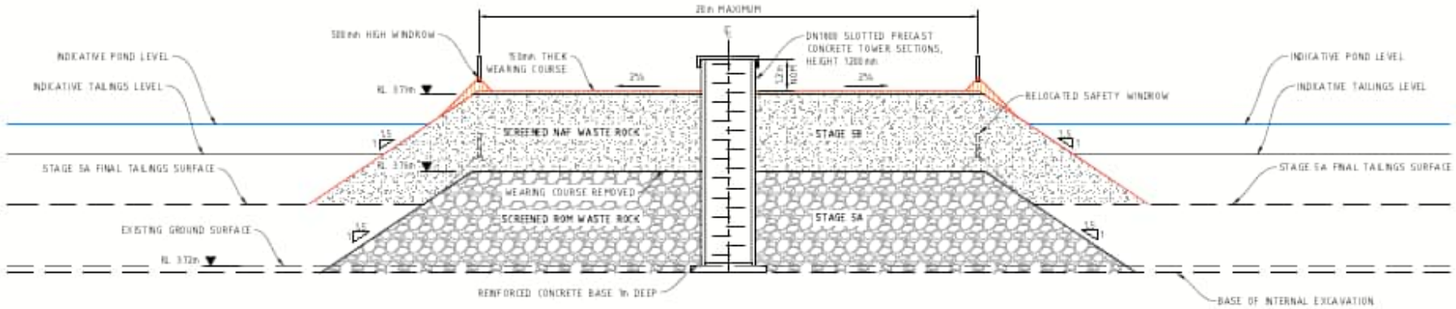
EMR GOLDEN GROVE PTY LTD
GOLDEN GROVE TAILINGS STORAGE FACILITIES

TSF 1 STAGE 5 EMBANKMENT RAISE DESIGN
SECTIONS AND DETAILS

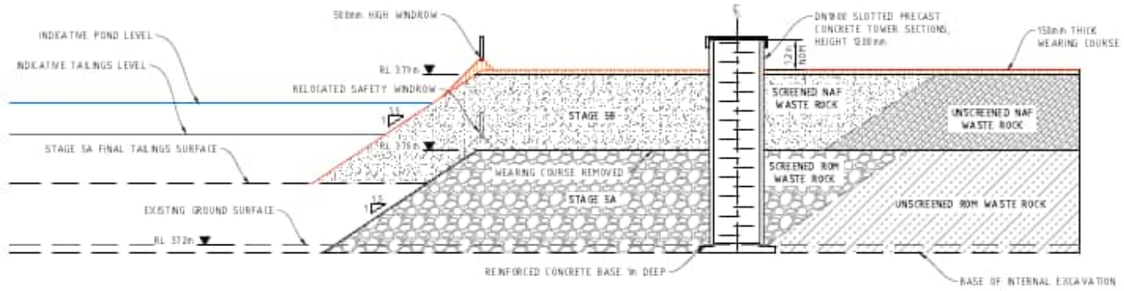
DWG. No.
FIGURE 10
SHEET SIZE A3 Rev. A
SHEET 1 OF 1



SECTION E DECANT ACCESS CAUSEWAY
SCALE 1:200 FIG9



SECTION F DECANT TOWER DETAILS
SCALE 1:200 FIG9



SECTION G DECANT ACCESS CAUSEWAY VEHICLE TURNING "HAMMERHEAD"
SCALE 1:200 FIG9

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NOT FOR CONSTRUCTION

No.	DESCRIPTION	DATE	DRAWN	CHECKED	APPD

SCALE: 1:200
JOB No.: 11S1/0037
DATE: 07.10.20
DESIGN: TL
DRAWN: TL
CHECKED: EC
APPROVED: DJN

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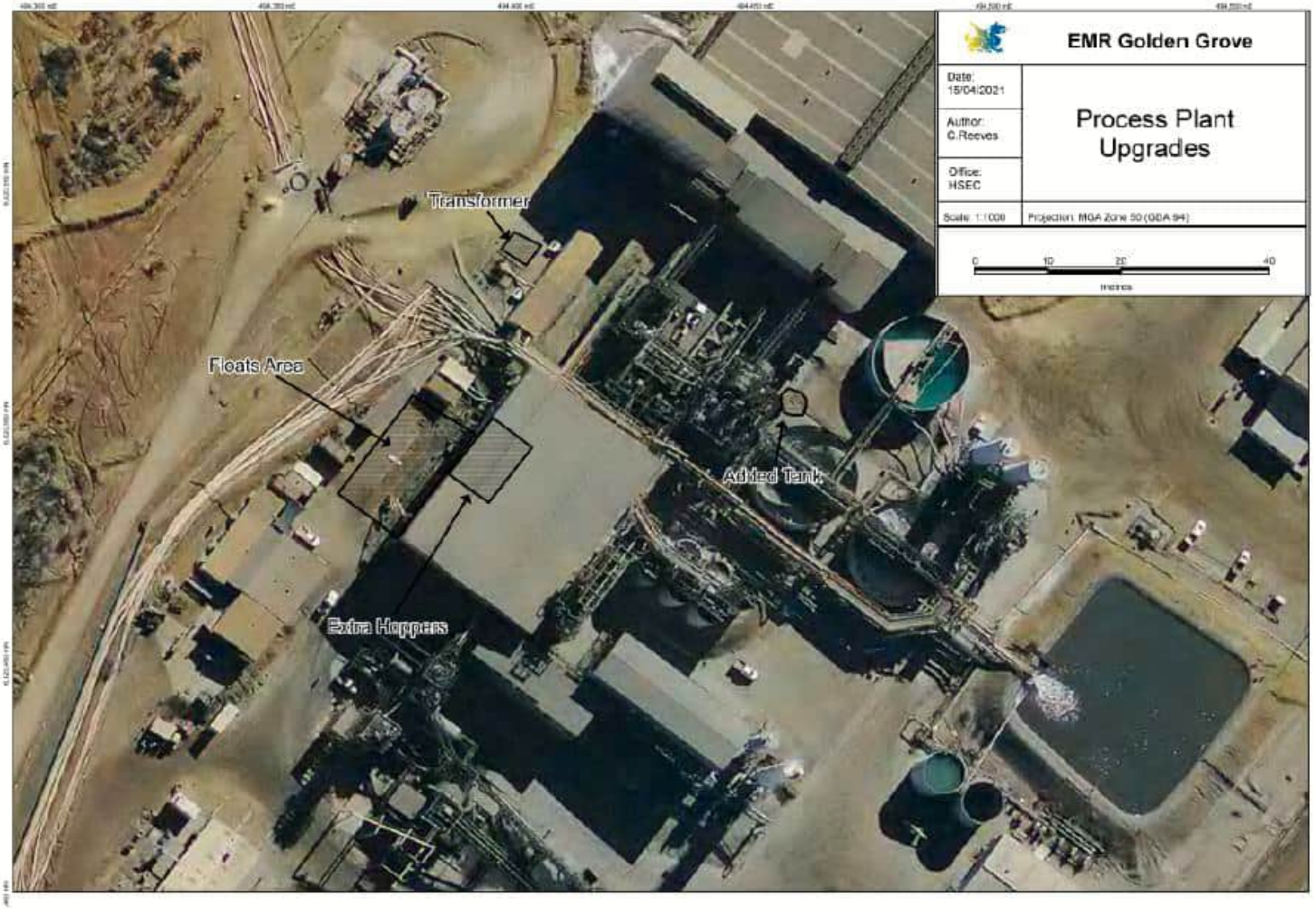
melbourne@atcwilliams.com.au

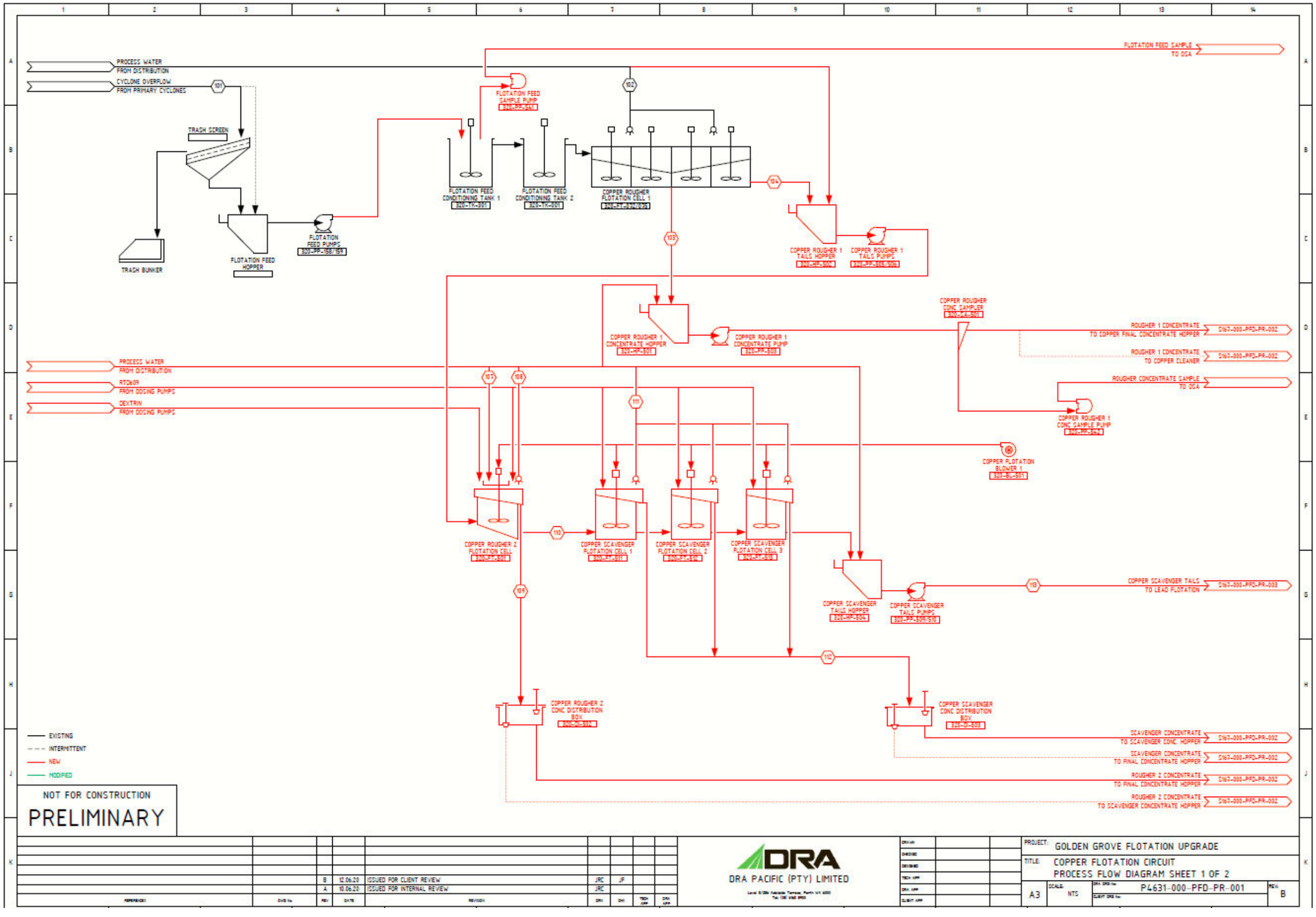
EMR GOLDEN GROVE PTY LTD
GOLDEN GROVE TAILINGS STORAGE FACILITIES

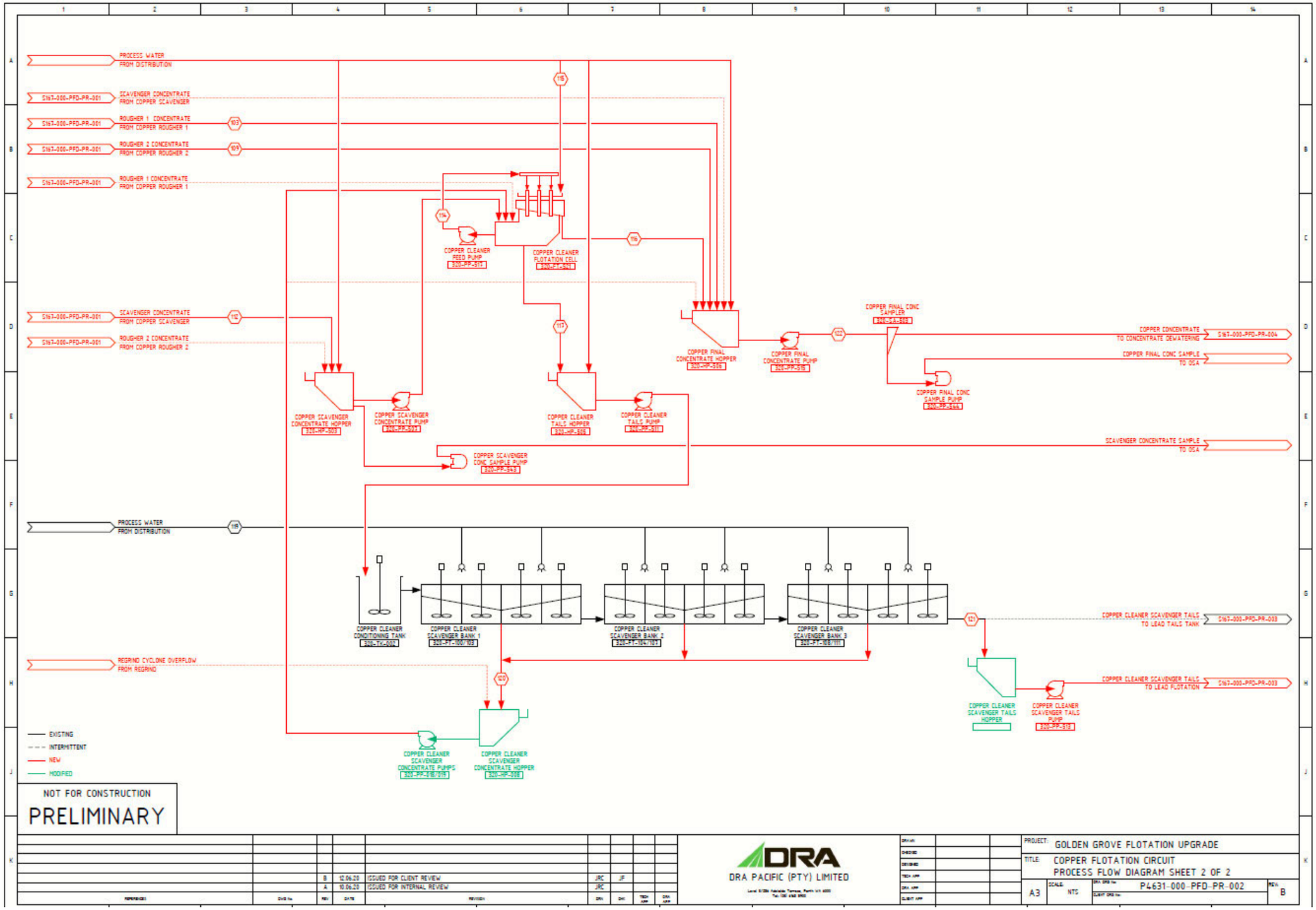
TSF 1 STAGE 5 EMBANKMENT RAISE DESIGN
DECANT SECTIONS AND DETAILS

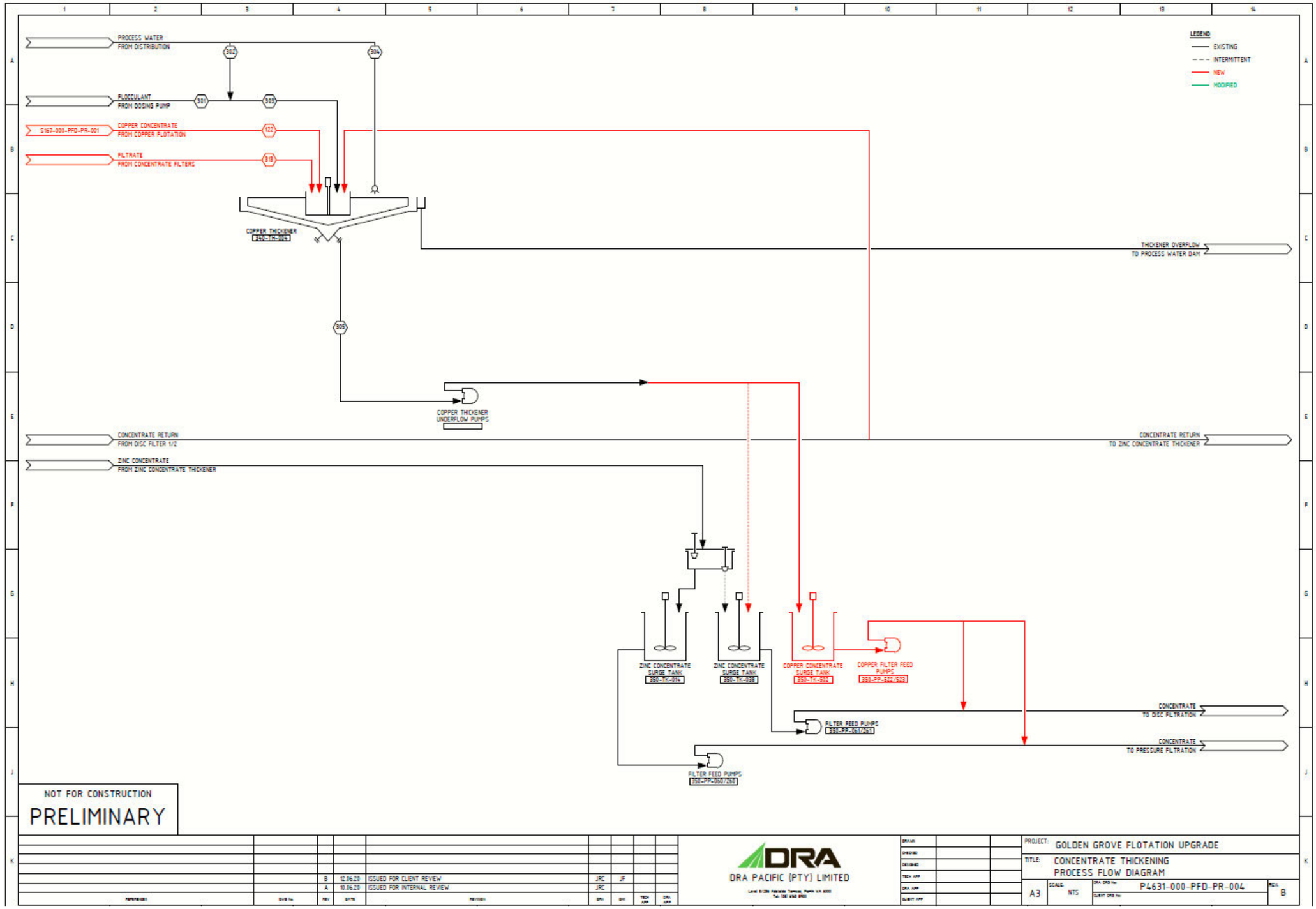
DWG. No.
FIGURE 11
SHEET SIZE: A3 | Rev.: A
SHEET 1 OF 1

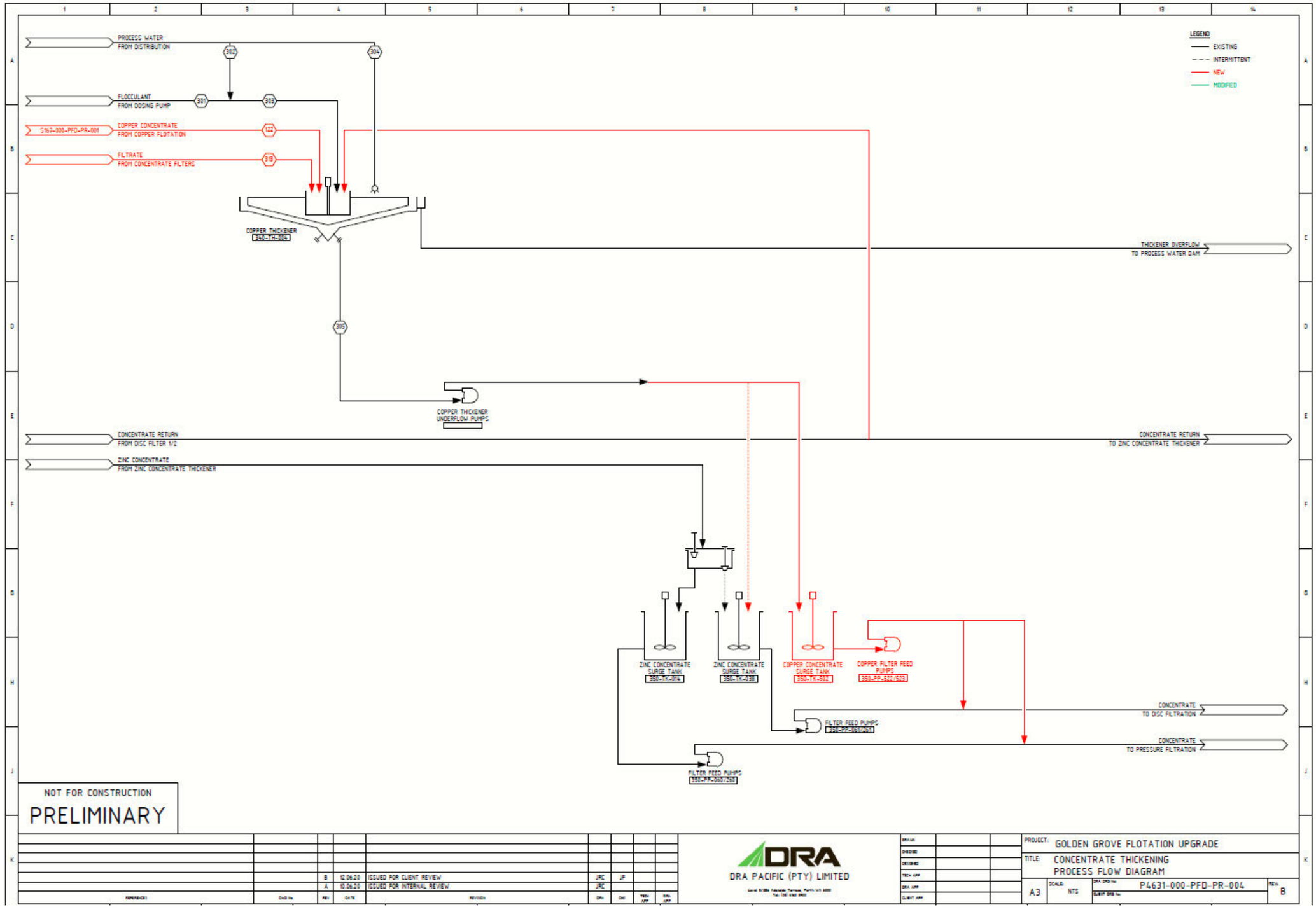
Schedule 5: Process plant design drawings



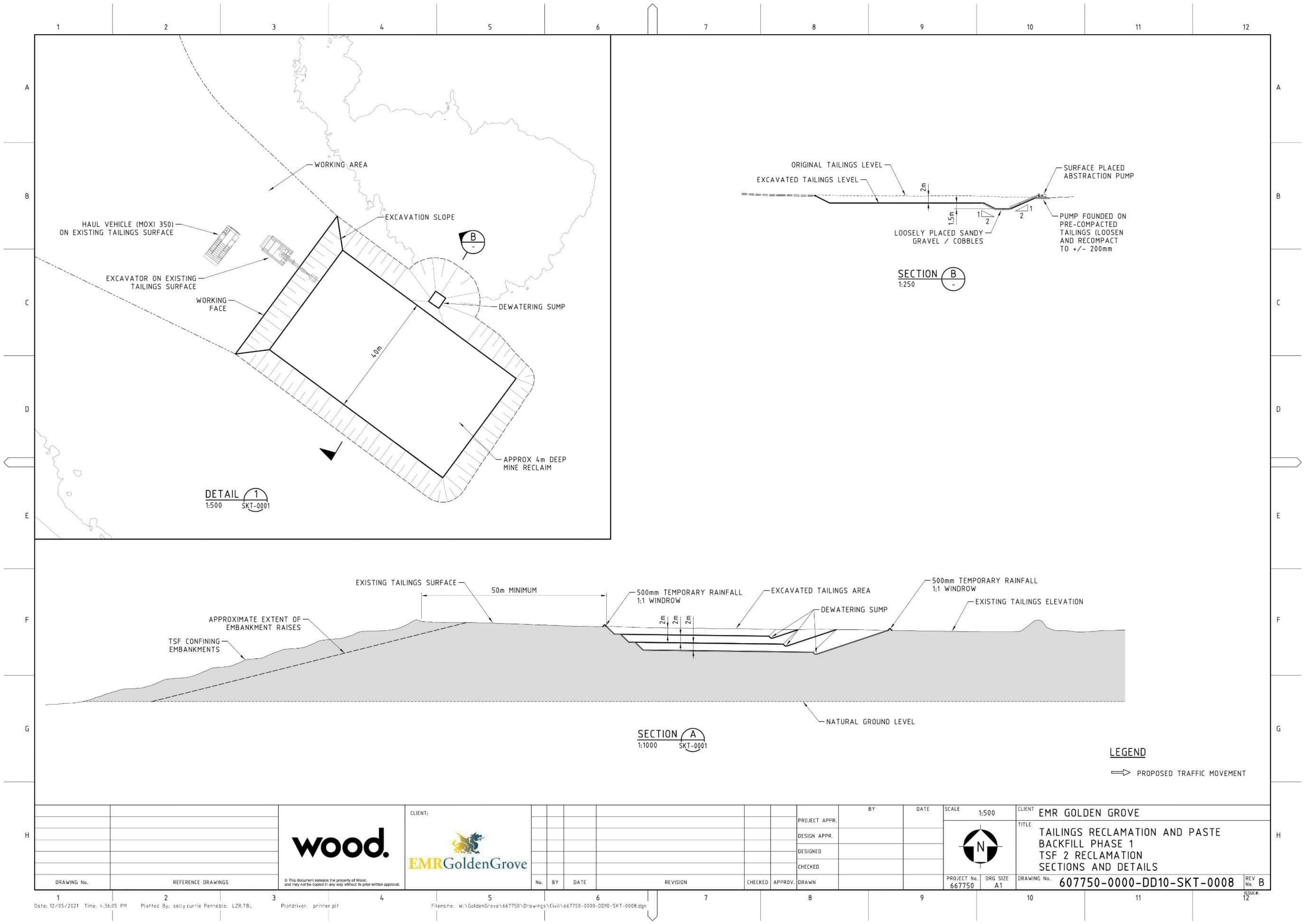

PROCESS WATER FROM DISTRIBUTION
CYCLONE OVERFLOW FROM PRIMARY CYCLONES
TRASH SCREEN
TRASH BUNKER
FLOTATION FEED HOPPER
FLOTATION FEED PUMPS
FLOTATION FEED SAMPLE PUMP
FLOTATION FEED CONDITIONING TANK 1
FLOTATION FEED CONDITIONING TANK 2
COPPER ROUGHER FLOTATION CELL 1
FLOTATION FEED SAMPLE TO OSA
COPPER ROUGHER 1 TAILS HOPPER
COPPER ROUGHER 1 TAILS PUMPS
COPPER ROUGHER 1 CONCENTRATE HOPPER
COPPER ROUGHER 1 CONCENTRATE PUMP
COPPER ROUGHER CONC SAMPLER
ROUGHER 1 CONCENTRATE TO COPPER FINAL CONCENTRATE HOPPER
ROUGHER 1 CONCENTRATE TO COPPER CLEANER
ROUGHER CONCENTRATE SAMPLE TO OSA
COPPER ROUGHER 1 CONC SAMPLE PUMP
PROCESS WATER FROM DISTRIBUTION
R7269 FROM DOSING PUMPS
DEXTRIN FROM DOSING PUMPS
COPPER FLOTATION BLOWER 1
COPPER ROUGHER 2 FLOTATION CELL
COPPER SCAVENGER FLOTATION CELL 1
COPPER SCAVENGER FLOTATION CELL 2
COPPER SCAVENGER FLOTATION CELL 3
COPPER SCAVENGER TAILS HOPPER
COPPER SCAVENGER TAILS PUMPS
COPPER SCAVENGER TAILS TO LEAD FLOTATION
COPPER ROUGHER 2 CONC DISTRIBUTION BOX
COPPER SCAVENGER CONC DISTRIBUTION BOX
SCAVENGER CONCENTRATE TO SCAVENGER CONC. HOPPER
SCAVENGER CONCENTRATE TO FINAL CONCENTRATE HOPPER
ROUGHER 2 CONCENTRATE TO FINAL CONCENTRATE HOPPER
ROUGHER 2 CONCENTRATE TO SCAVENGER CONCENTRATE HOPPER
EXISTING
INTERMITTENT
NEW
MODIFIED
NOT FOR CONSTRUCTION
PRELIMINARY
B 12.06.20 ISSUED FOR CLIENT REVIEW JRC JF
A 10.06.20 ISSUED FOR INTERNAL REVIEW JRC
DRA PACIFIC (PTY) LIMITED
PROJECT: GOLDEN GROVE FLOTATION UPGRADE
TITLE: COPPER FLOTATION CIRCUIT PROCESS FLOW DIAGRAM SHEET 1 OF 2
A3
SCALE: NTS
P4631-000-PFD-PR-001
REV: B


PROCESS WATER FROM DISTRIBUTION
S167-000-PFD-PR-001 SCAVENGER CONCENTRATE FROM COPPER SCAVENGER
S167-000-PFD-PR-001 ROUGHER 1 CONCENTRATE FROM COPPER ROUGHER 1
S167-000-PFD-PR-001 ROUGHER 2 CONCENTRATE FROM COPPER ROUGHER 2
S167-000-PFD-PR-001 ROUGHER 1 CONCENTRATE FROM COPPER ROUGHER 1
S167-000-PFD-PR-001 SCAVENGER CONCENTRATE FROM COPPER SCAVENGER
S167-000-PFD-PR-001 ROUGHER 2 CONCENTRATE FROM COPPER ROUGHER 2
COPPER CLEANER FEED PUMP 320-PP-517
COPPER CLEANER FLOTATION CELL 320-FT-521
COPPER SCAVENGER CONCENTRATE HOPPER 320-HP-503
COPPER SCAVENGER CONCENTRATE PUMP 320-PP-504
COPPER SCAVENGER CONC SAMPLE PUMP 320-PP-543
COPPER CLEANER TAILS HOPPER 320-HP-505
COPPER CLEANER TAILS PUMP 320-PP-511
COPPER FINAL CONCENTRATE HOPPER 320-HP-506
COPPER FINAL CONCENTRATE PUMP 320-PP-519
COPPER FINAL CONC SAMPLER 320-SA-508
COPPER FINAL CONC SAMPLE PUMP 320-PP-544
COPPER CONCENTRATE TO CONCENTRATE DEWATERING S167-000-PFD-PR-004
COPPER FINAL CONC SAMPLE TO OSA
SCAVENGER CONCENTRATE SAMPLE TO OSA
PROCESS WATER FROM DISTRIBUTION
COPPER CLEANER CONDITIONING TANK 320-TK-002
COPPER CLEANER SCAVENGER BANK 1 320-FT-100/103
COPPER CLEANER SCAVENGER BANK 2 320-FT-104/107
COPPER CLEANER SCAVENGER BANK 3 320-FT-108/111
COPPER CLEANER SCAVENGER TAILS HOPPER
COPPER CLEANER SCAVENGER TAILS PUMP 320-PP-512
COPPER CLEANER SCAVENGER TAILS TO LEAD TAILS TANK S167-000-PFD-PR-003
COPPER CLEANER SCAVENGER TAILS TO LEAD FLOTATION S167-000-PFD-PR-003
REGRIND CYCLONE OVERFLOW FROM REGRIND
COPPER CLEANER SCAVENGER CONCENTRATE PUMPS 320-PP-518/019
COPPER CLEANER SCAVENGER CONCENTRATE HOPPER 320-HP-008
EXISTING
INTERMITTENT
NEW
MODIFIED
NOT FOR CONSTRUCTION
PRELIMINARY
B 12.06.20 ISSUED FOR CLIENT REVIEW JRC JF
A 10.06.20 ISSUED FOR INTERNAL REVIEW JRC
DRA PACIFIC (PTY) LIMITED
PROJECT: GOLDEN GROVE FLOTATION UPGRADE
TITLE: COPPER FLOTATION CIRCUIT PROCESS FLOW DIAGRAM SHEET 2 OF 2
A3
SCALE: NTS
P4631-000-PFD-PR-002
REV: B


PROCESS WATER
FROM DISTRIBUTION
302
304
FLOCCULANT
FROM DOSING PUMP
301
303
S167-000-PFD-PR-001
COPPER CONCENTRATE
FROM COPPER FLOTATION
122
FILTRATE
FROM CONCENTRATE FILTERS
312
COPPER THICKENER
350-TK-004
THICKENER OVERFLOW
TO PROCESS WATER DAM
305
COPPER THICKENER
UNDERFLOW PUMPS
CONCENTRATE RETURN
FROM DISC FILTER 1/2
CONCENTRATE RETURN
TO ZINC CONCENTRATE THICKENER
ZINC CONCENTRATE
FROM ZINC CONCENTRATE THICKENER
ZINC CONCENTRATE
SURGE TANK
350-TK-014
ZINC CONCENTRATE
SURGE TANK
350-TK-038
COPPER CONCENTRATE
SURGE TANK
350-TK-502
COPPER FILTER FEED
PUMPS
350-PP-502/503
FILTER FEED PUMPS
350-PP-
CONCENTRATE
TO DISC FILTRATION
CONCENTRATE
TO PRESSURE FILTRATION
FILTER FEED PUMPS
350-PP-
LEGEND
EXISTING
INTERMITTENT
NEW
MODIFIED
NOT FOR CONSTRUCTION
PRELIMINARY
B 12.06.20 ISSUED FOR CLIENT REVIEW JRC JF
A 10.06.20 ISSUED FOR INTERNAL REVIEW JRC
DRA PACIFIC (PTY) LIMITED
PROJECT: GOLDEN GROVE FLOTATION UPGRADE
TITLE: CONCENTRATE THICKENING
PROCESS FLOW DIAGRAM
A3
SCALE: NTS
P4631-000-PFD-PR-004
REV: B



Schedule 6: Tailings reclamation from TSF2 design drawings


WORKING AREA
EXCAVATION SLOPE
HAUL VEHICLE (MOXI 350) ON EXISTING TAILINGS SURFACE
EXCAVATOR ON EXISTING TAILINGS SURFACE
WORKING FACE
DEWATERING SUMP
40m
APPROX 4m DEEP MINE RECLAIM
DETAIL 1
1:500 SKT-0001
ORIGINAL TAILINGS LEVEL
EXCAVATED TAILINGS LEVEL
2m
1.5m
SURFACE PLACED ABSTRACTION PUMP
PUMP FOUNDED ON PRE-COMPACTED TAILINGS (LOOSEN AND RECOMPACT TO +/- 200mm
LOOSELY PLACED SANDY GRAVEL / COBBLES
SECTION B
1:250
EXISTING TAILINGS SURFACE
50m MINIMUM
500mm TEMPORARY RAINFALL 1:1 WINDROW
EXCAVATED TAILINGS AREA
DEWATERING SUMP
500mm TEMPORARY RAINFALL 1:1 WINDROW
EXISTING TAILINGS ELEVATION
APPROXIMATE EXTENT OF EMBANKMENT RAISES
TSF CONFINING EMBANKMENTS
2m 2m 2m
NATURAL GROUND LEVEL
SECTION A
1:1000 SKT-0001
LEGEND
PROPOSED TRAFFIC MOVEMENT
DRAWING No.
REFERENCE DRAWINGS
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PROJECT APPR.
DESIGN APPR.
DESIGNED
CHECKED
DRAWN
BY DATE
SCALE 1:500
CLIENT EMR GOLDEN GROVE
TITLE TAILINGS RECLAMATION AND PASTE BACKFILL PHASE 1
TSF 2 RECLAMATION
SECTIONS AND DETAILS
PROJECT No. 667750
DRG SIZE A1
DRAWING No. 607750-0000-DD10-SKT-0008
REV No. B
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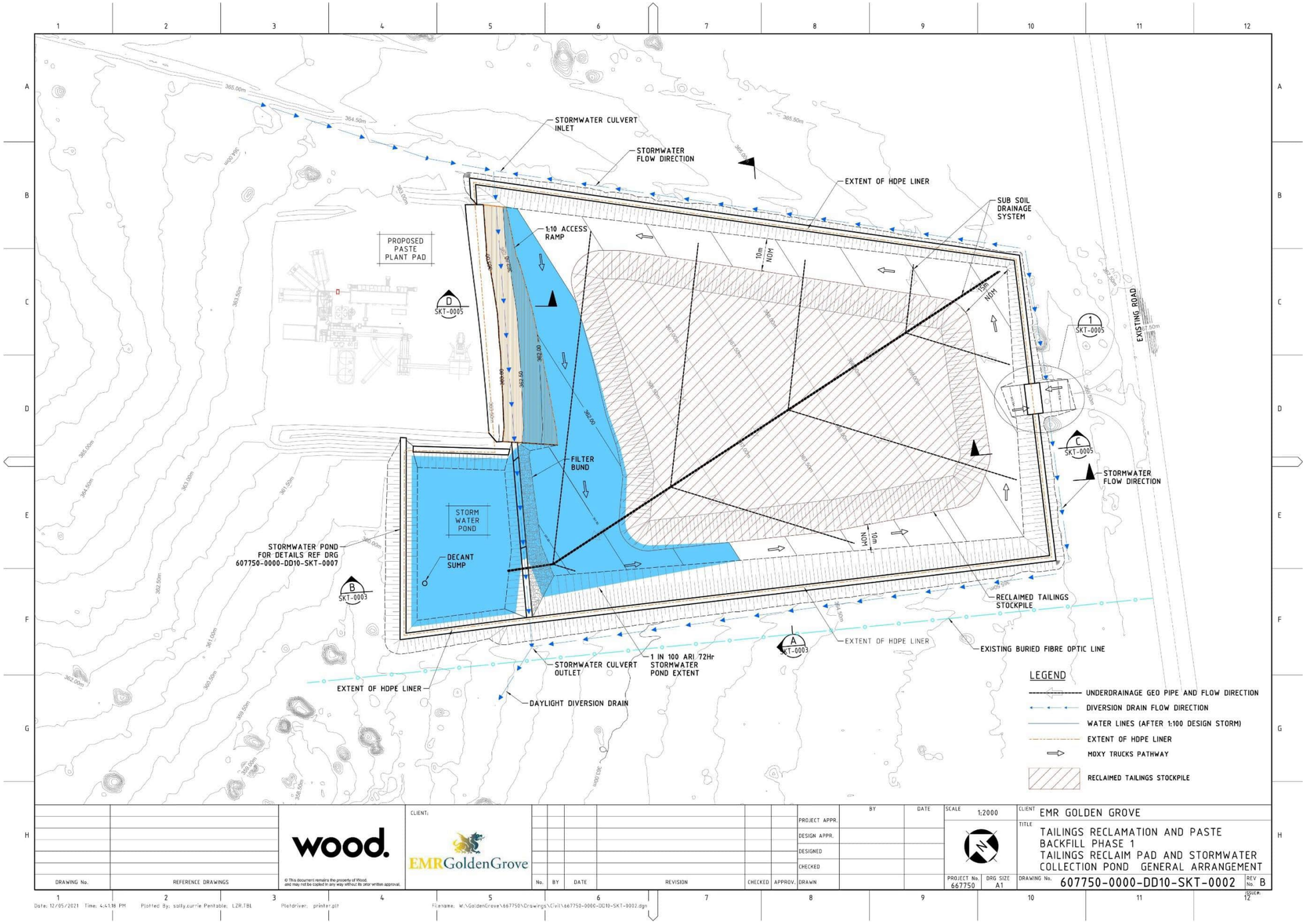
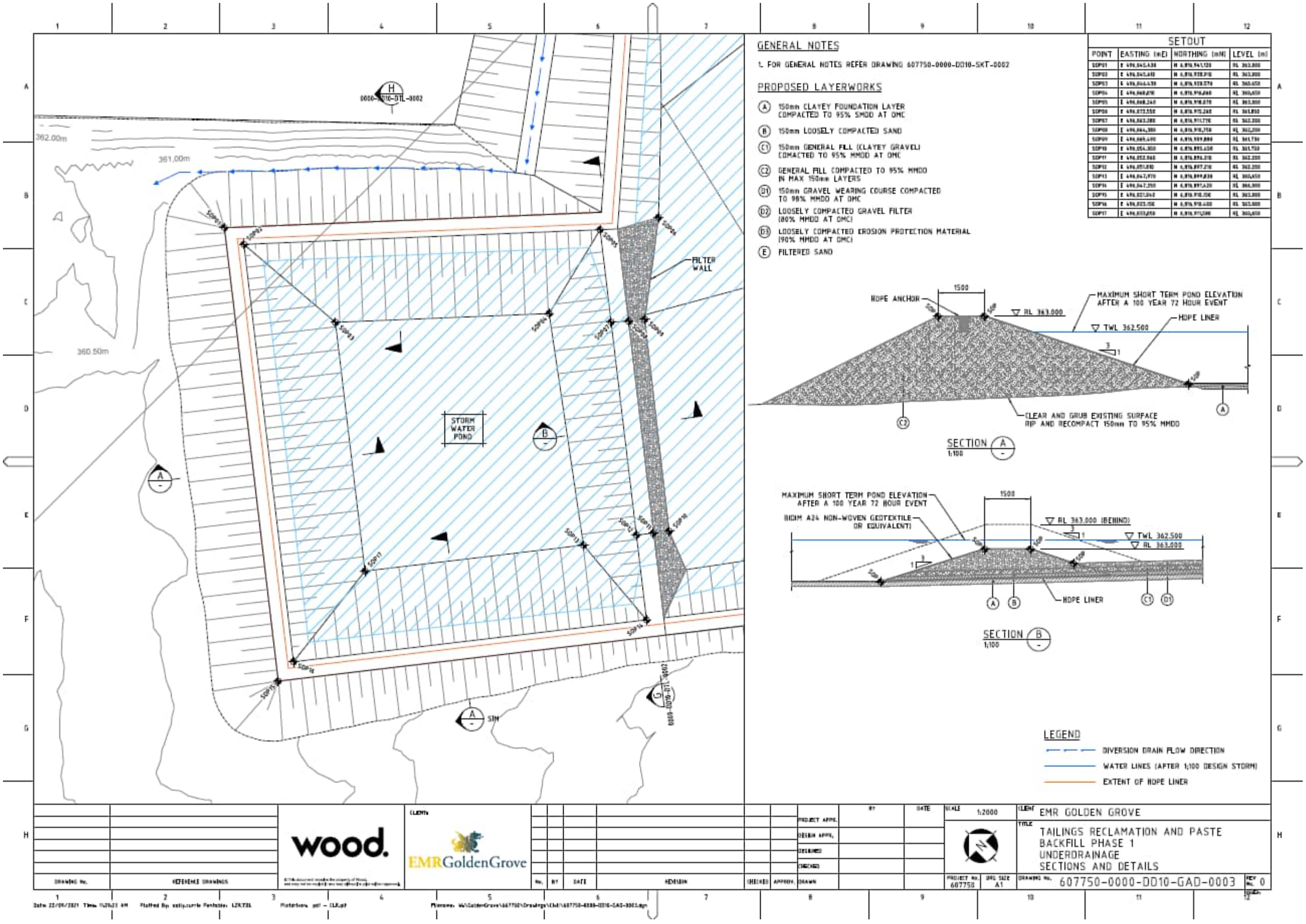
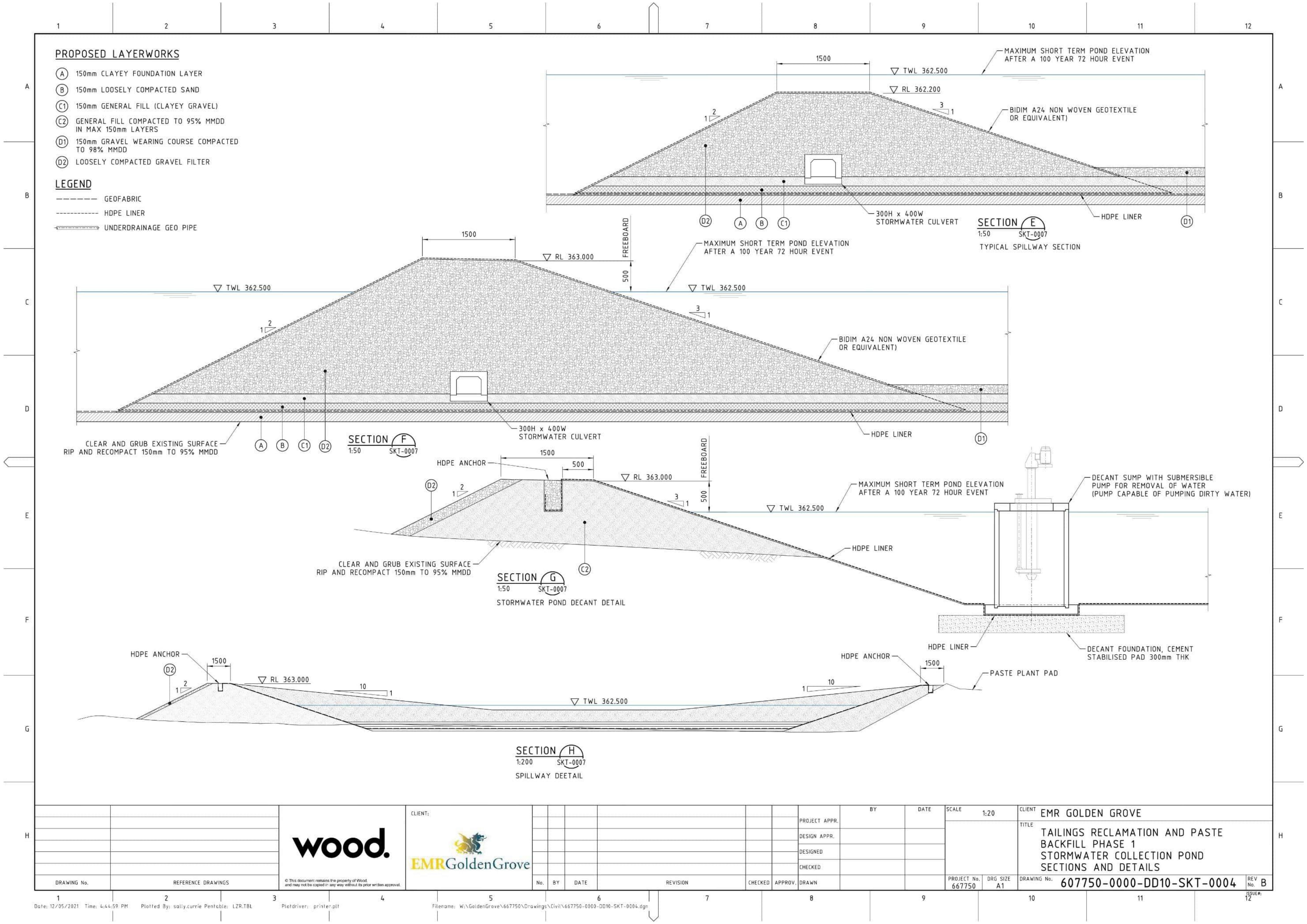
Schedule 7: Reclaimed tailings storage pad and storage pond design drawings




362.00m
361.00m
360.50m
FILTER WALL
STORM WATER POND
SDP01
SDP02
SDP03
SDP04
SDP05
SDP06
SDP07
SDP08
SDP09
SDP10
SDP11
SDP12
SDP13
SDP14
SDP15
SDP16
SDP17
SDP18
SIN
GENERAL NOTES
1. FOR GENERAL NOTES REFER DRAWING 607750-0000-DD10-SKT-0002
PROPOSED LAYERWORKS
(A) 150mm CLAYEY FOUNDATION LAYER COMPACTED TO 95% SMDD AT OMC
(B) 150mm LOOSELY COMPACTED SAND
(C1) 150mm GENERAL FILL (CLAYEY GRAVEL) COMACTED TO 95% MMDD AT OMC
(C2) GENERAL FILL COMPACTED TO 95% MMDD IN MAX 150mm LAYERS
(D1) 150mm GRAVEL WEARING COURSE COMPACTED TO 98% MMDD AT OMC
(D2) LOOSELY COMPACTED GRAVEL FILTER (80% MMDD AT OMC)
(D3) LOOSELY COMPACTED EROSION PROTECTION MATERIAL (90% MMDD AT OMC)
(E) FILTERED SAND
SETOUT
POINT | EASTING (mE) | NORTHING (mN) | LEVEL (m)
HOPE ANCHOR
1500
RL 363.000
MAXIMUM SHORT TERM POND ELEVATION AFTER A 100 YEAR 72 HOUR EVENT
TWL 362.500
HOPE LINER
CLEAR AND GRUB EXISTING SURFACE RIP AND RECOMPACT 150mm TO 95% MMDD
SECTION A 1:100
MAXIMUM SHORT TERM POND ELEVATION AFTER A 100 YEAR 72 HOUR EVENT
BIDIM A24 NON-WOVEN GEOTEXTILE OR EQUIVALENT
RL 363.000 (BEHIND)
SECTION B 1:100
LEGEND
DIVERSION DRAIN FLOW DIRECTION
WATER LINES (AFTER 1:100 DESIGN STORM)
EXTENT OF HOPE LINER
wood.
EMRGoldenGrove
CLIENT EMR GOLDEN GROVE
TITLE TAILINGS RECLAMATION AND PASTE BACKFILL PHASE 1 UNDERDRAINAGE SECTIONS AND DETAILS
SCALE 1:2000
PROJECT No. 607750
DRG SIZE A1
DRAWING No. 607750-0000-DD10-GAD-0003
REV No. 0


PROPOSED LAYERWORKS
(A) 150mm CLAYEY FOUNDATION LAYER
(B) 150mm LOOSELY COMPACTED SAND
(C1) 150mm GENERAL FILL (CLAYEY GRAVEL)
(C2) GENERAL FILL COMPACTED TO 95% MMDD IN MAX 150mm LAYERS
(D1) 150mm GRAVEL WEARING COURSE COMPACTED TO 98% MMDD
(D2) LOOSELY COMPACTED GRAVEL FILTER
LEGEND
GEOFABRIC
HDPE LINER
UNDERDRAINAGE GEO PIPE
MAXIMUM SHORT TERM POND ELEVATION AFTER A 100 YEAR 72 HOUR EVENT
1500
TWL 362.500
RL 362.200
BIDIM A24 NON WOVEN GEOTEXTILE OR EQUIVALENT)
300H x 400W STORMWATER CULVERT
HDPE LINER
SECTION E
1:50 SKT-0007
TYPICAL SPILLWAY SECTION
RL 363.000
FREEBOARD
500
CLEAR AND GRUB EXISTING SURFACE RIP AND RECOMPACT 150mm TO 95% MMDD
SECTION F
1:50 SKT-0007
HDPE ANCHOR
DECANT SUMP WITH SUBMERSIBLE PUMP FOR REMOVAL OF WATER (PUMP CAPABLE OF PUMPING DIRTY WATER)
SECTION G
1:50 SKT-0007
STORMWATER POND DECANT DETAIL
DECANT FOUNDATION, CEMENT STABILISED PAD 300mm THK
PASTE PLANT PAD
SECTION H
1:200 SKT-0007
SPILLWAY DEETAIL
DRAWING No.
REFERENCE DRAWINGS
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PROJECT APPR.
DESIGN APPR.
DESIGNED
CHECKED
DRAWN
BY DATE
SCALE 1:20
CLIENT EMR GOLDEN GROVE
TITLE TAILINGS RECLAMATION AND PASTE BACKFILL PHASE 1 STORMWATER COLLECTION POND SECTIONS AND DETAILS
PROJECT No. 667750
DRG SIZE A1
DRAWING No. 607750-0000-DD10-SKT-0004
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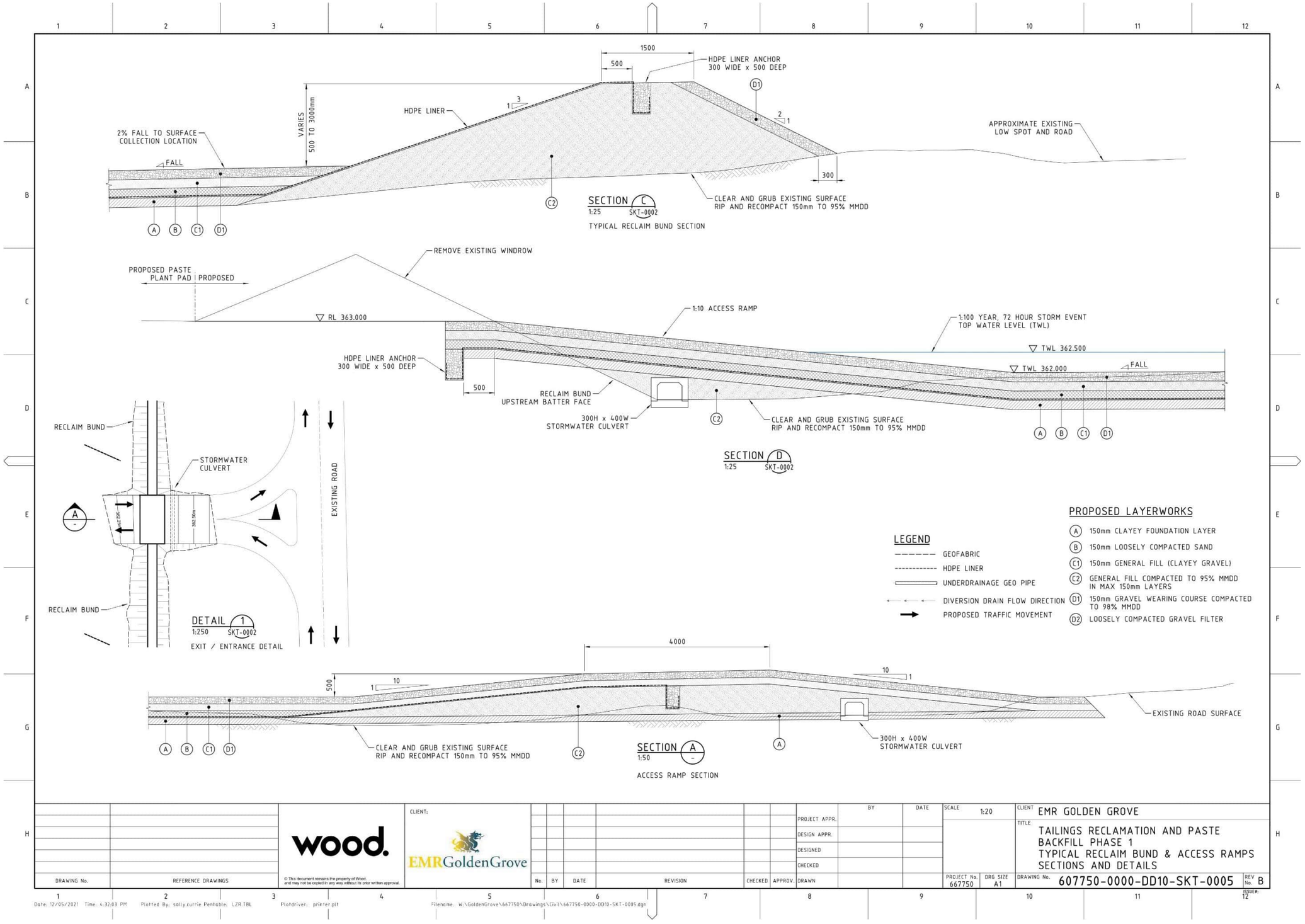
1500
500
HDPE LINER ANCHOR
300 WIDE x 500 DEEP
D1
HDPE LINER
VARIES
500 TO 3000mm
3
1
2
1
2% FALL TO SURFACE
COLLECTION LOCATION
FALL
APPROXIMATE EXISTING
LOW SPOT AND ROAD
300
A
B
C1
D1
C2
SECTION C
1:25 SKT-0002
CLEAR AND GRUB EXISTING SURFACE
RIP AND RECOMPACT 150mm TO 95% MMDD
TYPICAL RECLAIM BUND SECTION
REMOVE EXISTING WINDROW
PROPOSED PASTE
PLANT PAD
PROPOSED
RL 363.000
1:10 ACCESS RAMP
1:100 YEAR, 72 HOUR STORM EVENT
TOP WATER LEVEL (TWL)
TWL 362.500
TWL 362.000
FALL
HDPE LINER ANCHOR
300 WIDE x 500 DEEP
500
RECLAIM BUND
UPSTREAM BATTER FACE
300H x 400W
STORMWATER CULVERT
CLEAR AND GRUB EXISTING SURFACE
RIP AND RECOMPACT 150mm TO 95% MMDD
SECTION D
1:25 SKT-0002
RECLAIM BUND
STORMWATER
CULVERT
EXISTING ROAD
RECLAIM BUND
DETAIL 1
1:250 SKT-0002
EXIT / ENTRANCE DETAIL
4000
500
10
1
10
1
EXISTING ROAD SURFACE
CLEAR AND GRUB EXISTING SURFACE
RIP AND RECOMPACT 150mm TO 95% MMDD
300H x 400W
STORMWATER CULVERT
SECTION A
1:50
ACCESS RAMP SECTION
LEGEND
GEOFABRIC
HDPE LINER
UNDERDRAINAGE GEO PIPE
DIVERSION DRAIN FLOW DIRECTION
PROPOSED TRAFFIC MOVEMENT
PROPOSED LAYERWORKS
A 150mm CLAYEY FOUNDATION LAYER
B 150mm LOOSELY COMPACTED SAND
C1 150mm GENERAL FILL (CLAYEY GRAVEL)
C2 GENERAL FILL COMPACTED TO 95% MMDD IN MAX 150mm LAYERS
D1 150mm GRAVEL WEARING COURSE COMPACTED TO 98% MMDD
D2 LOOSELY COMPACTED GRAVEL FILTER
DRAWING No.
REFERENCE DRAWINGS
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No. BY DATE REVISION CHECKED APPROV.
PROJECT APPR.
DESIGN APPR.
DESIGNED
CHECKED
DRAWN
BY DATE
SCALE 1:20
CLIENT EMR GOLDEN GROVE
TITLE TAILINGS RECLAMATION AND PASTE BACKFILL PHASE 1 TYPICAL RECLAIM BUND & ACCESS RAMPS SECTIONS AND DETAILS
PROJECT No. 667750
DRG SIZE A1
DRAWING No. 607750-0000-DD10-SKT-0005
REV No. B
ISSUE#: 12
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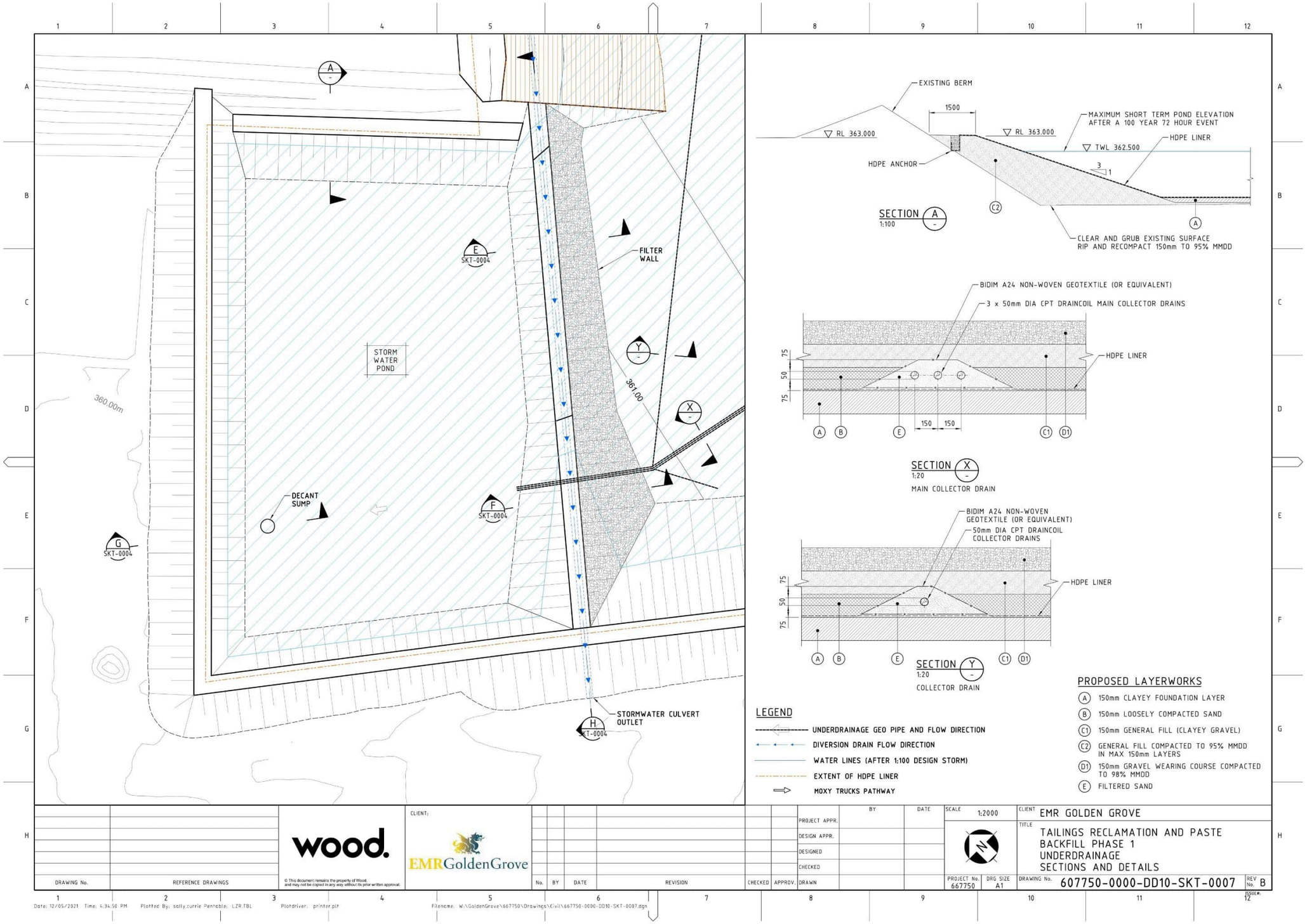
A
E
SKT-0004
FILTER WALL
STORM WATER POND
Y
361.00
X
360.00m
DECANT SUMP
F
SKT-0004
G
SKT-0004
H
SKT-0004
STORMWATER CULVERT OUTLET
EXISTING BERM
1500
RL 363.000
RL 363.000
MAXIMUM SHORT TERM POND ELEVATION AFTER A 100 YEAR 72 HOUR EVENT
TWL 362.500
HDPE LINER
HDPE ANCHOR
3
1
C2
A
CLEAR AND GRUB EXISTING SURFACE
RIP AND RECOMPACT 150mm TO 95% MMDD
SECTION A
1:100
BIDIM A24 NON-WOVEN GEOTEXTILE (OR EQUIVALENT)
3 x 50mm DIA CPT DRAINCOIL MAIN COLLECTOR DRAINS
HDPE LINER
75
50
75
150
150
A
B
E
C1
D1
SECTION X
1:20
MAIN COLLECTOR DRAIN
BIDIM A24 NON-WOVEN GEOTEXTILE (OR EQUIVALENT)
50mm DIA CPT DRAINCOIL COLLECTOR DRAINS
HDPE LINER
75
50
75
A
B
E
C1
D1
SECTION Y
1:20
COLLECTOR DRAIN
LEGEND
UNDERDRAINAGE GEO PIPE AND FLOW DIRECTION
DIVERSION DRAIN FLOW DIRECTION
WATER LINES (AFTER 1:100 DESIGN STORM)
EXTENT OF HDPE LINER
MOXY TRUCKS PATHWAY
PROPOSED LAYERWORKS
A 150mm CLAYEY FOUNDATION LAYER
B 150mm LOOSELY COMPACTED SAND
C1 150mm GENERAL FILL (CLAYEY GRAVEL)
C2 GENERAL FILL COMPACTED TO 95% MMDD IN MAX 150mm LAYERS
D1 150mm GRAVEL WEARING COURSE COMPACTED TO 98% MMDD
E FILTERED SAND
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PROJECT APPR.
DESIGN APPR.
DESIGNED
CHECKED
DRAWN
BY DATE
DRAWING No.
REFERENCE DRAWINGS
SCALE 1:2000
CLIENT EMR GOLDEN GROVE
TITLE TAILINGS RECLAMATION AND PASTE BACKFILL PHASE 1 UNDERDRAINAGE SECTIONS AND DETAILS
PROJECT No. 667750
DRG SIZE A1
DRAWING No. 607750-0000-DD10-SKT-0007
REV No. B
ISSUE#.
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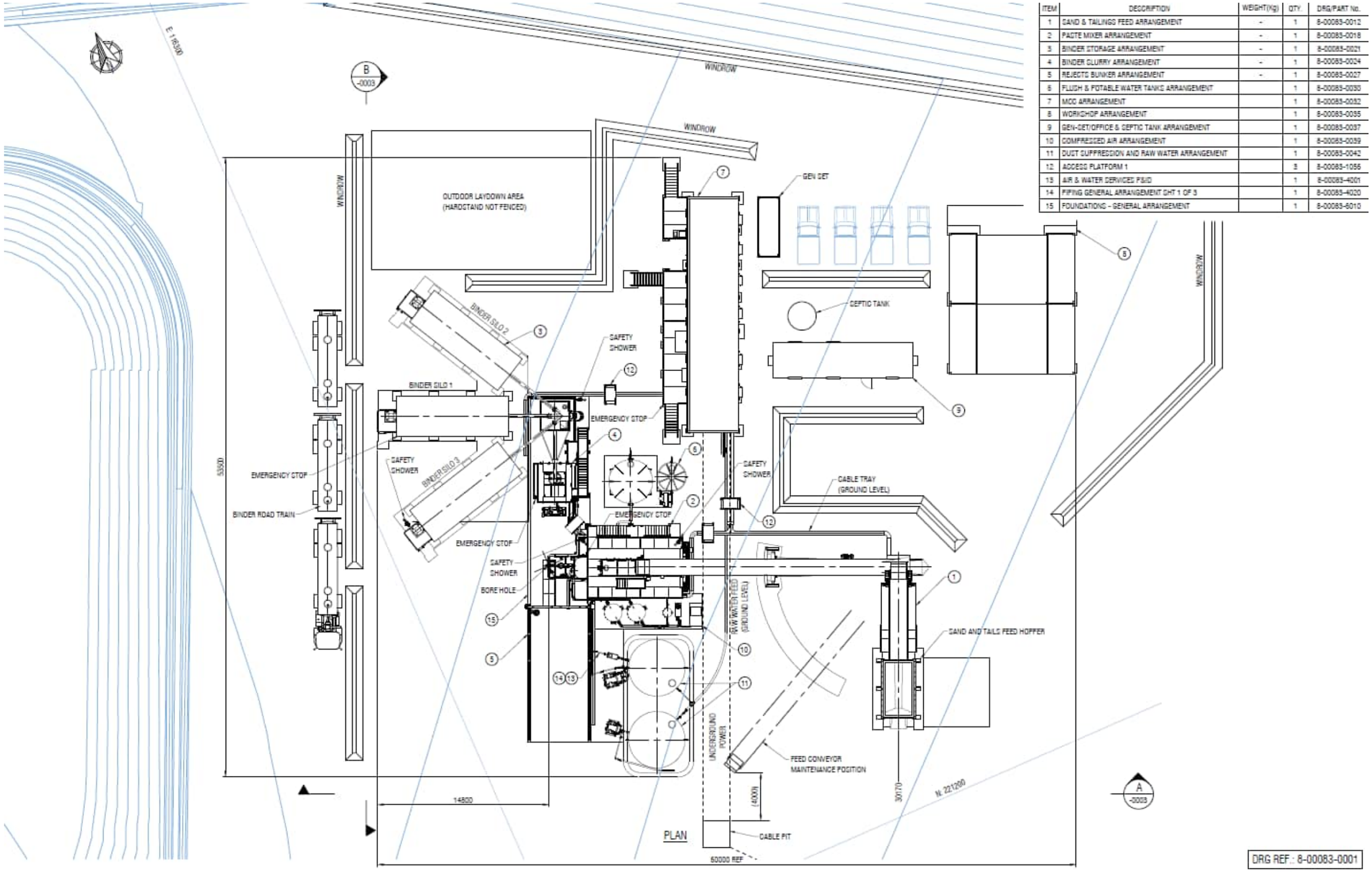
Filename: W:\GoldenGrove\667750\Drawings\Civil\667750-0000-DD10-SKT-0007.dgn

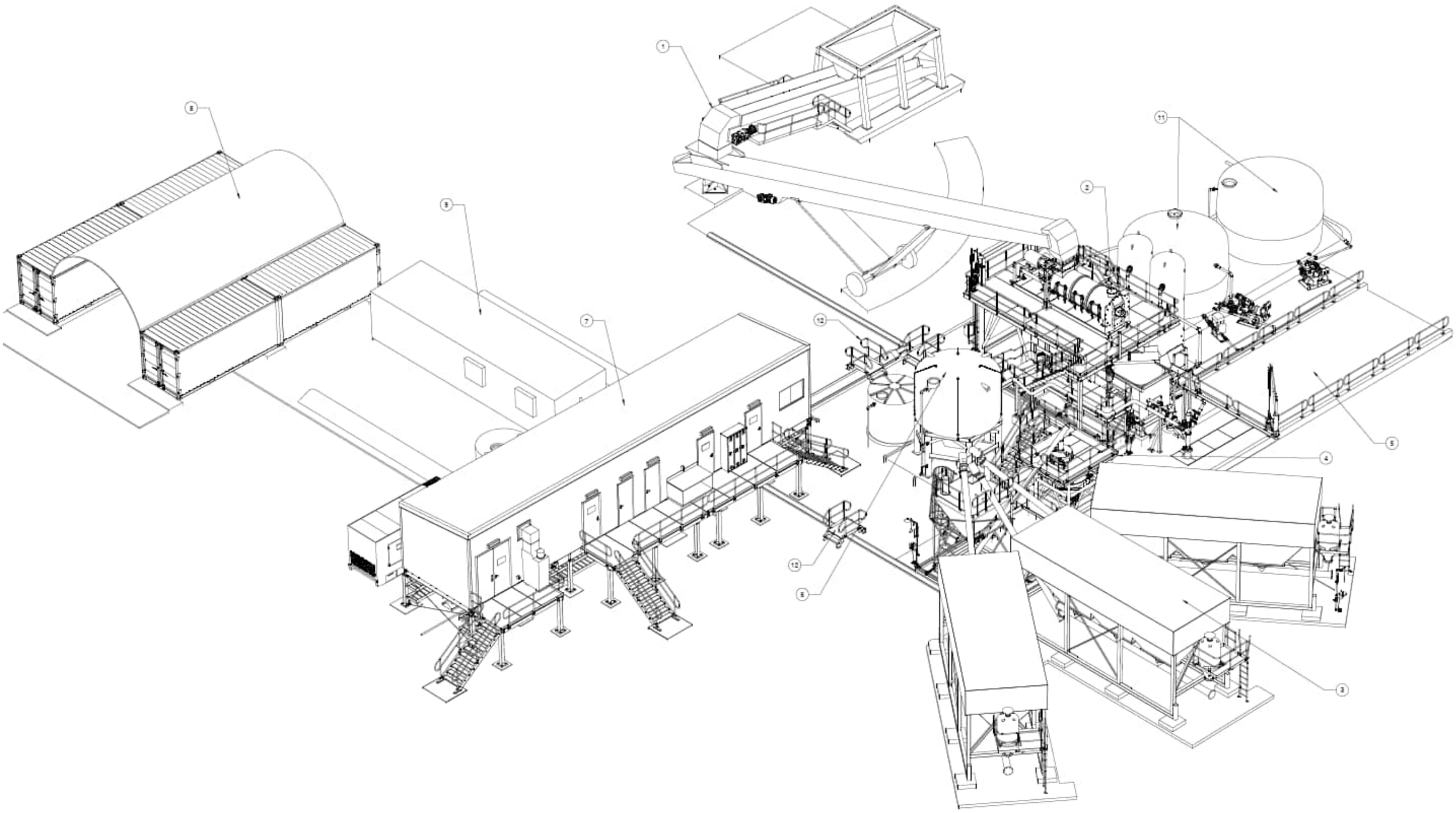
Schedule 8: Paste plant design drawings



ITEM	DESCRIPTION	WEIGHT(Kg)	QTY	DRG/PART No.
1	SAND & TAILINGS FEED ARRANGEMENT	-	1	8-00083-0012
2	PASTE MIXER ARRANGEMENT	-	1	8-00083-0018
3	BINDER STORAGE ARRANGEMENT	-	1	8-00083-0021
4	BINDER SLURRY ARRANGEMENT	-	1	8-00083-0024
5	REJECTS BUNKER ARRANGEMENT	-	1	8-00083-0027
6	FLUSH & POTABLE WATER TANKS ARRANGEMENT		1	8-00083-0030
7	MCC ARRANGEMENT		1	8-00083-0032
8	WORKSHOP ARRANGEMENT		1	8-00083-0035
9	GEN-SET/OFFICE & SEPTIC TANK ARRANGEMENT		1	8-00083-0037
10	COMPRESSED AIR ARRANGEMENT		1	8-00083-0039
11	DUST SUPPRESSION AND RAW WATER ARRANGEMENT		1	8-00083-0042
12	ACCESS PLATFORM 1		3	8-00083-1056
13	AIR & WATER SERVICES P&ID		1	8-00083-4001
14	PIPING GENERAL ARRANGEMENT SHT 1 OF 3		1	8-00083-4020
15	FOUNDATIONS - GENERAL ARRANGEMENT		1	8-00083-5010

DRG REF.: 8-00083-0001

NOTE:
ITEMS NUMBERS REFER TO DWG. 8-00083-0002



ISOMETRIC 3

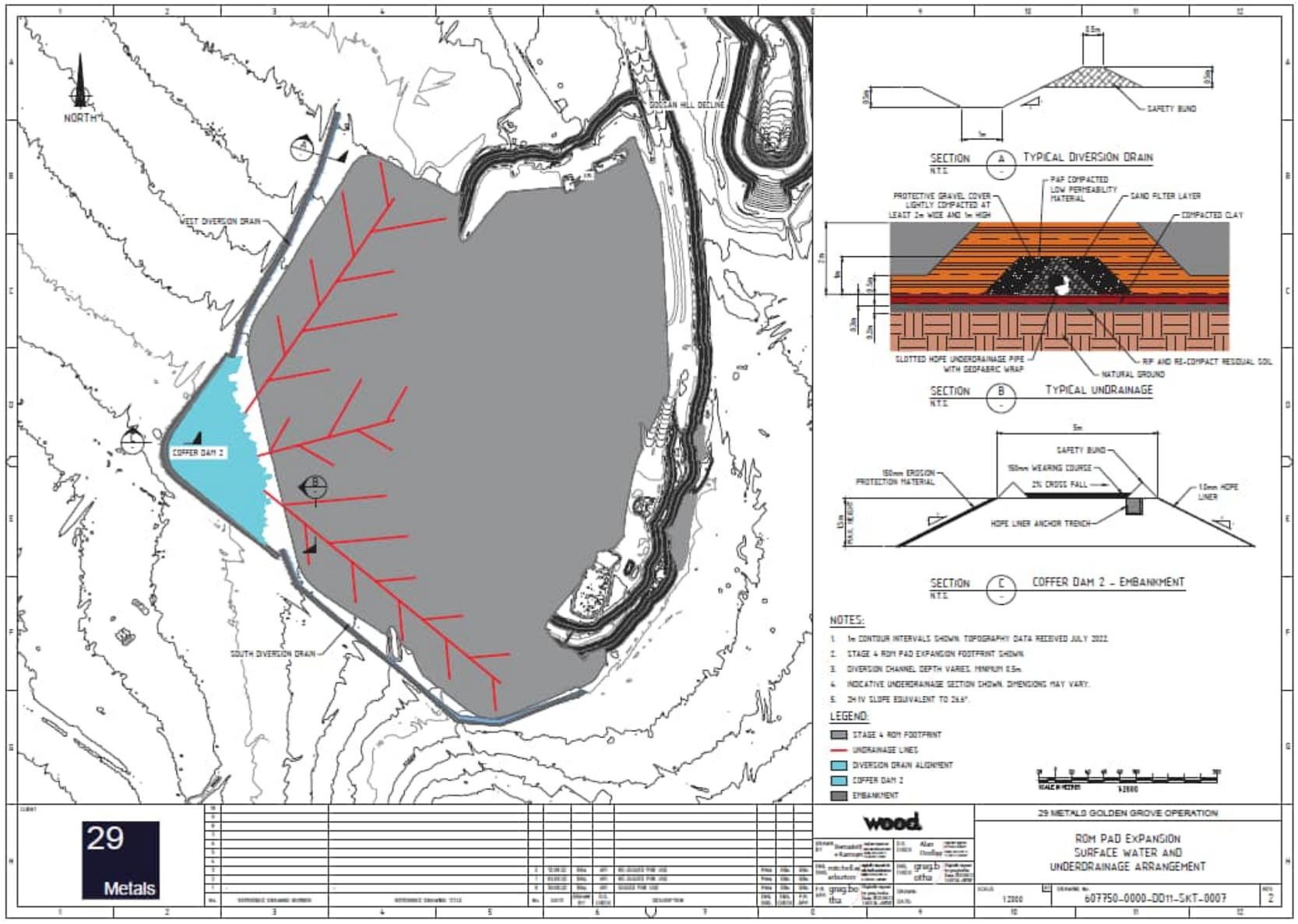
Schedule 9: Infrastructure/Equipment design and construction/installation requirements

No.	Design, construction and/or installation requirements (infrastructure and equipment)	Infrastructure/Equipment location
Category 5: Processing or beneficiation of metallic or non-metallic ore		

1.	• Tailings reclamation from TSF2:
	  ○ layout in accordance with Schedule 6; and
	  ○ dewatering sump(s) to allow removal of contaminated water via pumping.
	• Reclaimed tailings storage pad:
	  ○ construct in accordance with Schedule 7;
	  ○ capacity of 20,500 m^3;
	  ○ designed to contain a rainfall event of 1:100-year, 72-hour duration, while maintaining a minimum freeboard of 500 mm;
	  ○ clay foundation compacted to 95% modified maximum dry density (MMDD);
	  ○ lined with 2 mm High Density Poly Ethylene (HDPE) on compacted clay foundation;
	  ○ HDPE liner covered with 150 mm compacted loose soil, 150 mm general fill and 150 mm gravel wearing course compacted to 98% MMDD;
	  ○ perimeter bunds:
	  – HDPE liner anchored into the crest of the bund (i.e. exposed sides will be HDPE lined);
	  – constructed with well graded clayey gravel with sand and compacted to 95% of MMDD; and
	  – outer face of the bund lined with erosion resistant gravel soil.
	  ○ underdrainage system:
	  – herringbone configuration and perforated pipes, wrapped in geofabric, are laid in the filter sand layer, immediately above the HDPE liner;
	  – perforated subsoil pipes graded towards the storage pond and drainage via 50 mm diameter pipes; and
	  – one (1) pipe for the upper reaches of the area and three (3) pipes in the lower reaches, near the storage pond.
	  ○ pad engineered to slope towards the storage pond, therefore allowing contaminated water to flow into the storage pond via a filter bund;
	  ○ filter bund:
	  – geofabric (A24 BIDIM) encased bund with free-draining gravel chips (1-4 mm blue metal gravel), which is lightly tamped into place above the HDPE liner. Geofabric is wrapped around the upstream and downstream sides of the bund and fixed in an anchor trench on the crest; and
	  – also acts as a spillway from the reclaimed tailings storage pad to the storage pond, to facilitate water removal once pumps are at capacity.
	  ○ automatic dust suppression system installed on the perimeter of the reclaimed tailings storage pad.
	• Storage pond:
	  ○ construct in accordance with Schedule 7;
	  ○ capacity of 1,500 m^3;
	  ○ designed to contain a rainfall event of 1:100-year, 72-hour duration, while maintaining a minimum freeboard of 500 mm;
	  ○ clay foundation compacted to 95% modified maximum dry density (MMDD);
	  ○ lined with 1.5 mm High Density Poly Ethylene (HDPE) on compacted clay foundation;
	  ○ vehicle/mobile plant will not be permitted to drive on the storage pond, therefore the HDPE liner will not be covered;
	  ○ perimeter bunds:
	  – HDPE liner anchored into the crest of the bund (i.e. exposed sides will be HDPE lined);
	  – constructed with well graded clayey gravel with sand and compacted to 95% of MMDD; and
	  – outer face of the bund lined with erosion resistant gravel soil.
	  ○ decant system:
		As demonstrated in Schedules 1, 6, 7 and 8.

No.	Design, construction and/or installation requirements (infrastructure and equipment)	Infrastructure/Equipment location
	– sump and decant tower located with safe access steel walkway and rails to allow removal of contaminated water via pumping. ○ access management: – storage pond to be located within a fenced area and equipped with egress matts. • Paste plant: ○ layout of paste plant in accordance with Schedule 8; ○ comprising of binder storage and dosing with integrated vortex mixer for dust control; and ○ paste plant and associated infrastructure constructed/installed as per manufacturer's design specifications. • Stormwater management: ○ stormwater diversion bunds and/or culverts to be constructed/installed to safely divert surface water flows around the paste plant, reclaimed tailings storage pad, storage pond and construction areas. • Mobile screening equipment: ○ mobile screening plant to be placed within the reclaimed tailings storage pad and installed as per manufacturer's design specifications.	

Schedule 10: Coffer Dam 2 design drawings



Appendix B

Historical Rainfall and Evaporation

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Date	Golden Grove	Golden Grove	Golden Grove	Evaporation	LT Evap
Appendix B - Golden Grove Cl		Long-term Av.	Evaporation	SILO	Golden Grove
Jan-87	8.4	23.5		338.4	361.7
Feb-87	6.6	31.7		316.6	299.0
Mar-87	19.2	26.1		272.4	250.3
Apr-87	7.2	23.7		177.8	164.3
May-87	15.4	30.5		114.0	113.7
Jun-87	35.3	29.0		81.4	70.3
Jul-87	18.4	33.3		92.4	68.9
Aug-87	17.2	31.2		123.0	98.4
Sep-87	3.0	15.1		187.6	151.1
Oct-87	8.8	7.9		247.4	231.1
Nov-87	18.8	10.3		280.4	283.2
Dec-87	10.2	15.1		347.6	348.3
Jan-88	0.0	23.5		387.0	361.7
Feb-88	13.1	31.7		379.2	299.0
Mar-88	10.2	26.1		324.0	250.3
Apr-88	39.9	23.7		185.0	164.3
May-88	46.8	30.5		102.2	113.7
Jun-88	22.4	29.0		84.0	70.3
Jul-88	50.6	33.3		89.4	68.9
Aug-88	22.8	31.2		103.8	98.4
Sep-88	1.6	15.1		156.0	151.1
Oct-88	0.0	7.9		237.6	231.1
Nov-88	6.0	10.3		295.2	283.2
Dec-88	64.3	15.1		327.4	348.3
Jan-89	11.6	23.5		351.8	361.7
Feb-89	35.0	31.7		307.0	299.0
Mar-89	0.2	26.1		300.4	250.3
Apr-89	2.5	23.7		183.2	164.3
May-89	67.8	30.5		119.2	113.7
Jun-89	15.2	29.0		75.4	70.3
Jul-89	17.6	33.3		77.4	68.9
Aug-89	2.8	31.2		126.2	98.4
Sep-89	0.0	15.1		168.6	151.1
Oct-89	0.6	7.9		221.0	231.1
Nov-89	1.3	10.3		303.8	283.2
Dec-89	0.0	15.1		345.4	348.3
Jan-90	33.6	23.5		320.8	361.7
Feb-90	28.4	31.7		255.8	299.0
Mar-90	3.4	26.1		285.6	250.3
Apr-90	44.2	23.7		189.6	164.3
May-90	15.6	30.5		113.6	113.7
Jun-90	33.2	29.0		87.4	70.3
Jul-90	33.8	33.3		85.4	68.9
Aug-90	38.0	31.2		92.0	98.4
Sep-90	1.4	15.1		168.0	151.1
Oct-90	17.6	7.9		224.8	231.1
Nov-90	9.6	10.3		310.4	283.2
Dec-90	4.0	15.1		362.4	348.3

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Date	Golden Grove	Golden Grove	Golden Grove	Evaporation	LT Evap
Appendix B - Golden Grove Cl		Long-term Av.	Evaporation	SILO	Golden Grove
Jan-91	17.0	23.5		406.0	361.7
Feb-91	0.0	31.7		367.2	299.0
Mar-91	0.0	26.1		292.4	250.3
Apr-91	0.0	23.7		220.2	164.3
May-91	8.0	30.5		141.6	113.7
Jun-91	16.0	29.0		76.4	70.3
Jul-91	13.0	33.3		79.2	68.9
Aug-91	3.0	31.2		113.2	98.4
Sep-91	13.0	15.1		153.8	151.1
Oct-91	7.0	7.9		249.2	231.1
Nov-91	17.0	10.3		281.2	283.2
Dec-91	24.0	15.1		331.4	348.3
Jan-92	4.0	23.5		366.4	361.7
Feb-92	4.0	31.7		312.0	299.0
Mar-92	81.0	26.1		239.2	250.3
Apr-92	160.5	23.7		145.8	164.3
May-92	19.0	30.5		98.0	113.7
Jun-92	56.5	29.0		70.0	70.3
Jul-92	5.0	33.3		78.2	68.9
Aug-92	118.0	31.2		91.2	98.4
Sep-92	47.0	15.1		118.0	151.1
Oct-92	0.0	7.9		214.8	231.1
Nov-92	2.0	10.3		255.0	283.2
Dec-92	1.0	15.1		337.4	348.3
Jan-93	0.0	23.5		382.6	361.7
Feb-93	0.5	31.7		313.6	299.0
Mar-93	7.0	26.1		253.8	250.3
Apr-93	3.0	23.7		177.6	164.3
May-93	65.0	30.5		116.2	113.7
Jun-93	46.5	29.0		75.2	70.3
Jul-93	47.0	33.3		81.8	68.9
Aug-93	39.8	31.2		96.4	98.4
Sep-93	13.2	15.1		147.4	151.1
Oct-93	3.0	7.9		217.8	231.1
Nov-93	20.0	10.3		259.8	283.2
Dec-93	0.0	15.1		362.6	348.3
Jan-94	0.0	23.5		401.8	361.7
Feb-94	31.5	31.7		296.4	299.0
Mar-94	0.0	26.1		307.4	250.3
Apr-94	0.0	23.7		224.8	164.3
May-94	43.5	30.5		152.8	113.7
Jun-94	33.3	29.0		85.4	70.3
Jul-94	4.0	33.3		87.8	68.9
Aug-94	15.0	31.2		124.2	98.4
Sep-94	6.0	15.1		184.0	151.1
Oct-94	3.5	7.9		256.2	231.1
Nov-94	0.0	10.3		326.8	283.2
Dec-94	3.5	15.1		388.2	348.3

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Date	Golden Grove	Golden Grove	Golden Grove	Evaporation	LT Evap
Appendix B - Golden Grove Cl		Long-term Av.	Evaporation	SILO	Golden Grove
Jan-95	29.0	23.5		386.4	361.7
Feb-95	119.0	31.7		300.0	299.0
Mar-95	1.0	26.1		269.6	250.3
Apr-95	36.0	23.7		150.6	164.3
May-95	13.0	30.5		117.4	113.7
Jun-95	43.7	29.0		82.8	70.3
Jul-95	46.5	33.3		81.4	68.9
Aug-95	4.0	31.2		116.2	98.4
Sep-95	18.5	15.1		155.4	151.1
Oct-95	10.0	7.9		256.2	231.1
Nov-95	14.0	10.3		278.8	283.2
Dec-95	7.9	15.1		346.6	348.3
Jan-96	0.0	23.5		419.0	361.7
Feb-96	54.5	31.7		368.6	299.0
Mar-96	0.0	26.1		311.8	250.3
Apr-96	60.2	23.7		189.8	164.3
May-96	6.6	30.5		156.8	113.7
Jun-96	72.5	29.0		79.6	70.3
Jul-96	114.6	33.3		78.8	68.9
Aug-96	40.6	31.2		85.2	98.4
Sep-96	10.2	15.1		140.8	151.1
Oct-96	0.0	7.9		241.2	231.1
Nov-96	35.0	10.3		296.8	283.2
Dec-96	2.8	15.1		336.4	348.3
Jan-97	0.0	23.5		401.4	361.7
Feb-97	108.0	31.7		258.6	299.0
Mar-97	6.0	26.1		280.2	250.3
Apr-97	85.0	23.7		148.6	164.3
May-97	73.8	30.5		103.4	113.7
Jun-97	22.5	29.0		84.2	70.3
Jul-97	44.8	33.3		89.2	68.9
Aug-97	57.5	31.2		96.6	98.4
Sep-97	18.0	15.1		141.4	151.1
Oct-97	12.5	7.9		244.0	231.1
Nov-97	20.5	10.3		292.0	283.2
Dec-97	1.0	15.1		384.6	348.3
Jan-98	0.0	23.5		409.4	361.7
Feb-98	0.0	31.7		358.0	299.0
Mar-98	19.2	26.1		309.2	250.3
Apr-98	1.7	23.7		189.0	164.3
May-98	91.6	30.5		135.6	113.7
Jun-98	54.7	29.0		87.8	70.3
Jul-98	110.0	33.3		65.2	68.9
Aug-98	24.3	31.2		97.8	98.4
Sep-98	16.5	15.1		151.2	151.1
Oct-98	1.5	7.9		220.4	231.1
Nov-98	3.0	10.3		313.2	283.2
Dec-98	26.2	15.1		323.2	348.3

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Date	Golden Grove	Golden Grove	Golden Grove	Evaporation	LT Evap
Appendix B - Golden Grove Cl		Long-term Av.	Evaporation	SILO	Golden Grove
Jan-99	1.4	23.5		358.0	361.7
Feb-99	2.2	31.7		301.6	299.0
Mar-99	88.5	26.1		247.2	250.3
Apr-99	0.0	23.7		177.2	164.3
May-99	104.3	30.5		106.8	113.7
Jun-99	9.5	29.0		82.0	70.3
Jul-99	30.5	33.3		92.6	68.9
Aug-99	14.0	31.2		116.4	98.4
Sep-99	31.0	15.1		151.6	151.1
Oct-99	12.0	7.9	161.2	242.8	231.1
Nov-99	1.2	10.3	214.6	291.8	283.2
Dec-99	23.5	15.1	287.5	351.0	348.3
Jan-00	117.0	23.5	212.7	315.8	361.7
Feb-00	10.0	31.7	213.7	305.2	299.0
Mar-00	114.0	26.1	114.1	214.8	250.3
Apr-00	27.7	23.7	95.7	163.6	164.3
May-00	0.0	30.5	80.0	129.8	113.7
Jun-00	17.5	29.0	72.2	107.6	70.3
Jul-00	26.6	33.3	53.4	82.4	68.9
Aug-00	28.3	31.2	72.5	105.6	98.4
Sep-00	7.0	15.1	106.3	164.6	151.1
Oct-00	2.0	7.9	177.4	253.0	231.1
Nov-00	0.2	10.3	206.4	294.6	283.2
Dec-00	22.2	15.1	302.2	373.2	348.3
Jan-01	138.6	23.5	233.1	331.6	361.7
Feb-01	68.4	31.7	182.1	235.2	299.0
Mar-01	0.0	26.1	180.0	275.4	250.3
Apr-01	5.0	23.7	148.0	199.6	164.3
May-01	26.5	30.5	80.4	116.0	113.7
Jun-01	8.5	29.0	62.1	92.2	70.3
Jul-01	27.7	33.3	73.9	101.6	68.9
Aug-01	27.0	31.2	79.5	117.2	98.4
Sep-01	15.5	15.1	125.4	154.6	151.1
Oct-01	26.8	7.9	147.3	208.6	231.1
Nov-01	19.7	10.3	197.1	294.2	283.2
Dec-01	50.0	15.1	252.4	342.2	348.3
Jan-02	23.5	23.5	287.4	349.4	361.7
Feb-02	10.4	31.7	243.8	335.2	299.0
Mar-02	30.8	26.1	207.0	283.4	250.3
Apr-02	18.8	23.7	137.8	188.4	164.3
May-02	15.0	30.5	98.7	141.6	113.7
Jun-02	25.2	29.0	62.8	95.8	70.3
Jul-02	25.2	33.3	63.8	94.8	68.9
Aug-02	22.7	31.2	85.9	118.2	98.4
Sep-02	5.0	15.1	119.6	172.2	151.1
Oct-02	7.8	7.9	327.2	245.6	231.1
Nov-02	1.0	10.3	251.2	327.2	283.2
Dec-02	40.6	15.1	277.6	356.8	348.3

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Date	Golden Grove	Golden Grove	Golden Grove	Evaporation	LT Evap
	Appendix B - Golden Grove Cl	Long-term Av.	Evaporation	SILO	Golden Grove
Jan-03	2.4	23.5	285.9	379.6	361.7
Feb-03	2.2	31.7	237.4	306.2	299.0
Mar-03	30.6	26.1	224.8	289.0	250.3
Apr-03	11.8	23.7	134.7	176.2	164.3
May-03	40.7	30.5	100.7	141.8	113.7
Jun-03	26.6	29.0	60.1	96.6	70.3
Jul-03	14.9	33.3	83.4	85.6	68.9
Aug-03	36.9	31.2	73.0	109.8	98.4
Sep-03	27.7	15.1	104.7	153.8	151.1
Oct-03	2.0	7.9	184.0	249.4	231.1
Nov-03	27.3	10.3	239.3	302.8	283.2
Dec-03	1.8	15.1	320.8	379.0	348.3
Jan-04	1.8	23.5	312.5	359.6	361.7
Feb-04	13.0	31.7	248.2	296.4	299.0
Mar-04	16.4	26.1	194.3	273.2	250.3
Apr-04	26.0	23.7	132.3	170.6	164.3
May-04	15.6	30.5	87.5	121.0	113.7
Jun-04	22.0	29.0	71.0	90.4	70.3
Jul-04	31.5	33.3	58.2	76.8	68.9
Aug-04	19.2	31.2	71.7	110.4	98.4
Sep-04	12.6	15.1	108.4	158.2	151.1
Oct-04	2.2	7.9	177.8	236.8	231.1
Nov-04	11.0	10.3	218.6	285.4	283.2
Dec-04	0.8	15.1	284.0	360.4	348.3
Jan-05	0.0	23.5	336.1	399.2	361.7
Feb-05	6.2	31.7	278.1	320.8	299.0
Mar-05	43.1	26.1	216.9	262.4	250.3
Apr-05	5.0	23.7	128.3	184.6	164.3
May-05	54.6	30.5	89.3	118.2	113.7
Jun-05	68.4	29.0	65.8	91.8	70.3
Jul-05	9.8	33.3	60.9	89.8	68.9
Aug-05	62.6	31.2	81.2	109.2	98.4
Sep-05	18.6	15.1	103.8	154.6	151.1
Oct-05	10.0	7.9	145.8	219.0	231.1
Nov-05	0.0	10.3	236.9	306.4	283.2
Dec-05	0.0	15.1	261.6	340.4	348.3
Jan-06	62.8	23.5	246.9	295.6	361.7
Feb-06	44.8	31.7	184.4	252.8	299.0
Mar-06	68.5	26.1	165.2	282.8	250.3
Apr-06	2.2	23.7	95.2	156.8	164.3
May-06	1.0	30.5	93.6	139.2	113.7
Jun-06	7.1	29.0	72.5	108.2	70.3
Jul-06	11.6	33.3	60.9	98.0	68.9
Aug-06	5.0	31.2	91.9	134.4	98.4
Sep-06	41.5	15.1	117.0	170.4	151.1
Oct-06	20.1	7.9	194.9	248.0	231.1
Nov-06	2.0	10.3	230.4	285.0	283.2
Dec-06	2.6	15.1	304.9	379.0	348.3

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Date	Golden Grove	Golden Grove	Golden Grove	Evaporation	LT Evap
	Appendix B - Golden Grove Cl	Long-term Av.	Evaporation	SILO	Golden Grove
Jan-07	17.9	23.5	285.9	354.2	361.7
Feb-07	24.4	31.7	271.4	308.0	299.0
Mar-07	0.4	26.1	308.7	335.8	250.3
Apr-07	0.9	23.7	150.3	196.2	164.3
May-07	4.2	30.5	83.4	126.6	113.7
Jun-07	24.7	29.0	52.1	122.2	70.3
Jul-07	41.2	33.3	54.9	107.6	68.9
Aug-07	6.2	31.2	82.6	124.4	98.4
Sep-07	10.8	15.1	122.7	166.8	151.1
Oct-07	2.2	7.9	189.6	247.4	231.1
Nov-07	1.0	10.3	255.9	340.8	283.2
Dec-07	14.0	15.1	253.0	339.6	348.3
Jan-08	0.0	23.5		399.4	361.7
Feb-08	126.0	31.7		296.0	299.0
Mar-08	20.0	26.1		275.6	250.3
Apr-08	71.8	23.7		169.8	164.3
May-08	0.0	30.5		127.0	113.7
Jun-08	12.2	29.0		102.2	70.3
Jul-08	106.2	33.3		91.2	68.9
Aug-08	34.2	31.2		124.4	98.4
Sep-08	9.2	15.1		162.0	151.1
Oct-08	14.4	7.9		241.4	231.1
Nov-08	0.0	10.3		245.4	283.2
Dec-08	4.0	15.1		338.8	348.3
Jan-09	46.6	23.5		380.8	361.7
Feb-09	33.4	31.7		310.0	299.0
Mar-09	0.0	26.1		272.6	250.3
Apr-09	19.0	23.7		200.2	164.3
May-09	25.4	30.5		144.0	113.7
Jun-09	12.6	29.0		74.0	70.3
Jul-09	5.3	33.3		76.0	68.9
Aug-09	12.0	31.2		97.6	98.4
Sep-09	11.2	15.1		139.2	151.1
Oct-09	7.4	7.9		220.4	231.1
Nov-09	6.6	10.3		299.0	283.2
Dec-09	21.0	15.1		365.4	348.3
Jan-10	0.0	23.5		361.8	361.7
Feb-10	1.4	31.7		315.2	299.0
Mar-10	1.0	26.1		304.4	250.3
Apr-10	2.6	23.7		183.2	164.3
May-10	19.2	30.5		135.0	113.7
Jun-10	36.2	29.0		85.6	70.3
Jul-10	34.4	33.3		86.4	68.9
Aug-10	50.2	31.2		111.6	98.4
Sep-10	4.6	15.1		170.4	151.1
Oct-10	0.0	7.9		267.4	231.1
Nov-10	0.0	10.3		328.6	283.2
Dec-10	90.8	15.1		310.8	348.3

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Date	Golden Grove	Golden Grove	Golden Grove	Evaporation	LT Evap
Appendix B - Golden Grove Cl		Long-term Av.	Evaporation	SILO	Golden Grove
Jan-11	72.4	23.5		309.8	361.7
Feb-11	57.4	31.7		259.8	299.0
Mar-11	0.0	26.1		274.6	250.3
Apr-11	0.0	23.7		200.6	164.3
May-11	52.8	30.5		131.4	113.7
Jun-11	29.4	29.0		84.6	70.3
Jul-11	33.0	33.3		73.8	68.9
Aug-11	22.8	31.2		111.0	98.4
Sep-11	7.4	15.1		157.2	151.1
Oct-11	41.0	7.9		200.2	231.1
Nov-11	15.8	10.3		281.0	283.2
Dec-11	9.0	15.1		320.0	348.3
Jan-12	8.6	23.5		316.0	361.7
Feb-12	72.0	31.7		301.8	299.0
Mar-12	13.5	26.1		274.6	250.3
Apr-12	8.5	23.7		184.4	164.3
May-12	2.8	30.5		137.8	113.7
Jun-12	17.0	29.0		87.6	70.3
Jul-12	5.0	33.3		96.4	68.9
Aug-12	23.1	31.2		132.6	98.4
Sep-12	1.6	15.1		177.4	151.1
Oct-12	0.0	7.9		252.8	231.1
Nov-12	30.4	10.3		282.4	283.2
Dec-12	39.0	15.1		301.4	348.3
Jan-13	40.2	23.5	387.6	316.0	361.7
Feb-13	3.5	31.7	391.3	301.8	299.0
Mar-13	17.0	26.1	281.9	274.6	250.3
Apr-13	11.9	23.7	219.3	184.4	164.3
May-13	48.5	30.5	113.2	137.8	113.7
Jun-13	4.5	29.0	74.2	87.6	70.3
Jul-13	17.3	33.3	92.7	96.4	68.9
Aug-13	27.3	31.2	115.5	132.6	98.4
Sep-13	18.6	15.1	146.9	177.4	151.1
Oct-13	13.9	7.9	272.6	252.8	231.1
Nov-13	1.2	10.3	365.9	282.4	283.2
Dec-13	6.7	15.1	416.4	301.4	348.3
Jan-14	24.0	23.5	441.9	316.0	361.7
Feb-14	23.5	31.7	318.8	301.8	299.0
Mar-14	28.0	26.1	324.4	274.6	250.3
Apr-14	53.5	23.7	213.2	184.4	164.3
May-14	73.5	30.5	88.1	137.8	113.7
Jun-14	7.4	29.0	94.5	87.6	70.3
Jul-14	12.2	33.3	89.0	96.4	68.9
Aug-14	22.6	31.2	147.1	132.6	98.4
Sep-14	30.4	15.1	189.9	177.4	151.1
Oct-14	10.0	7.9	288.5	252.8	231.1
Nov-14	5.0	10.3	339.2	282.4	283.2
Dec-14	5.5	15.1	422.9	301.4	348.3

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Date	Golden Grove	Golden Grove	Golden Grove	Evaporation	LT Evap
	Appendix B - Golden Grove Cl	Long-term Av.	Evaporation	SILO	Golden Grove
Jan-15	12.2	23.5	528.6	316.0	361.7
Feb-15	13.5	31.7	399.1	301.8	299.0
Mar-15	86.5	26.1	233.1	274.6	250.3
Apr-15	40.2	23.7	162.2	184.4	164.3
May-15	9.5	30.5	135.4	137.8	113.7
Jun-15	22.0	29.0	89.2	87.6	70.3
Jul-15	44.0	33.3	85.7	96.4	68.9
Aug-15	39.4	31.2	95.0	132.6	98.4
Sep-15	0.5	15.1	213.9	177.4	151.1
Oct-15	0.0	7.9	300.3	252.8	231.1
Nov-15	11.3	10.3	336.3	282.4	283.2
Dec-15	1.5	15.1	428.8	301.4	348.3
Jan-16	75.9	23.5	337.5	310.5	361.7
Feb-16	0.0	31.7	375.2	332.5	299.0
Mar-16	48.8	26.1	291.1	265.6	250.3
Apr-16	37.5	23.7	171.6	170.8	164.3
May-16	35.5	30.5	108.0	111.5	113.7
Jun-16	40.5	29.0	57.7	72.0	70.3
Jul-16	29.8	33.3	78.6	82.9	68.9
Aug-16	31.5	31.2	114.2	108.2	98.4
Sep-16	4.8	15.1	165.2	156.2	151.1
Oct-16	2.0	7.9	273.2	242.2	231.1
Nov-16	1.0	10.3	345.8	308.6	283.2
Dec-16	14.2	15.1	396.6	341.0	348.3
Jan-17	11.5	23.5	454.9	324.8	361.7
Feb-17	150.3	31.7	252.1	231.2	299.0
Mar-17	0.0	26.1	314.1	270.9	250.3
Apr-17	2.5	23.7	237.1	188.7	164.3
May-17	4.7	30.5	152.1	133.3	113.7
Jun-17	3.0	29.0	127.0	113.8	70.3
Jul-17	10.7	33.3	83.9	94.7	68.9
Aug-17	47.9	31.2	117.2	113.3	98.4
Sep-17	16.1	15.1	184.1	166.3	151.1
Oct-17	0.5	7.9	278.2	237.6	231.1
Nov-17	18.5	10.3	363.8	312.0	283.2
Dec-17	11.0	15.1	407.7	345.4	348.3
Jan-18	29.5	23.5	429.6	359.8	361.7
Feb-18	7.4	31.7	326.4	263.8	299.0
Mar-18	16.0	26.1	347.8	291.5	250.3
Apr-18	2.3	23.7	202.1	180.3	164.3
May-18	14.3	30.5	176.2	161.8	113.7
Jun-18	26.3	29.0	83.3	82.3	70.3
Jul-18	37.8	33.3	78.7	93.6	68.9
Aug-18	30.4	31.2	123.2	110.8	98.4
Sep-18	0.8	15.1	206.3	167.5	151.1
Oct-18	15.5	7.9	256.5	235.9	231.1
Nov-18	12.5	10.3	353.0	289.3	283.2
Dec-18	17.0	15.1	381.7	345.9	348.3
Jan-19	0.0	23.5	466.8	389.5	361.7
Feb-19	0.0	31.7	417.3	334.1	299.0
Mar-19	26.5	26.1	335.0	273.2	250.3
Apr-19	47.8	23.7	207.7	181.0	164.3
May-19	0.0	30.5	155.7	139.2	113.7
Jun-19	82.5	29.0	78.8	89.8	70.3
Jul-19	17.0	33.3	83.2	89.4	68.9
Aug-19	13.0	31.2	145.9	131.3	98.4
Sep-19	1.0	15.1	228.4	184.9	151.1
Oct-19	2.0	7.9	311.4	259.4	231.1

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Date	Golden Grove	Golden Grove	Golden Grove	Evaporation	LT Evap
	Appendix B - Golden Grove Cl	Long-term Av.	Evaporation	SILO	Golden Grove
Nov-19	0.0	10.3	60.9	339.8	283.2
Dec-19	23.4	15.1	NR	390.4	348.3
Jan-20	3.0	23.5	NR	356.4	361.7
Feb-20	47.5	31.7	NR	290.8	299.0
Mar-20	13.0	26.1	NR	245.8	250.3
Apr-20	1.5	23.7	73.9	175.7	164.3
May-20	13.5	30.5	155.6	130.6	113.7
Jun-20	24.8	29.0	92.3	97.1	70.3
Jul-20	34.0	33.3	97.1	97.9	68.9
Aug-20	41.8	31.2	115.2	114.9	98.4
Sep-20	1.8	15.1	201.2	187.9	151.1
Oct-20	0.4	7.9	288.9	268.0	231.1
Nov-20	10.0	10.3	339.6	289.7	283.2
Dec-20	5.5	15.1	460.6	379.7	348.3
Jan-21	0.0	23.5	445.4	386.3	361.7
Feb-21	43.0	31.7	299.6	256.0	299.0
Mar-21	79.0	26.1	251.5	240.2	250.3
Apr-21	26.0	23.7	224.3	177.4	164.3
May-21	110.5	30.5	111.1	100.3	113.7
Jun-21	41.5	29.0	64.3	69.6	70.3
Jul-21	64.8	33.3	51.6	74.3	68.9
Aug-21	10.4	31.2	108.6	103.4	98.4
Sep-21	6.4	15.1	191.7	166.1	151.1
Oct-21	26.7	7.9	203.1	198.5	231.1
Nov-21	5.2	10.3	334.8	249.7	283.2
Dec-21	2.0	15.1	439.2	362.7	348.3
Jan-22	16.3	23.5	516.7	376.4	361.7
Feb-22	11.2	31.7	374.3	284.9	299.0
Mar-22	58.2	26.1	290.5	257.9	250.3
Apr-22	18.5	23.7	143.9	167.3	164.3
May-22	20.2	30.5	128.5	127.5	113.7
Jun-22	21.7	29.0	72.0	84.5	70.3
Jul-22	25.9	33.3	70.1	93.5	68.9
Aug-22	58.2	31.2	116.4	105.8	98.4
Sep-22	49.0	15.1	138.5	137.5	151.1
Oct-22	2.3	7.9	233.6	216.5	231.1
Nov-22	3.6	10.3	326.8	298.5	283.2
Dec-22	0.8	15.1	441.6	378.4	348.3
Jan-23	16.3	23.5	406.3	403.8	361.7
Feb-23	11.2	31.7	391.8	344.5	299.0
Mar-23	58.2	26.1	295.6	295.2	250.3
Apr-23	18.5	23.7	181.7	179.1	164.3
May-23	20.2	30.5	157.2	143.9	113.7
Jun-23	21.7	29.0	66.3	77.4	70.3
Jul-23	25.9	33.3	82.8	92.7	68.9
Aug-23	58.2	31.2	136.8	133.9	98.4
Sep-23	49.0	15.1	210.6	178.7	151.1
Oct-23	2.3	7.9	316.1	271.3	231.1
Nov-23	3.6	10.3	358.7	329.0	283.2
Dec-23	0.8	15.1	458.0	397.4	348.3
Jan-24	1.0	23.5	445.8	415.9	361.7
Feb-24	17.3	31.7	395.7	382.9	299.0
Mar-24	28.0	26.1	266.1	283.0	250.3
Apr-24	6.5	23.7	240.0	207.8	164.3
May-24	11.2	30.5	161.0	150.2	113.7
Jun-24	99.9	29.0	12.0	76.9	70.3
Jul-24	54.7	33.3	0.0	84.0	68.9

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Date	Golden Grove	Golden Grove	Golden Grove	Evaporation	LT Evap
Appendix B - Golden Grove Cl		Long-term Av.	Evaporation	SILO	Golden Grove
Aug-24	29.3	31.2	68.8	104.0	98.4
Sep-24	6.0	15.1	205.6	171.0	151.1
Oct-24	18.8	7.9	235.2	245.9	231.1
Nov-24	40.0	10.3	257.7	298.8	283.2
Dec-24	8.6	15.1	372.6	383.1	348.3
2022	**285.9**	**277.6**	**2852.9**	**2528.7**	**361.7**
2023	**285.9**	**277.6**	**3061.9**	**2846.9**	**299.0**
2024	**321.3**	**277.6**	**2660.5**	**2803.5**	**250.3**

Appendix B. Golden Grove Rainfall and Evaporation (1987-2024)

Month	1987-2024 Totals	Rain Averages	Evap Totals	Evap Averages
January	823.5	23.5	6149.3	361.7
February	1110.3	31.7	5083.8	299.0
March	914.7	26.1	4255.5	250.3
April	830.9	23.7	2793.4	164.3
May	1065.8	30.5	1933.3	113.7
June	1015.7	29.0	1194.8	70.3
July	1166.5	33.3	1170.8	68.9
August	1092.0	31.2	1672.4	98.4
September	527.3	15.1	2569.0	151.1
October	277.7	7.9	4159.3	231.1
November	360.1	10.3	5097.6	283.2
December	530.2	15.1	6270.3	348.3
Current Average Total		**277.56**		**2440.41**

Appendix C

Monthly Groundwater Pumpage, Scuddles and Gossan Hill Mines

Appendix C - Golden Grove Monthly Pumpage Data (1990 to 2024)

MONTH	Nett Scuddles Mine Monthly Pumpage	Potable Water Supply						Gossan Hill Mine Area								Seepage Recovery Pumpage	Combined Total Monthly Pumpage	Monthly Discharge Pumpage to Lake Wow-naminya
		GGW53P Monthly Pumpage	GGW67P Monthly Pumpage	GGW69P Monthly Pumpage	GGW93P Monthly Pumpage	RMB4 Monthly Pumpage	Total Monthly Pumpage	GHDEC37R Monthly Pumpage	GHDEC44P Monthly Pumpage	Gossan Hill Bores Monthly Pumpage	EPA to GH UG 2010-2012	GH UG to MWC via EPB (190 to EPB)	GH UG to MWC (667 to EPB)	Nett Gossan Hill Decline Monthly Pumpage	Nett Gossan Hill Mine Monthly Pumpage			
	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)
Jan-90	50,364	9	0	0	0	0	14,262	0	0	0	0	0	0	0	0	0	64,626	0
Feb-90	39,312	238	0	0	0	0	9,414	0	0	0	0	0	0	0	0	0	48,726	0
Mar-90	32,618	3,913	0	0	0	0	12,317	0	0	0	0	0	0	0	0	0	44,935	0
Apr-90	39,650	2,844	0	0	0	0	7,595	0	0	0	0	0	0	0	0	0	47,245	0
May-90	29,170	1,099	0	0	0	0	9,573	0	0	0	0	0	0	0	0	0	38,743	0
Jun-90	28,230	0	0	0	0	0	5,063	0	0	0	0	0	0	0	0	0	33,293	0
Jul-90	29,760	0	0	0	0	0	2,828	0	0	0	0	0	0	0	0	0	32,588	0
Aug-90	29,760	416	0	0	0	0	6,052	0	0	0	0	0	0	0	0	0	35,812	0
Sep-90	28,800	1,934	0	0	0	0	7,232	0	0	0	0	0	0	0	0	0	36,032	0
Oct-90	29,760	1,017	0	0	0	0	6,846	0	0	0	0	0	0	0	0	0	36,606	0
Nov-90	28,800	1,017	0	0	0	0	6,846	0	0	0	0	0	0	0	0	0	35,646	0
Dec-90	29,760	2,129	0	0	0	0	8,967	0	0	0	0	0	0	0	0	0	38,727	0
Jan-91	N.R.	4,776	0	0	0	0	15,473	0	0	0	0	0	0	0	0	0	15,473	0
Feb-91	N.R.	3,720	0	0	0	0	12,415	0	0	0	0	0	0	0	0	0	12,415	0
Mar-91	N.R.	4,280	0	0	0	0	11,184	0	0	0	0	0	0	0	0	0	11,184	0
Apr-91	N.R.	602	0	0	0	0	8,191	0	0	0	0	0	0	0	0	0	8,191	0
May-91	N.R.	0	0	0	0	0	8,028	0	0	0	0	0	0	0	0	0	8,028	0
Jun-91	N.R.	2	0	0	0	0	8,226	0	0	0	0	0	0	0	0	0	8,226	0
Jul-91	N.R.	1	0	0	0	0	5,729	0	0	0	0	0	0	0	0	0	5,729	0
Aug-91	N.R.	1	0	0	0	0	5,729	0	0	0	0	0	0	0	0	0	5,729	0
Sep-91	N.R.	50	0	0	0	0	11,192	0	0	0	0	0	0	0	0	0	11,192	0
Oct-91	N.R.	611	0	0	0	0	9,478	0	0	0	0	0	0	0	0	0	9,478	0
Nov-91	N.R.	1,114	0	0	0	0	7,548	0	0	0	0	0	0	0	0	0	7,548	0
Dec-91	N.R.	1,114	0	0	0	0	7,548	0	0	0	0	0	0	0	0	0	7,548	0
Jan-92	62,000	5,180	0	0	0	0	21,154	0	0	0	0	0	0	0	0	0	83,154	0
Feb-92	56,000	4,042	0	0	0	0	13,272	0	0	0	0	0	0	0	0	0	69,272	0
Mar-92	62,000	2,063	0	0	0	0	7,919	0	0	0	0	0	0	0	0	0	69,919	0
Apr-92	60,000	778	0	0	0	0	3,432	0	0	0	0	0	0	0	0	0	63,432	0
May-92	62,000	778	0	0	0	0	3,432	0	0	0	0	0	0	0	0	0	65,432	0
Jun-92	60,000	778	0	0	0	0	3,432	0	0	0	0	0	0	0	0	0	63,432	0
Jul-92	62,000	4	0	0	0	0	1,140	0	0	0	0	0	0	0	0	0	63,140	0
Aug-92	62,000	0	0	0	0	0	5,923	0	0	0	0	0	0	0	0	0	67,923	0
Sep-92	60,000	0	0	0	0	0	5,923	0	0	0	0	0	0	0	0	0	65,923	0
Oct-92	62,000	5,367	0	0	0	0	8,536	0	0	0	0	0	0	0	0	0	70,536	0
Nov-92	60,000	7,503	0	0	0	0	12,254	0	0	0	0	0	0	0	0	0	72,254	0
Dec-92	62,000	3,184	0	0	0	0	10,779	0	0	0	0	0	0	0	0	0	72,779	0
Jan-93	62,000	2,988	0	0	0	0	14,719	0	0	0	0	0	0	0	0	0	76,719	0
Feb-93	56,000	2,549	0	0	0	0	12,083	0	0	0	0	0	0	0	0	0	68,083	0
Mar-93	62,000	257	0	0	0	0	9,213	0	0	0	0	0	0	0	0	0	71,213	0
Apr-93	60,000	1	0	0	0	0	8,307	0	0	0	0	0	0	0	0	0	68,307	0
May-93	62,000	1	0	0	0	0	5,434	0	0	0	0	0	0	0	0	0	67,434	0
Jun-93	60,000	0	0	0	0	0	4,343	0	0	0	0	0	0	0	0	0	64,343	0
Jul-93	62,000	11	0	0	0	0	5,268	0	0	0	0	0	0	0	0	0	67,268	0
Aug-93	62,000	0	0	0	0	0	5,174	0	0	0	0	0	0	0	0	0	67,174	0
Sep-93	60,000	603	6,120	0	0	0	11,741	0	0	0	0	0	0	0	0	0	71,741	0
Oct-93	62,000	2	7,988	8,122	0	0	20,332	0	0	0	0	0	0	0	0	0	82,332	0
Nov-93	60,000	291	4,587	9,067	0	0	19,391	0	0	0	0	0	0	0	0	0	79,391	0
Dec-93	62,000	420	8,065	8,142	0	0	23,443	0	0	0	0	0	0	0	0	0	85,443	0

Appendix C - Golden Grove Monthly Pumpage Data (1990 to 2024)

MONTH	Nett Scuddles Mine Monthly Pumpage		Potable Water Supply					Gossan Hill Mine Area								Seepage Recovery Pumpage	Combined Total Monthly Pumpage	Monthly Discharge Pumpage to Lake Wow-naminya
		GGW53P Monthly Pumpage	GGW67P Monthly Pumpage	GGW69P Monthly Pumpage	GGW93P Monthly Pumpage	RMB4 Monthly Pumpage	Total Monthly Pumpage	GHDEC37R Monthly Pumpage	GHDEC44P Monthly Pumpage	Gossan Hill Bores Monthly Pumpage	EPA to GH UG 2010-2012	GH UG to MWC via EPB (190 to EPB)	GH UG to MWC (667 to EPB)	Nett Gossan Hill Decline Monthly Pumpage	Nett Gossan Hill Mine Monthly Pumpage			
	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)
Jan-94	84,370	5,092	0	0	0	0	5,092	0	0	0	0	0	0	0	0	0	89,462	0
Feb-94	76,689	2,091	6,902	13,145	0	0	31,297	0	0	0	0	0	0	0	0	0	107,986	0
Mar-94	92,673	535	9,275	22,734	0	0	39,094	0	0	0	0	0	0	0	0	0	131,767	0
Apr-94	96,682	17	7,652	27,623	0	0	41,952	0	0	0	0	0	0	0	0	0	138,634	0
May-94	91,601	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91,601	0
Jun-94	84,240	40	5,785	30,592	0	0	42,152	0	0	0	0	0	0	0	0	0	126,392	0
Jul-94	84,370	3	2,969	6,359	0	0	10,787	0	0	0	0	0	0	0	0	0	95,157	0
Aug-94	66,960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66,960	0
Sep-94	65,318	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65,318	0
Oct-94	61,871	6	8,507	11,810	0	0	28,191	0	0	0	0	0	0	0	0	0	90,062	0
Nov-94	51,322	427	2,981	3,271	0	0	10,764	0	0	12,960	0	0	0	0	12,960	0	75,046	0
Dec-94	68,299	355	2,810	5,149	0	0	13,459	0	0	13,392	0	0	0	0	13,392	0	95,150	0
Jan-95	17,849	799	3,293	13,057	0	0	20,442	13,392	0	40,176	0	0	0	0	40,176	0	78,467	0
Feb-95	19,890	277	7,598	10,656	0	0	22,510	12,096	0	36,288	0	0	0	0	36,288	0	78,688	0
Mar-95	31,596	4	3,814	4,766	0	0	12,226	13,392	0	40,176	0	0	0	0	40,176	0	83,998	0
Apr-95	16,889	5	6,120	5,878	0	0	15,462	9,564	15,073	44,260	0	0	0	0	44,260	0	76,611	0
May-95	21,460	3	4,462	3,896	0	0	11,166	14,881	15,956	46,310	0	0	0	16,050	62,360	0	94,986	0
Jun-95	34,291	3	6,437	8,153	0	0	17,321	16,259	26,800	57,134	0	0	0	15,550	72,684	0	124,296	0
Jul-95	24,001	2	7,478	7,995	0	0	17,960	14,122	23,675	53,364	0	0	0	16,050	69,414	0	111,375	0
Aug-95	29,190	2	3,554	2,231	0	0	6,936	11,133	22,521	48,101	0	0	0	16,050	64,151	0	100,277	0
Sep-95	31,148	3	6,686	3,761	0	0	13,123	9,009	19,649	42,432	0	0	0	15,550	57,982	0	102,253	0
Oct-95	42,211	5	6,117	1,356	0	0	11,996	10,823	4,170	23,548	0	0	0	68,900	92,448	0	146,655	0
Nov-95	47,761	724	1,316	7,879	0	0	16,417	0	15,000	26,894	0	0	0	86,486	113,380	0	177,558	0
Dec-95	23,823	305	3,127	1,563	0	0	6,901	0	15,500	52,400	0	0	0	124,589	157,589	0	188,313	0
Jan-96	34,550	9	9,228	10,172	0	0	27,311	0	18,749	18,749	0	0	0	114,186	132,935	0	194,796	0
Feb-96	37,739	6	8,053	11,364	0	0	25,916	0	16,934	16,934	0	0	0	110,678	127,612	0	191,267	0
Mar-96	43,819	5	8,864	10,273	0	0	25,050	0	18,749	18,749	0	0	0	133,056	151,805	0	220,674	0
Apr-96	51,477	5	3,972	17,332	0	0	24,521	0	18,144	18,144	0	0	0	108,864	127,008	0	203,006	0
May-96	46,202	79	6,232	9,223	0	0	19,655	0	18,749	18,749	0	0	0	112,493	131,242	0	197,099	0
Jun-96	50,544	90	4,044	3,243	0	0	9,517	0	18,144	18,144	0	0	0	108,864	127,008	0	187,069	0
Jul-96	54,533	40	0	8,591	0	0	10,974	0	18,749	18,749	0	0	0	112,493	131,242	0	196,749	0
Aug-96	39,641	40	0	8,592	0	0	10,974	0	18,749	18,749	0	0	0	112,493	131,242	0	181,857	0
Sep-96	47,097	45	321	9,683	0	0	12,324	0	18,144	18,144	0	0	0	108,864	127,008	0	186,429	0
Oct-96	54,104	269	260	9,404	0	0	15,191	0	18,749	18,749	0	0	0	112,493	131,242	0	200,537	0
Nov-96	62,856	415	84	10,608	0	0	14,920	0	18,144	18,144	0	0	0	108,864	127,008	0	204,784	0
Dec-96	53,969	910	40	13,429	0	0	20,708	0	18,749	18,749	0	0	0	112,493	131,242	0	205,919	0
Jan-97	48,211	1,646	-1	4,165	0	0	5,810	0	18,749	18,749	0	0	0	112,492	131,241	0	185,262	0
Feb-97	52,013	845	1	7,317	0	0	8,163	0	16,934	16,934	0	0	0	84,672	101,606	0	161,782	0
Mar-97	60,531	2	0	16,791	0	0	16,793	0	18,749	18,749	0	0	0	93,744	112,493	0	189,817	0
Apr-97	47,434	0	0	4,662	0	0	4,662	0	18,144	18,144	0	0	0	85,536	103,680	0	155,776	0
May-97	51,425	1	0	4,662	0	0	4,663	0	18,749	18,749	0	0	0	88,387	107,136	0	163,224	0
Jun-97	41,214	0	0	4,662	0	0	4,662	0	18,144	18,144	0	0	0	85,536	103,680	0	149,556	0
Jul-97	50,355	0	5	5,677	0	0	5,682	0	18,749	18,749	0	0	0	99,101	117,850	0	173,887	117,850
Aug-97	46,310		797	11,164	0	0	11,961	0	18,749	18,749	0	0	0	115,171	133,920	0	192,191	113,920
Sep-97	53,569	0	797	11,164	0	0	11,961	0	18,144	18,144	0	0	0	116,640	134,784	0	200,314	134,784
Oct-97	50,622	0	797	11,164	0	0	11,961	0	18,749	18,749	0	0	0	136,598	155,347	0	217,930	155,347
Nov-97	52,169	0	0	12,656	0	0	12,656	0	18,144	18,144	0	0	0	142,560	160,704	0	225,529	160,704
Dec-97	44,496	0	628	18,159	0	0	18,787	0	18,749	18,749	0	0	0	155,347	174,096	0	237,379	174,096

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		GGW53P Monthly Pumpage	GGW67P Monthly Pumpage	GGW69P Monthly Pumpage	GGW93P Monthly Pumpage	RMB4 Monthly Pumpage	Total Monthly Pumpage	GHDEC37R Monthly Pumpage	GHDEC44P Monthly Pumpage	Gossan Hill Bores Monthly Pumpage	EPA to GH UG 2010-2012	GH UG to MWC via EPB (190 to EPB)	GH UG to MWC (667 to EPB)	Nett Gossan Hill Decline Monthly Pumpage	Nett Gossan Hill Mine Monthly Pumpage			
	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)
Jan-98	28,904	0	0	22,426	0	0	22,426	0	18,749	18,749	0	0	0	155,348	174,097	0	225,427	175,408
Feb-98	34,895	0	0	22,426	0	0	22,426	0	16,934	16,934	0	0	0	157,164	174,098	0	231,419	175,408
Mar-98	35,488	0	0	6,886	0	0	6,886	0	18,749	18,749	0	0	0	147,044	165,793	0	208,167	175,408
Apr-98	33,058	0	0	17,761	0	0	17,761	0	18,144	18,144	0	0	0	147,485	165,629	0	216,448	156,870
May-98	39,552	0	25	17,761	0	0	17,786	0	18,749	18,749	0	0	0	155,079	173,828	0	231,166	180,190
Jun-98	43,710	0	1,475	7,954	0	0	9,429	0	18,144	18,144	0	0	0	150,077	168,221	0	221,360	185,450
Jul-98	48,609	0	1,773	7,954	0	0	9,727	0	18,749	18,749	0	0	0	146,990	165,739	0	224,075	179,141
Aug-98	45,320	0	7,553	0	0	0	7,553	0	18,749	18,749	0	0	0	144,848	163,597	0	216,470	184,788
Sep-98	56,655	0	15,534	0	0	0	15,534	0	18,144	18,144	0	0	0	143,804	161,948	0	234,137	171,448
Oct-98	54,228	0	9,883	5,431	0	0	15,314	0	10,663	10,663	0	0	0	169,513	180,176	0	249,718	175,408
Nov-98	53,162	0	4,092	5,431	0	0	9,523	0	10,773	10,773	0	0	0	171,108	181,881	0	244,566	175,408
Dec-98	51,630	0	2,257	21,210	0	0	23,467	0	8,947	8,947	0	0	0	165,417	174,364	0	249,461	169,967
Jan-99	51,693	0	3,110	9,221	0	0	12,331	0	0	0	0	0	0	180,551	180,551	0	244,575	162,760
Feb-99	32,175	0	1,708	9,221	0	0	10,929	0	588	588	0	0	0	157,894	158,482	0	201,586	136,216
Mar-99	43,658	0	1,708	30,180	0	0	31,888	0	0	0	0	0	0	185,908	185,908	0	261,454	149,700
Apr-99	34,474	0	0	30,180	0	0	30,180	0	0	0	0	0	0	170,891	170,891	0	235,545	152,846
May-99	40,980	0	828	9,691	0	0	10,519	0	0	0	0	0	0	195,845	195,845	0	247,344	168,583
Jun-99	44,064	0	0	10,743	0	0	10,799	0	0	0	0	0	0	185,406	185,406	0	240,269	137,497
Jul-99	49,952	0	6	10,756	0	0	10,762	0	0	0	0	0	0	168,578	168,578	0	229,292	161,748
Aug-99	55,979	0	3	7,597	0	0	7,600	0	0	0	0	0	0	157,088	157,088	0	220,667	183,141
Sep-99	75,946	0	43	10,267	0	0	10,312	0	0	0	0	0	0	191,134	191,134	0	277,392	160,087
Oct-99	41,622	0	0	11,928	0	0	11,930	0	0	0	0	0	0	182,453	182,453	0	236,005	147,742
Nov-99	37,092	0	305	12,578	0	0	12,884	0	10,773	10,773	0	0	0	152,704	163,477	0	213,453	165,637
Dec-99	38,864	0	1	19,179	0	0	19,181	0	8,947	8,947	0	0	0	168,738	177,685	0	235,730	159,830
Jan-00	45,667	0	3	8,935	0	0	8,959	0	7,185	7,185	0	0	0	162,304	169,489	0	224,115	149,319
Feb-00	37,909	0	5	6,746	0	0	6,772	0	9,228	9,228	0	0	0	129,006	138,234	0	182,915	129,612
Mar-00	47,970	0	8	10,309	0	0	10,338	0	6,705	6,705	0	0	0	169,748	176,453	0	234,761	164,943
Apr-00	34,759	0	5	4,922	0	0	4,948	0	10,680	10,680	0	0	0	162,414	173,094	0	212,801	143,163
May-00	50,568	0	850	12,172	0	0	13,043	0	5,789	5,789	0	0	0	173,932	179,721	0	243,332	144,131
Jun-00	40,435	0	3	12,689	0	0	12,713	0	5,616	5,616	0	0	0	175,824	181,440	0	234,588	154,352
Jul-00	47,408	0	4	9,522	0	0	9,547	0	5,962	5,962	0	0	0	182,330	188,292	0	245,247	166,910
Aug-00	44,461	0	3	5,969	0	0	5,993	0	7,820	7,820	0	0	0	186,900	194,720	0	245,174	157,200
Sep-00	44,686	0	2	11,739	0	0	11,762	0	10,505	10,505	0	0	0	181,459	191,964	0	248,412	176,888
Oct-00	64,764	0	3	12,193	0	0	12,217	0	7,210	7,210	0	0	0	195,465	202,675	0	279,656	177,466
Nov-00	113,322	0	2	16,968	0	0	16,991	0	12,926	12,926	0	0	0	189,768	202,694	0	333,007	162,117
Dec-00	48,452	0	310	15,516	0	0	15,847	0	12,344	12,344	0	0	0	176,028	188,372	0	252,671	116,731
Jan-01	47,809	0	27	15,652	0	0	15,690	0	11,162	11,162	0	0	0	160,497	171,659	0	235,158	144,085
Feb-01	40,739	0	28	15,652	0	0	15,691	0	11,163	11,163	0	0	0	139,142	150,305	0	206,735	133,308
Mar-01	47,354	0	5	11,476	0	0	11,512	0	7,022	7,022	0	0	0	162,494	169,516	0	228,382	161,092
Apr-01	42,768	0	158	14,308	0	0	14,486	0	11,509	11,509	0	0	0	146,603	158,112	0	215,366	127,708
May-01	44,140	0	3	5,068	0	0	5,094	0	7,188	7,188	0	0	0	153,596	160,784	0	210,018	136,505
Jun-01	41,265	0	5	9,793	0	0	9,810	0	8,907	8,907	0	0	0	140,600	149,507	0	200,581	154,930
Jul-01	43,631	0	4	8,406	0	0	8,421	0	6,238	6,238	0	0	0	154,064	160,302	0	212,354	152,735
Aug-01	43,095	0	0	8,407	0	0	8,418	0	6,238	6,238	0	0	0	124,870	131,108	0	182,621	142,047
Sep-01	43,157	0	3	13,619	0	0	13,636	0	10,398	10,398	0	0	0	140,586	150,984	0	207,777	118,937
Oct-01	53,006	0	6,962	10,653	0	0	17,629	0	11,657	11,657	0	0	0	147,627	159,284	0	229,919	136,977
Nov-01	38,284	0	2	7,616	0	0	7,633	0	6,140	6,140	0	0	0	148,006	154,146	0	200,063	117,867
Dec-01	79,040	0	11	8,399	0	0	8,424	0	11,310	11,310	0	0	0	147,974	159,284	0	246,748	60,208

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	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)
Jan-02	25,616	0	3	12,449	0	0	12,466	0	7,457	7,457	0	0	0	114,092	121,549	0	159,631	70,904
Feb-02	44,587	0	3	13,270	0	0	13,287	0	9,866	9,866	0	0	0	140,607	150,473	0	208,347	45,995
Mar-02	38,843	0	10	16,177	0	0	16,201	0	12,301	12,301	0	0	0	151,549	163,850	0	218,894	71,438
Apr-02	36,260	0	1	7,695	0	0	7,710	0	6,706	6,706	0	0	0	149,310	156,016	0	199,986	81,740
May-02	33,427	0	4	13,577	0	0	13,595	0	3,029	3,029	0	0	0	185,023	188,052	0	235,074	64,512
Jun-02	37,247	0	1,715	7,835	0	0	9,564	0	592	592	0	0	0	134,784	135,376	0	182,187	44,137
Jul-02	33,905	0	2,274	8,181	0	0	10,469	0	731	731	0	0	0	129,549	130,280	0	174,654	78,315
Aug-02	41,781	0	0	10,082	0	0	10,096	0	229	229	0	0	0	149,357	149,586	0	201,463	96,734
Sep-02	36,157	0	1,121	12,455	0	0	13,590	0	9,052	9,052	0	0	0	151,565	160,617	0	210,364	85,449
Oct-02	38,095	0	1,695	20,770	0	0	22,479	0	3,960	3,960	0	0	0	156,595	160,555	0	221,129	60,013
Nov-02	35,891	0	1,762	12,190	0	0	13,966	0	9,008	9,008	0	0	0	134,063	143,071	0	192,928	42,308
Dec-02	42,644	0	19	11,474	0	0	11,507	0	11,166	11,166	0	0	0	149,595	160,761	0	214,912	73,011
Jan-03	61,575	0	2	13,794	0	0	13,810	0	9,592	9,592	0	0	0	88,671	98,263	0	173,648	63,826
Feb-03	61,102	0	12	12,057	0	0	12,083	0	9,108	9,108	0	0	0	111,559	120,667	0	193,852	51,601
Mar-03	68,244	0	181	14,004	0	0	14,199	0	10,483	10,483	0	0	0	120,640	131,123	0	213,566	79,132
Apr-03	60,497	0	159	12,359	0	0	12,532	0	9,490	9,490	0	0	0	119,620	129,110	0	202,139	83,782
May-03	70,750	0	453	11,841	0	0	12,308	0	10,695	10,695	0	0	0	132,582	143,277	0	226,335	82,252
Jun-03	53,962	0	920	10,059	0	0	10,993	0	9,572	9,572	0	0	0	124,765	134,337	0	199,292	112,019
Jul-03	54,674	0	0	7,889	0	0	7,903	0	11,251	11,251	0	0	0	107,138	118,389	0	180,966	84,213
Aug-03	66,806	0	0	6,929	0	0	6,943	0	7,552	7,552	0	0	0	125,174	132,726	0	206,475	90,876
Sep-03	62,356	0	643	8,622	0	0	9,279	0	8,549	8,549	0	0	0	113,702	122,251	0	193,886	111,587
Oct-03	66,081	0	1,239	12,809	0	0	14,062	0	7,461	7,461	0	0	0	112,168	119,629	0	199,772	92,244
Nov-03	63,401	0	503	12,071	0	0	12,588	0	8,604	8,604	0	0	0	107,916	116,520	0	192,509	61,288
Dec-03	67,384	0	2,085	14,593	0	0	16,692	0	9,795	9,795	0	0	0	117,804	127,599	0	211,675	32,437
Jan-04	66,578	0	167	13,228	0	0	13,409	0	8,982	8,982	0	124,209	0	124,209	133,191	0	213,178	42,209
Feb-04	47,502	0	82	16,070	0	0	16,166	0	9,351	9,351	0	126,835	0	126,835	136,186	0	199,854	37,433
Mar-04	50,800	0	0	12,377	0	0	12,391	0	7,442	7,442	0	120,838	0	120,838	128,280	0	191,471	41,206
Apr-04	50,800	0	0	11,270	0	0	11,284	0	8,160	8,160	0	130,663	0	130,663	138,823	0	200,907	83,432
May-04	50,800	0	2	12,160	0	0	12,176	0	9,290	9,290	0	130,011	0	130,011	139,301	0	202,277	81,764
Jun-04	50,800	0	1	11,155	0	0	11,170	0	9,399	9,399	0	141,531	0	141,531	150,930	0	212,900	109,446
Jul-04	50,800	0	0	8,118	0	0	8,132	0	7,930	7,930	0	131,765	0	131,765	139,695	0	198,627	102,394
Aug-04	50,800	0	0	8,737	0	0	8,751	0	7,862	7,862	0	130,017	0	130,017	137,879	0	197,430	104,950
Sep-04	50,800	0	49	16,846	0	0	16,909	0	8,251	8,251	0	134,842	0	134,842	143,093	0	210,802	90,936
Oct-04	50,800	0	49	6,643	0	0	6,706	0	7,985	7,985	0	142,975	0	142,975	150,960	0	208,466	110,162
Nov-04	50,800	0	49	14,291	0	0	14,354	0	8,465	8,465	0	133,724	0	133,724	142,189	0	207,343	80,925
Dec-04	50,800	0	49	14,292	0	0	14,355	0	8,465	8,465	0	138,183	0	138,183	146,648	0	211,803	83,623
Jan-05	50,800	0	389	16,343	0	0	16,732	0	6,980	6,980	0	123,565	0	123,565	130,545	0	198,077	49,527
Feb-05	50,800	0	362	18,670	0	0	19,032	0	8,676	8,676	0	141,569	0	141,569	150,245	0	220,077	61,835
Mar-05	50,800	0	346	11,324	0	0	11,670	0	6,154	6,154	0	113,012	0	113,012	119,166	0	181,636	55,633
Apr-05	50,800	0	0	11,816	0	0	11,816	0	6,445	6,445	0	116,453	0	116,453	122,898	0	185,514	66,010
May-05	48,932	0	1	9,945	0	0	9,946	0	7,195	7,195	0	130,161	0	130,161	137,356	0	196,234	100,502
Jun-05	54,443	0	3	9,616	0	0	9,619	0	6,020	6,020	0	140,809	0	140,809	146,829	0	210,891	117,731
Jul-05	41,141	0	0	9,528	0	0	9,528	0	5,125	5,125	0	125,471	0	125,471	130,596	0	181,265	83,028
Aug-05	45,696	0	160	10,120	0	0	10,280	0	5,125	5,125	0	132,843	0	130,766	135,891	0	191,867	96,712
Sep-05	44,686	0	171	10,783	0	0	10,954	0	5,125	5,125	0	144,803	0	139,679	144,804	0	200,444	97,301
Oct-05	29,071	0	145	8,187	0	0	8,332	0	5,125	5,125	0	101,465	0	96,439	101,564	0	138,967	62,327
Nov-05	21,940	0	1,143	18,138	0	0	19,281	0	5,125	5,125	0	168,612	0	163,487	168,612	0	209,833	72,632
Dec-05	70,258	0	275	14,020	0	0	14,295	0	5,125	5,125	0	131,428	0	126,303	131,428	0	215,981	32,586

Appendix C - Golden Grove Monthly Pumpage Data (1990 to 2024)

MONTH	Nett Scuddles Mine Monthly Pumpage		Potable Water Supply					Gossan Hill Mine Area								Seepage Recovery Pumpage	Combined Total Monthly Pumpage	Monthly Discharge Pumpage to Lake Wow-naminya
		GGW53P Monthly Pumpage	GGW67P Monthly Pumpage	GGW69P Monthly Pumpage	GGW93P Monthly Pumpage	RMB4 Monthly Pumpage	Total Monthly Pumpage	GHDEC37R Monthly Pumpage	GHDEC44P Monthly Pumpage	Gossan Hill Bores Monthly Pumpage	EPA to GH UG 2010-2012	GH UG to MWC via EPB (190 to EPB)	GH UG to MWC (667 to EPB)	Nett Gossan Hill Decline Monthly Pumpage	Nett Gossan Hill Mine Monthly Pumpage			
	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)
Jan-06	35,546	0	98	13,066	0	0	13,164	0	0	0	0	109,533	0	109,533	109,533	0	158,243	61,836
Feb-06	39,897	0	58	12,957	0	0	13,015	0	0	0	0	118,466	0	118,466	118,466	0	171,378	48,228
Mar-06	46,104	0	91	14,360	0	0	14,451	0	942	942	0	142,099	0	142,099	143,041	0	203,596	54,144
Apr-06	37,038	0	47	9,177	0	0	9,224	0	1,198	1,198	0	107,609	0	107,609	108,807	0	155,069	78,239
May-06	36,960	0	1	10,370	0	0	10,371	0	3,510	3,510	0	115,848	0	115,848	119,358	0	166,689	86,206
Jun-06	39,809	0	4	11,513	0	0	11,517	0	4,702	4,702	0	98,507	33,115	131,622	136,324	0	187,650	55,728
Jul-06	38,796	0	43	12,342	0	0	12,385	0	0	0	0	73,457	57,895	131,352	131,352	0	182,533	75,264
Aug-06	53,103	0	373	21,409	0	0	21,782	0	596	596	0	103,869	77,702	181,571	182,167	0	257,052	120,814
Sep-06	26,824	0	5	11,456	0	0	11,461	0	229	229	0	75,640	40,185	115,825	116,054	0	154,339	83,286
Oct-06	31,943	0	1	11,273	0	0	11,274	0	5,791	5,791	0	62,297	59,888	122,185	127,976	0	171,193	54,800
Nov-06	35,417	0	87	15,485	0	0	15,572	0	7,114	7,114	0	66,999	67,681	134,680	141,794	0	192,783	23,992
Dec-06	37,272	0	158	15,637	0	0	15,795	0	6,882	6,882	0	91,005	52,670	143,675	150,557	0	203,624	37,220
Jan-07	33,328	0	3	13,831	0	0	13,834	0	6,787	6,787	0	88,957	51,315	140,272	147,059	0	194,221	21,176
Feb-07	36,987	0	98	17,822	0	0	17,920	0	7,086	7,086	0	71,628	58,230	129,858	136,944	0	191,851	20,990
Mar-07	43,135	0	2	15,619	0	0	15,621	0	4,555	4,555	0	81,244	62,134	143,378	147,933	0	206,689	26,872
Apr-07	40,279	0	236	14,093	0	0	14,329	0	4,750	4,750	0	46,859	55,227	102,086	106,836	0	161,444	14,921
May-07	39,862	0	1	15,807	0	0	15,808	0	6,154	6,154	0	60,613	75,175	135,788	141,942	0	197,612	54,358
Jun-07	57,040	0	1	16,055	0	0	16,056	0	6,154	6,154	0	55,397	68,227	123,624	129,778	0	202,874	71,235
Jul-07	43,874	0	1	14,234	0	0	14,235	0	6,190	6,190	0	52,001	72,478	124,479	130,669	0	188,778	79,147
Aug-07	52,947	0	0	19,240	0	0	19,240	0	8,008	8,008	0	60,178	88,057	148,235	156,243	0	228,430	104,173
Sep-07	43,939	0	95	13,556	0	0	13,651	0	6,164	6,164	0	48,558	75,832	124,390	130,554	0	188,143	110,627
Oct-07	40,675	0	95	18,964	0	0	19,059	0	6,164	6,164	0	49,067	60,886	109,953	116,117	0	175,850	83,437
Nov-07	45,484	0	53	19,980	0	0	20,033	0	6,201	6,201	0	73,486	81,512	154,998	161,199	0	226,716	53,026
Dec-07	40,068	0	53	17,363	0	0	17,416	0	6,201	6,201	0	73,224	64,092	137,316	143,517	0	201,001	46,883
Jan-08	35,009	0	6	15,765	0	0	15,771	0	4,800	4,800	0	74,509	48,273	122,782	127,582	13,115	191,477	40,533
Feb-08	34,210	0	0	17,631	0	0	17,631	0	0	0	0	87,857	57,589	145,446	145,446	15,577	212,864	95,642
Mar-08	39,158	0	3	15,485	0	0	15,488	0	0	0	0	85,953	30,613	116,566	116,566	10,573	181,785	51,859
Apr-08	33,459	0	0	13,295	0	0	13,295	0	0	0	0	80,305	44,963	125,268	125,268	12,320	184,342	76,736
May-08	33,211	0	2	13,199	0	0	13,201	0	0	0	0	76,505	54,362	130,867	130,867	12,187	189,466	81,841
Jun-08	31,012	0	0	12,760	0	0	12,760	0	0	0	0	72,803	50,336	123,139	123,139	11,738	178,649	79,362
Jul-08	39,025	0	0	15,788	0	0	15,788	0	0	0	0	91,531	65,277	156,808	156,808	14,688	226,309	110,357
Aug-08	30,586	0	0	13,496	0	0	13,496	0	0	0	0	67,744	56,030	123,774	123,774	11,639	179,495	31,531
Sep-08	32,222	0	0	13,261	0	0	13,261	0	0	0	0	73,780	52,890	126,670	126,670	14,736	186,889	127,737
Oct-08	37,875	0	0	14,570	0	0	14,570	0	0	0	0	74,160	62,210	136,370	136,370	15,903	204,718	60,137
Nov-08	32,840	0	0	15,368	0	0	15,368	0	0	0	0	64,730	58,765	123,495	123,495	11,785	183,488	33,902
Dec-08	36,100	0	0	16,637	0	0	16,637	0	0	0	0	61,528	57,341	118,869	118,869	18,151	189,757	15,244
Jan-09	36,906	0	3	19,689	0	0	19,692	0	0	0	0	75,854	61,442	137,296	137,296	16,450	210,344	5,000
Feb-09	32,953	0	0	12,881	0	0	12,881	0	0	0	0	60,005	48,618	108,623	108,623	16,450	170,907	16,016
Mar-09	54,811	0	3	11,814	0	0	11,817	0	0	0	0	63,326	58,574	121,900	121,900	5,484	194,012	35,788
Apr-09	51,840	0	1	14,487	0	0	14,488	0	0	0	0	69,072	58,574	127,646	127,646	15,159	209,133	52,366
May-09	35,986	0	2	13,186	0	0	13,188	0	0	0	0	72,610	46,506	119,116	119,116	14,007	182,297	76,509
Jun-09	81,998	0	0	10,191	0	0	10,191	0	0	0	0	59,510	30,556	90,066	90,066	8,176	190,431	108,983
Jul-09	52,944	0	0	10,367	0	0	10,367	0	0	0	0	66,944	50,378	117,322	117,322	13,557	194,190	124,131
Aug-09	68,394	0	0	13,123	0	0	13,123	0	0	0	0	68,235	56,004	124,239	124,239	17,952	223,708	75,788
Sep-09	57,421	0	0	10,975	0	0	10,975	0	0	0	0	61,465	48,680	110,145	110,145	6,321	184,862	63,823
Oct-09	60,221	0	0	12,518	0	0	12,518	0	0	0	0	67,509	45,684	113,193	113,193	12,742	198,674	66,802
Nov-09	56,089	0	0	14,129	0	0	14,129	0	0	0	0	69,038	49,981	119,019	119,019	14,635	203,872	6,847
Dec-09	59,106	0	2,124	12,503	0	0	14,627	0	0	0	0	54,114	52,931	107,045	107,045	8,189	188,967	0

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		GGW53P Monthly Pumpage	GGW67P Monthly Pumpage	GGW69P Monthly Pumpage	GGW93P Monthly Pumpage	RMB4 Monthly Pumpage	Total Monthly Pumpage	GHDEC37R Monthly Pumpage	GHDEC44P Monthly Pumpage	Gossan Hill Bores Monthly Pumpage	EPA to GH UG 2010-2012	GH UG to MWC via EPB (190 to EPB)	GH UG to MWC (667 to EPB)	Nett Gossan Hill Decline Monthly Pumpage	Nett Gossan Hill Mine Monthly Pumpage			
	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)
Jan-10	67,052	0	0	14,451	0	0	14,451	0	0	0	-66,637	73,761	63,520	70,644	70,644	7,599	159,746	0
Feb-10	48,426	0	1,660	9,204	0	0	10,864	0	0	0	-32,977	53,463	45,206	65,692	65,692	7,594	132,576	0
Mar-10	57,610	0	3,544	14,724	0	15,591	33,859	0	114	114	-45,072	63,949	52,723	71,600	71,714	11,687	174,870	764
Apr-10	50,502	0	1,817	11,729	0	5,781	19,327	0	37	37	-46,292	58,926	46,948	59,582	59,619	9,868	139,316	783
May-10	56,996	0	1	12,647	0	0	12,648	0	0	0	-57,277	63,753	62,802	69,278	69,278	7,559	146,481	31,635
Jun-10	65,605	0	0	13,059	0	3,035	16,094	0	0	0	-62,106	73,284	67,966	79,144	79,144	9,440	170,283	75,774
Jul-10	54,644	0	273	10,582	0	15,701	26,556	0	0	0	-41,667	51,444	67,966	77,743	77,743	5,642	164,585	36,413
Aug-10	67,367	0	78	14,840	0	18,490	33,408	0	0	0	-46,902	60,005	47,681	60,784	60,784	11,409	172,968	0
Sep-10	60,649	0	27	14,003	0	15,472	29,502	0	0	0	-38,467	54,430	55,649	71,612	71,612	11,899	173,662	0
Oct-10	66,082	0	0	18,926	0	17,480	36,406	0	0	0	-41,494	66,172	54,217	78,895	78,895	16,361	197,744	0
Nov-10	54,759	0	38	12,832	0	10,088	22,958	0	3	3	-39,014	52,205	43,566	56,757	56,760	16,452	150,929	0
Dec-10	63,240	0	0	14,423	0	2	14,425	0	0	0	-39,014	65,494	38,390	64,870	64,870	15,423	157,958	0
Jan-11	58,294	0	0	13,503	0	0	13,503	0	1,492	1,492	-45,561	54,499	52,991	61,929	63,421	14,292	149,510	0
Feb-11	52,594	0	0	12,472	0	0	12,472	0	4,038	4,038	-27,168	54,437	51,217	78,486	82,524	13,794	161,384	0
Mar-11	50,701	0	0	12,642	0	0	12,642	0	3,869	3,869	-32,309	51,954	44,939	64,584	68,453	13,059	144,855	0
Apr-11	56,109	0	0	12,883	0	0	12,883	0	4,175	4,175	-42,918	59,029	49,012	65,123	69,298	16,987	155,277	0
May-11	57,373	0	0	13,264	0	0	13,264	0	4,596	4,596	-47,352	57,052	57,259	66,959	71,555	18,019	160,211	0
Jun-11	46,253	0	0	11,954	0	0	11,954	0	3,606	3,606	-39,175	59,943	42,620	63,388	66,994	17,162	142,363	14,023
Jul-11	60,647	0	138	13,267	0	0	13,405	0	4,229	4,229	-35,886	55,479	48,524	68,117	72,346	17,249	163,647	36,042
Aug-11	53,888	0	0	12,206	0	0	12,206	0	3,812	3,812	-40,289	56,989	42,625	59,325	63,137	16,986	146,217	30,315
Sep-11	55,161	0	0	12,308	0	0	12,308	0	4,137	4,137	-35,663	58,301	46,194	68,832	72,969	15,285	155,723	23,077
Oct-11	53,520	0	0	11,859	0	0	11,859	0	3,941	3,941	-39,083	60,335	45,659	66,911	70,852	15,625	151,856	19,014
Nov-11	57,957	0	0	17,504	0	0	17,504	0	5,097	5,097	-38,242	58,857	44,902	65,517	70,614	13,880	159,955	10,064
Dec-11	57,317	0	0	9,096	0	0	9,096	0	3,365	3,365	-62,709	57,277	44,902	39,470	42,835	14,933	124,181	13,277
Jan-12	44,979	0	0	9,549	0	0	9,549	0	3,495	3,495	-52,053	38,566	43,709	30,222	33,717	11,789	100,034	8,751
Feb-12	39,686	0	0	10,874	0	0	10,874	0	3,890	3,890	-58,726	34,537	46,139	21,950	25,840	13,646	90,046	4,269
Mar-12	36,107	0	0	11,981	0	0	11,981	0	5,108	5,108	-55,248	52,086	44,689	41,527	46,635	14,080	108,803	2,886
Apr-12	48,278	0	0	6,301	0	0	6,301	0	2,998	2,998	-34,885	61,474	26,138	52,727	55,725	12,983	123,287	25,833
May-12	48,278	0	0	10,240	0	0	10,240	0	4,220	4,220	-39,575	72,906	11,384	44,715	48,935	13,863	121,316	62,749
Jun-12	48,278	0	0	8,705	0	0	8,705	0	3,662	3,662	-34,775	64,646	11,755	41,626	45,288	11,626	113,897	41,858
Jul-12	42,369	0	0	7,391	0	0	7,391	0	3,252	3,252	-36,907	74,329	16,184	53,606	56,858	12,998	119,616	62,226
Aug-12	59,012	0	0	9,480	0	0	9,480	0	3,928	3,928	-34,001	74,759	16,185	56,943	60,871	11,960	141,323	87,609
Sep-12	56,516	0	0	9,172	0	0	9,172	0	3,840	3,840	-28,303	64,915	44,821	81,433	85,273	9,002	159,963	118,690
Oct-12	54,412	0	0	11,576	0	2,509	14,085	0	4,282	4,282	-45,845	26,273	44,195	24,623	28,905	11,602	109,004	73,936
Nov-12	52,517	0	0	9,987	0	4	9,991	0	3,308	3,308	-40,325	56,449	44,327	60,451	63,759	12,932	139,199	75,414
Dec-12	48,905	0	0	11,471	0	2	11,473	0	3,858	3,858	-26,888	26,782	43,393	43,287	47,145	12,150	119,673	98,869
Jan-13	58,168	0	0	12,550	0	3	12,553	0	3,680	3,680	-34,062	63,438	43,385	72,761	76,441	13,634	160,796	93,336
Feb-13	53,278	0	0	9,265	0	4,866	14,131	0	3,440	3,440	-40,895	58,060	38,176	55,341	58,781	8,911	135,101	102,415
Mar-13	59,881	0	0	12,666	0	3,543	16,209	0	4,133	4,133	-42,134	74,391	45,409	77,666	81,799	10,581	168,470	63,712
Apr-13	50,896	0	0	9,595	0	2	9,597	0	3,525	3,525	-33,133	68,465	40,735	76,067	79,592	12,304	152,389	36,475
May-13	46,394	0	0	10,205	0	11,060	21,265	0	3,480	3,480	-27,081	69,099	37,044	79,062	82,542	10,364	160,565	78,231
Jun-13	47,442	0	0	9,941	0	5,686	15,627	0	3,743	3,743	-30,344	72,245	35,759	77,660	81,403	9,721	154,193	89,773
Jul-13	47,513	0	0	10,223	0	1,898	12,121	0	3,619	3,619	-24,863	77,577	38,064	90,778	94,397	9,368	163,399	100,936
Aug-13	55,871	0	0	9,738	0	0	9,738	0	3,973	3,973	-28,823	60,942	41,670	73,789	77,762	11,872	155,243	143,304
Sep-13	49,750	0	0	8,846	0	0	8,846	0	3,426	3,426	-25,460	64,738	33,329	72,607	76,033	9,498	144,127	49,775
Oct-13	52,702	0	0	8,656	0	0	8,656	0	3,481	3,481	-32,805	62,790	35,054	65,039	68,520	8,965	138,843	11,918
Nov-13	54,574	0	0	11,091	0	0	11,091	0	3,556	3,556	-44,204	68,871	39,716	64,383	67,939	9,314	142,918	7,700
Dec-13	48,229	0	0	10,463	0	0	10,463	0	3,667	3,667	-42,894	58,035	37,856	52,907	56,574	8,617	123,883	5,039

Appendix C - Golden Grove Monthly Pumpage Data (1990 to 2024)

MONTH	Nett Scuddles Mine Monthly Pumpage		Potable Water Supply					Gossan Hill Mine Area								Seepage Recovery Pumpage	Combined Total Monthly Pumpage	Monthly Discharge Pumpage to Lake Wow-naminya
		GGW53P Monthly Pumpage	GGW67P Monthly Pumpage	GGW69P Monthly Pumpage	GGW93P Monthly Pumpage	RMB4 Monthly Pumpage	Total Monthly Pumpage	GHDEC37R Monthly Pumpage	GHDEC44P Monthly Pumpage	Gossan Hill Bores Monthly Pumpage	EPA to GH UG 2010-2012	GH UG to MWC via EPB (190 to EPB)	GH UG to MWC (667 to EPB)	Nett Gossan Hill Decline Monthly Pumpage	Nett Gossan Hill Mine Monthly Pumpage			
	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)
Jan-14	51,898	0	0	11,377	0	14,411	25,788	0	3,722	3,722	-44,668	69,241	37,683	62,256	65,978	6,936	150,600	39
Feb-14	53,453	0	0	11,997	0	7,268	19,265	0	3,539	3,539	-36,099	65,279	36,001	65,181	68,720	10,923	152,361	12,794
Mar-14	49,891	0	367	9,033	0	11,485	20,885	0	3,410	3,410	-33,028	58,865	35,141	60,978	64,388	8,294	143,458	20,964
Apr-14	52,454	0	438	8,799	0	2,289	11,526	0	3,517	3,517	-24,712	61,803	35,388	72,479	75,996	8,548	148,524	33,715
May-14	53,595	0	37	8,892	0	3	8,932	0	3,608	3,608	-29,519	66,178	35,581	72,240	75,848	8,947	147,322	99,899
Jun-14	53,523	0	3,239	9,456	0	2,732	15,427	0	2,993	2,993	-27,499	56,792	36,314	65,607	68,600	8,373	145,923	52,359
Jul-14	52,989	0	5,799	9,208	0	3	15,010	0	3,659	3,659	-27,518	61,651	39,851	73,984	77,643	9,071	154,713	48,803
Aug-14	45,523	0	5,144	10,196	0	1,090	16,430	0	3,433	3,433	-30,706	59,430	35,717	64,441	67,874	8,549	138,376	42,592
Sep-14	51,246	0	3,828	9,994	0	2,706	16,528	0	3,642	3,642	-30,859	62,123	35,235	66,499	70,141	8,599	146,514	48,572
Oct-14	49,859	0	8,863	9,787	0	4,681	23,331	0	3,317	3,317	-40,238	53,256	33,287	46,305	49,622	8,227	131,039	19,304
Nov-14	56,063	0	4,943	11,594	0	2	16,539	0	3,740	3,740	-34,300	54,402	41,037	61,139	64,879	7,555	145,036	15,381
Dec-14	45,463	0	8,391	12,288	0	13,206	33,885	0	3,156	3,156	-32,849	39,755	32,789	39,695	42,851	7,857	130,056	3,341
Jan-15	49,307	0	0	13,087	0	21,059	34,146	0	3,456	3,456	-33,139	62,667	40,913	70,441	73,897	9,373	166,723	0
Feb-15	46,229	0	0	12,502	0	15,284	27,786	0	3,249	3,249	-51,213	55,928	38,047	42,762	46,011	7,235	127,261	0
Mar-15	48,653	0	12	10,158	0	16	10,186	0	3,362	3,362	-52,677	57,425	38,633	43,381	46,743	6,555	112,137	27,495
Apr-15	50,535	0	13	10,477	0	2	10,492	0	3,574	3,574	-50,662	55,206	38,110	42,654	46,228	9,864	117,119	91,590
May-15	49,012	0	113	10,646	0	1,951	12,710	0	2,046	2,046	-57,544	55,630	36,757	34,843	36,889	11,093	109,704	66,545
Jun-15	51,556	0	9	11,151	0	2	11,162	0	0	0	-51,755	57,427	35,462	41,134	41,134	9,548	113,400	57,829
Jul-15	54,431	0	10	9,218	0	2	9,230	0	0	0	-47,555	60,350	42,422	55,217	55,217	9,548	128,426	80,548
Aug-15	41,552	0	7	10,159	0	2	10,168	0	0	0	-72,809	47,175	41,177	15,543	15,543	10,571	77,834	54,866
Sep-15	46,996	0	107	8,971	0	933	10,011	0	0	0	-30,334	48,925	37,515	56,106	56,106	9,365	122,478	22,024
Oct-15	47,351	0	8	10,019	0	1,498	11,525	0	0	0	-46,567	49,721	37,515	40,669	40,669	7,929	107,473	10,582
Nov-15	46,717	0	67	10,248	0	2	10,317	0	0	0	-44,134	51,598	37,331	44,795	44,795	9,906	111,735	29,489
Dec-15	48,177	0	10	10,797	0	2	10,809	0	0	0	-43,912	58,297	38,111	52,496	52,496	9,339	120,821	30,960
Jan-16	46,472	0	0	9,888	0	2	9,890	0	2	2	-44,133	55,467	37,763	49,097	49,099	7,654	113,115	43,230
Feb-16	47,021	0	0	10,163	0	11	10,174	0	355	355	-41,846	51,761	37,945	47,860	48,215	6,881	112,291	52,370
Mar-16	47,821	0	162	8,630	0	2	8,794	0	2,894	2,894	-40,466	54,459	40,685	54,678	57,572	8,830	123,017	83,320
Apr-16	50,761	0	105	6,469	0	2	6,576	0	810	810	-30,744	27,076	38,220	34,552	35,362	7,674	100,373	87,935
May-16	45,354	0	19	6,553	0	2	6,574	0	6	6	-30,287	39,461	30,574	39,748	39,754	8,415	100,097	100,267
Jun-16	54,661	0	16	8,525	0	2	8,543	0	7	7	-48,303	49,982	35,990	37,669	37,676	8,435	109,315	88,783
Jul-16	44,415	0	17	6,815	0	3	6,835	0	6	6	-33,796	44,320	30,126	40,650	40,656	8,009	99,915	84,782
Aug-16	49,504	0	201	6,749	0	2	6,952	0	1	1	-37,406	50,008	32,278	44,880	44,881	8,421	109,758	66,242
Sep-16	49,980	0	12	8,745	0	3	8,760	0	129	129	-41,203	58,140	32,384	49,321	49,450	8,340	116,530	62,523
Oct-16	46,611	0	154	8,956	0	1	9,111	0	429	429	-59,608	62,780	33,580	36,752	37,181	8,220	101,123	35,709
Nov-16	44,633	0	1,335	9,590	0	4,578	15,503	0	561	561	-82,754	50,246	48,959	16,451	17,012	7,527	84,675	14,353
Dec-16	46,472	0	414	13,400	0	1,937	15,751	0	1,603	1,603	-71,574	73,551	37,495	39,472	41,075	7,768	111,066	18,654
Jan-17	51,031	0	0	11,063	0	1,752	12,815	0	862	862	-65,500	68,191	40,619	43,310	44,172	7,871	115,889	13,299
Feb-17	55,894	0	0	9,864	0	6	9,870	0	462	462	-44,358	60,736	37,857	54,235	54,697	7,107	127,568	72,449
Mar-17	55,894	0	10	9,864	0	5	9,879	0	462	462	-44,358	60,736	37,857	54,235	54,697	8,563	129,033	52,782
Apr-17	41,810	0	295	6,977	0	0	7,272	0	2,363	2,363	-37,666	47,940	28,312	38,586	40,949	6,301	96,332	63,886
May-17	58,932	0	52	11,631	0	0	11,683	0	2,331	2,331	-53,281	64,846	38,909	50,474	52,805	9,023	132,443	51,486
Jun-17	36,963	0	22	7,517	0	0	7,539	0	3,232	3,232	-34,561	43,223	26,125	34,787	38,019	5,503	88,024	51,326
Jul-17	43,417	0	37	8,367	0	0	8,404	0	3,860	3,860	-35,355	47,956	29,930	42,531	46,391	6,100	104,312	51,295
Aug-17	51,142	0	584	8,277	0	0	8,861	0	3,481	3,481	-45,389	51,237	33,910	39,758	43,239	7,310	110,552	67,245
Sep-17	47,913	0	190	8,814	0	1	9,005	0	0	0	-35,333	44,942	31,274	40,883	40,883	6,664	104,465	59,694
Oct-17	46,962	0	25	8,790	0	0	8,815	0	2	2	-46,030	50,140	33,017	37,127	37,129	7,038	99,944	42,145
Nov-17	26,785	0	1,541	2,000	0	5,951	9,492	0	2,413	2,413	-42,007	47,732	31,964	37,689	40,102	6,766	83,145	24,666
Dec-17	31,306	0	415	6,631	0	6,967	14,013	0	3,636	3,636	-49,728	51,845	33,716	35,833	39,469	7,227	92,015	3,584

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MONTH	Nett Scuddles Mine Monthly Pumpage	Potable Water Supply						Gossan Hill Mine Area								Seepage Recovery Pumpage	Combined Total Monthly Pumpage	Monthly Discharge Pumpage to Lake Wow-naminya
		GGW53P Monthly Pumpage	GGW67P Monthly Pumpage	GGW69P Monthly Pumpage	GGW93P Monthly Pumpage	RMB4 Monthly Pumpage	Total Monthly Pumpage	GHDEC37R Monthly Pumpage	GHDEC44P Monthly Pumpage	Gossan Hill Bores Monthly Pumpage	EPA to GH UG 2010-2012	GH UG to MWC via EPB (190 to EPB)	GH UG to MWC (667 to EPB)	Nett Gossan Hill Decline Monthly Pumpage	Nett Gossan Hill Mine Monthly Pumpage			
	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)
Jan-18	45,343	0	0	9,448	0	0	9,448	0	3,111	3,111	-43,822	47,955	28,707	32,840	35,951	5,245	95,987	24,659
Feb-18	43,953	0	0	9,214	0	5,127	14,341	0	3,256	3,256	-45,290	46,962	29,112	30,784	34,040	6,573	98,907	10,842
Mar-18	49,067	0	165	9,225	0	541	9,931	0	1,751	1,751	-52,457	38,868	31,586	17,997	19,748	5,824	84,569	29,121
Apr-18	42,937	0	50	8,160	0	1,353	9,563	0	1,861	1,861	-50,152	36,377	29,229	15,454	17,315	5,148	74,963	32,472
May-18	44,809	0	14	9,754	0	294	10,062	0	0	0	-50,938	52,953	30,976	32,991	32,991	5,506	93,368	34,090
Jun-18	41,790	0	289	8,040	0	1,253	9,582	0	0	0	-45,903	48,944	29,587	32,628	32,628	5,252	89,252	60,206
Jul-18	42,800	0	9	8,341	0	862	9,212	0	0	0	-47,487	44,046	29,478	26,037	26,037	5,722	83,771	62,422
Aug-18	45,352	0	12	9,516	0	767	10,295	0	0	0	-50,557	45,435	33,464	28,342	28,342	3,876	87,865	41,630
Sep-18	48,503	0	208	10,010	0	166	10,384	0	0	0	-61,254	51,232	31,087	21,065	21,065	6,457	86,409	37,900
Oct-18	45,606	0	59	9,511	0	323	9,893	0	0	0	-46,990	41,969	26,698	21,677	21,677	5,118	82,294	39,115
Nov-18	50,152	0	553	11,196	0	5,892	17,641	0	0	0	-65,183	44,896	30,681	10,394	10,394	5,576	83,763	23,379
Dec-18	40,671	0	918	14,091	0	9,700	24,709	0	0	0	-56,491	37,180	24,978	5,667	5,667	3,054	74,101	4,971
Jan-19	40,671	0	0	14,091	0	9,700	23,791	0	0	0	-56,491	37,180	24,978	5,666	5,666	3,054	73,181	4,971
Feb-19	48,370	0	0	7,219	0	13,759	20,978	0	0	0	-67,894	74,863	27,309	34,278	34,278	3,019	106,645	11,043
Mar-19	43,993	0	68	12,618	0	4,668	17,354	0	0	0	-55,217	84,540	27,387	56,710	56,710	4,691	122,748	3,710
Apr-19	46,472	0	99	12,560	0	3,258	15,917	0	0	0	-56,926	79,935	31,805	54,814	54,814	4,271	121,473	55,448
May-19	46,472	0	54	11,836	0	187	12,077	0	0	0	-51,615	79,935	24,541	52,861	52,861	4,845	116,254	16,809
Jun-19	47,550	0	112	12,433	0	1	12,546	0	0	0	-55,342	78,619	29,688	52,965	52,965	5,029	118,090	52,649
Jul-19	42,719	0	48	10,076	0	0	10,124	0	0	0	-44,177	68,904	28,874	53,601	53,601	5,721	112,165	61,106
Aug-19	49,308	0	75	10,752	0	0	10,827	0	0	0	-50,097	68,319	35,027	53,249	53,249	6,376	119,760	34,166
Sep-19	39,018	0	55	8,108	0	5,209	13,372	0	0	0	-38,661	54,325	26,799	42,463	42,463	5,796	100,649	11,454
Oct-19	55,630	0	94	11,330	0	1,796	13,220	0	0	0	-59,530	75,396	42,119	57,985	57,985	9,797	136,632	10,929
Nov-19	32,209	0	2,629	8,757	0	8,984	20,370	0	0	0	-36,133	43,222	25,955	33,044	33,044	4,683	90,306	0
Dec-19	47,598	0	649	12,278	0	15,743	28,670	0	0	0	-43,522	42,522	27,585	26,585	26,585	6,004	108,857	18,568
Jan-20	58,067	0	0	15,143	0	27,848	42,991	0	0	0	-58,447	42,522	39,437	23,512	23,512	6,796	131,366	0
Feb-20	41,856	0	0	9,226	0	0	9,226	0	0	0	-36,101	35,711	25,291	24,901	24,901	4,676	80,659	4,222
Mar-20	39,674	0	5,393	9,604	0	0	14,997	0	0	0	-30,649	33,933	29,189	32,473	32,473	6,259	93,403	26,389
Apr-20	43,172	2,702	60	10,657	18,073	9,202	40,694	0	0	0	-37,423	41,730	32,661	36,968	36,968	2,678	123,511	18,703
May-20	43,172	0	70	10,935	0	7,964	18,969	0	3,389	3,389	-43,853	40,707	32,057	28,911	32,300	3,885	98,326	17,906
Jun-20	47,170	3,216	103	10,908	22,855	5,568	42,650	0	3,381	3,381	-36,822	45,394	33,169	41,741	45,122	3,788	138,730	35,517
Jul-20	44,295	80	43	11,807	1,971	2,716	16,617	0	3,320	3,320	-53,748	45,655	43,513	35,420	38,740	4,005	103,657	55,231
Aug-20	42,875	52	106	9,899	6,174	3,499	19,730	0	3,076	3,076	-36,331	39,279	36,026	38,974	42,050	4,009	108,664	56,154
Sep-20	39,963	230	3	9,828	7,000	13,046	30,107	0	3,115	3,115	-36,151	37,084	31,319	32,252	35,367	4,352	109,789	23,723
Oct-20	44,896	241	45	9,845	8,217	8,534	26,882	0	3,327	3,327	-60,640	40,285	18,855	-1,501	1,827	4,797	78,401	403
Nov-20	41,438	274	39	12,200	25,018	6,942	44,473	0	3,230	3,230	-66,168	64,838	50,174	48,844	52,074	4,373	142,357	1,928
Dec-20	47,729	304	3,553	10,662	31,089	6,227	51,835	0	2,886	2,886	-45,098	58,277	34,181	47,360	50,246	3,184	152,994	16
Jan-21	47,729	377	6,008	12,277	31,061	3,971	53,694	0	2,986	2,986	-43,229	59,727	36,185	52,683	55,669	5,300	162,392	1,214
Feb-21	47,729	151	403	10,307	14,650	1,958	27,469	0	2,679	2,679	-41,382	58,576	33,287	50,481	53,160	2,588	130,945	28,094
Mar-21	37,606	155	313	11,937	10,037	4,311	26,752	0	2,547	2,547	-36,456	57,419	29,628	50,590	53,137	3,314	120,808	25,628
Apr-21	37,606	155	313	11,937	10,037	4,311	26,752	0	2,547	2,547	-36,456	57,419	29,628	50,590	53,137	3,314	120,808	25,628
May-21	52,764	0	289	15,042	4,815	3,109	23,255	0	3,174	3,174	-42,403	78,919	32,446	68,962	72,136	2,905	151,060	68,412
Jun-21	36,725	19	44	9,031	1,446	0	10,540	0	0	0	-36,231	60,347	0	24,116	24,116	1,679	73,061	49,248
Jul-21	36,725	19	44	9,031	1,446	0	10,540	0	0	0	-36,231	60,347	0	24,116	24,116	1,679	73,061	49,248
Aug-21	36,725	19	44	9,031	1,446	0	10,540	0	0	0	-36,231	60,347	0	24,116	24,116	1,718	73,099	49,248
Sep-21	37,580	0	2,179	9,261	14,328	92	25,860	0	0	0	-43,264	62,127	0	18,863	18,863	3,235	85,538	15,919
Oct-21	43,855	0	1,965	12,288	15,778	630	30,661	0	0	0	-57,652	80,253	0	22,601	22,601	2,562	99,679	7,760
Nov-21	34,917	0	7,826	11,646	33,799	3,805	57,076	0	0	0	-55,512	64,898	0	9,386	9,386	5,024	106,403	1
Dec-21	34,804	0	4,327	13,076	26,463	0	43,866	0	0	0	-49,440	64,351	0	14,911	14,911	3,235	96,816	0
Jan-22	34,522	0	3,641	11,239	17,217	1,481	33,578	0	0	0	-50,421	71,721	0	21,300	21,300	3,629	93,029	4,716
Feb-22	23,819	0	233	11,239	17,709	771	29,952	0	0	0	-46,015	63,836	0	17,821	17,821	3,085	74,677	16,061
Mar-22	14,579	0	90	9,576	16,726	3	26,395	0	0	0	-39,899	61,048	19,377	40,526	40,526	3,016	84,516	20,513
Apr-22	5,793	0	948	7,213	6,068	0	14,229	0	0	0	-33,804	48,825	34,173	49,194	49,194	3,993	73,209	20,158
May-22	3,956	15	467	9,493	4,650	0	14,625	0	0	0	-41,124	74,799	42,364	76,039	76,039	2,144	96,764	40,091
Jun-22	2,250	0	472	13,085	4,500	0	18,057	0	0	0	-50,863	98,578	46,994	94,709	94,709	3,370	118,386	50,014
Jul-22	579	1	175	5,814	4,500	0	10,490	0	0	0	-26,198	39,474	18,298	31,574	31,574	1,347	43,990	20,520
Aug-22	1,238	0	127	8,814	4,154	0	13,095	0	0	0	-42,595	87,623	46,044	91,072	91,072	2,917	108,322	53,855
Sep-22	1,641	0	1,893	8,173	4,446	6,077	20,589	0	0	0	-74,573	72,277	33,261	30,965	30,965	2,533	55,728	32,715
Oct-22	1,792	0	4,573	9,000	4,500	6,668	24,741	0	0	0	-46,389	55,153	30,429	39,193	39,193	1,959	67,685	65
Nov-22	4,001	0	6,675	6,122	32,158	5,516	50,471	0	0	0	-55,847	69,475	34,460	48,088	48,088	2,449	105,009	669
Dec-22	4,964	0	9,854	14,885	30,535	5,470	60,744	0	0	0	-51,873	72,309	32,670	53,106	53,106	3,130	121,944	0

Appendix C - Golden Grove Monthly Pumpage Data (1990 to 2024)

MONTH	Nett Scuddles Mine Monthly Pumpage		Potable Water Supply					Gossan Hill Mine Area								Seepage Recovery Pumpage	Combined Total Monthly Pumpage	Monthly Discharge Pumpage to Lake Wow-naminya
		GGW53P Monthly Pumpage	GGW67P Monthly Pumpage	GGW69P Monthly Pumpage	GGW93P Monthly Pumpage	RMB4 Monthly Pumpage	Total Monthly Pumpage	GHDEC37R Monthly Pumpage	GHDEC44P Monthly Pumpage	Gossan Hill Bores Monthly Pumpage	EPA to GH UG 2010-2012	GH UG to MWC via EPB (190 to EPB)	GH UG to MWC (667 to EPB)	Nett Gossan Hill Decline Monthly Pumpage	Nett Gossan Hill Mine Monthly Pumpage			
	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)	(kL)
Jan-23	5,688	0	9,984	11,239	29,021	502	50,746	5,379	0	5,379	-48,216	70,892	36,256	58,932	58,932	5,263	120,629	0
Feb-23	5,688	0	8,887	49,771	23,721	348	82,727	5,698	0	5,698	-39,946	73,353	33,163	66,570	66,570	5,808	160,794	1
Mar-23	29,432	0	2,288	17,423	13,764	108	33,583	5,060	0	5,060	-40,348	52,061	25,832	37,545	37,545	3,422	103,982	19,345
Apr-23	31,702	0	3,138	48,183	5,520	0	56,841	4,177	0	4,177	-11,729	39,795	30,720	58,786	58,786	3,068	150,397	30,160
May-23	45,595	0	2,653	47,686	10,626	0	60,965	4,956	0	4,956	-31,818	67,266	29,498	64,946	64,946	3,757	175,263	11,202
Jun-23	58,145	0	470	11,310	6,020	0	17,800	8,201	0	8,201	-45,928	98,937	29,498	82,507	82,507	5,734	164,186	19,048
Jul-23	45,024	0	460	2,466	5,367	0	8,293	0	0	0	-37,160	68,528	15,867	47,235	47,235	3,943	104,494	6,299
Aug-23	43,466	0	4,475	21,321	15,999	0	41,795	0	0	0	-41,143	72,896	27,073	58,826	58,826	4,301	148,388	722
Sep-23	38,262	0	7,021	27,482	12,114	0	46,617	0	0	0	-36,909	67,499	24,310	54,900	54,900	2,848	142,627	222
Oct-23	49,984	0	9,022	35,683	8,953	0	53,658	5,464	0	5,464	-56,669	87,575	32,657	63,563	63,563	2,840	170,044	6
Nov-23	38,858	0	8,899	39,627	42,350	0	90,876	7,460	0	7,460	-44,536	85,250	24,652	65,366	65,366	9,690	204,791	0
Dec-23	36,009	0	8,027	29,801	22,746	0	60,574	6,480	0	6,480	-34,074	58,632	25,086	49,644	49,644	3,553	149,780	1
Jan-24	40,849	0	7,134	33,615	26,880	0	67,629	7,154	0	7,154	-50,616	80,905	28,386	58,675	58,675	3,981	171,134	1
Feb-24	34,199	0	6,032	29,232	19,346	0	54,610	5,763	0	5,763	-57,340	70,418	27,113	40,191	40,191	6,843	135,843	4,726
Mar-24	71,895	0	5,672	7,699	12,241	0	25,612	5,554	0	5,554	-52,355	76,572	19,233	43,450	43,450	2,307	143,264	9,357
Apr-24	56,424	0	7,439	14,963	11,376	0	33,778	8,562	0	8,562	-66,723	102,672	30,936	66,885	66,885	3,498	160,585	9,270
May-24	96,939	0	5,703	12,451	8,079	0	26,233	15,537	0	15,537	-47,742	79,223	20,936	52,417	52,417	2,415	178,004	7,422
Jun-24	38,607	0	6,081	10,262	2,392	0	18,735	6,975	0	6,975	-40,690	74,855	25,735	59,900	59,900	2,591	119,833	54,091
Jul-24	33,916	0	6,506	11,327	2,281	0	20,114	5,629	0	5,629	-37,699	73,202	23,278	58,781	58,781	2,100	114,911	60,776
Aug-24	34,509	0	7,667	12,828	6,868	0	27,363	7,636	0	7,636	-54,639	64,469	29,732	39,562	39,562	3,913	105,347	33,566
Sep-24	50,344	0	6,209	11,314	5,137	0	22,660	13,934	0	13,934	-44,579	85,496	77,407	118,324	118,324	3,251	194,579	9,755
Oct-24	39,628	0	5,967	13,386	9,007	0	28,360	12,613	0	12,613	-62,417	61,255	17,700	16,538	16,538	2,060	86,586	5,498
Nov-24	34,685	0	5,084	10,639	7,398	0	23,121	5,303	0	5,303	-40,645	58,018	5,941	23,314	23,314	2,016	83,136	3,301
Dec-24	34,685	0	7,853	19,817	22,004	6,404	56,078	5,400	0	5,400	-65,520	83,791	32,687	50,958	50,958	2,830	144,551	0
2016 Total	573,705	0	2,435	104,483	0	6,545	113,463	0	6,803	6,803	-562,120	617,251	435,999	491,130	497,933	96,172	1,281,273	738,168
2017 Total	548,049	0	3,171	99,795	0	14,682	117,648	0	23,104	23,104	-533,566	639,524	403,490	509,448	532,552	85,473	1,283,722	553,857
2018 Total	540,983	0	2,277	116,506	0	26,278	145,061	0	9,979	9,979	-616,524	536,817	355,583	275,876	285,855	63,352	1,035,251	400,807
2019 Total	540,009	0	3,883	132,058	0	63,305	199,246	0	0	0	-615,605	787,759	352,067	524,220	524,220	63,285	1,326,759	280,853
2020 Total	534,306	7,099	9,415	130,714	120,397	91,546	359,171	0	25,724	25,724	-541,431	525,415	405,871	389,855	415,579	52,801	1,361,857	240,192
2021 Total	484,764	895	23,754	134,864	165,306	22,186	347,005	0	13,932	13,932	-514,487	764,729	161,173	411,415	425,347	36,552	1,293,669	320,400
2022 Total	99,134	16	29,148	114,653	147,163	25,986	316,966	0	0	0	-559,601	815,118	338,070	593,587	593,587	33,572	1,043,259	259,377
2023 Total	427,853	0	65,324	341,992	196,201	958	604,475	52,875	0	52,875	-468,476	842,684	334,612	708,820	708,820	54,226	1,795,374	87,006
2024 Total	566,680	0	77,347	187,533	133,009	6,404	404,293	100,060	0	100,060	-620,965	910,876	339,084	628,995	628,995	37,803	1,637,771	197,763
2019	55.0%	0.0%	0.2%	10.0%	0.0%	0.6%	10.9%	0.0%	0.7%	0.7%	-53.9%	59.2%	41.8%	47.1%	47.7%	9.2%	122.8%	70.8%
2020	30.5%	0.0%	0.2%	5.6%	0.0%	0.8%	6.6%	0.0%	1.3%	1.3%	-29.7%	35.6%	22.5%	28.4%	29.7%	4.8%	71.5%	30.8%
2021	33.0%	0.0%	0.1%	7.1%	0.0%	1.6%	8.9%	0.0%	0.6%	0.6%	-37.6%	32.8%	21.7%	16.8%	17.5%	3.9%	63.2%	24.5%
2022	9.5%	0.0%	2.8%	11.0%	14.1%	2.5%	30.4%	0.0%	0.0%	0.0%	-53.6%	78.1%	32.4%	56.9%	56.9%	3.2%	29.7%	24.9%
2023	23.8%	0.0%	3.6%	19.0%	10.9%	0.1%	33.7%	2.9%	0.0%	2.9%	-26.1%	46.9%	18.6%	39.5%	39.5%	3.0%	51.2%	4.8%
2024	34.6%	0.0%	4.7%	11.5%	8.1%	0.4%	24.7%	6.1%	0.0%	6.1%	-37.9%	55.6%	20.7%	38.4%	38.4%	2.3%	46.7%	12.1%
2022-24 Av.	**30,380**	**0**	**4,773**	**17,894**	**13,233**	**926**	**36,826**	**4,248**	**0**	**4,248**	**-45,807**	**71,352**	**28,105**	**53,650**	**53,650**	**3,489**	**124,345**	**15,115**
2019-21 Av.	**43,308**	**222**	**1,029**	**11,045**	**7,936**	**4,918**	**25,151**	**0**	**1,102**	**1,102**	**-46,431**	**57,720**	**25,531**	**36,819**	**37,921**	**4,240**	**110,619**	**23,373**
2016-18 Av.	**46,187**	**0**	**219**	**8,911**	**0**	**1,320**	**10,449**	**0**	**1,108**	**1,108**	**-47,561**	**49,822**	**33,196**	**35,457**	**36,565**	**6,805**	**100,007**	**47,023**
2013-15 Av.	**50,588**	**0**	**1,150**	**10,369**	**0**	**3,547**	**15,066**	**0**	**2,810**	**2,810**	**-38,361**	**60,216**	**37,839**	**59,692**	**62,501**	**9,315**	**137,471**	**45,897**
2010-12 Av.	**54,225**	**0**	**210**	**11,975**	**0**	**2,893**	**15,079**	**0**	**2,565**	**2,565**	**-42,522**	**57,466**	**44,733**	**59,676**	**62,242**	**12,968**	**144,513**	**26,508**
2016-18 to 2019-21 Change	-6%	N/A	370%	24%	N/A	273%	141%	N/A	-1%	-1%	N/A	16%	-23%	4%	4%	-38%	11%	-50%
2019-21 to 2022-24 Change	-30%	-100%	364%	62%	67%	-81%	46%	N/A	N/A	286%	N/A	24%	10%	46%	41%	-18%	12%	-35%

Appendix C - Golden Grove Monthly Pumpage Data (1990 to 2024)

MONTH	GVW007P Monthly Pumpage	Gossan Valley Bores Monthly Pumpage	Nett Gossan Valley Mine Monthly Pumpage
	(kL)	(kL)	(kL)
Jan-22	0	0	0
Feb-22	0	0	0
Mar-22	0	0	0
Apr-22	0	0	0
May-22	0	0	0
Jun-22	0	0	0
Jul-22	0	0	0
Aug-22	0	0	0
Sep-22	0	0	0
Oct-22	0	0	0
Nov-22	0	0	0
Dec-22	0	0	0
Jan-23	0	0	0
Feb-23	0	0	0
Mar-23	0	0	0
Apr-23	0	0	0
May-23	0	0	0
Jun-23	0	0	0
Jul-23	0	0	0
Aug-23	0	0	0
Sep-23	0	0	0
Oct-23	0	0	0
Nov-23	0	0	0
Dec-23	11,265	11,265	11,265
Jan-24	15,190	15,190	15,190
Feb-24	7,778	7,778	7,778
Mar-24	15,353	15,353	15,353
Apr-24	14,251	14,251	14,251
May-24	6,983	6,983	6,983
Jun-24	310	310	310
Jul-24	772	772	772
Aug-24	698	698	698
Sep-24	10,650	10,650	10,650
Oct-24	22,431	22,431	22,431
Nov-24	26,102	26,102	26,102
Dec-24	41,803	41,803	41,803
2016 Total	0	0	0
2017 Total	0	0	0
2018 Total	0	0	0
2019 Total	0	0	0
2020 Total	0	0	0
2021 Total	0	0	0
2022 Total	0	0	0
2023 Total	11,265	11,265	11,265
2024 Total	162,321	162,321	162,321
2019	0.0%	0.0%	0.0%
2020	0.0%	0.0%	0.0%
2021	0.0%	0.0%	0.0%
2022	0.0%	0.0%	0.0%
2023	0.6%	0.6%	0.6%
2024	9.9%	9.9%	9.9%
2022-24 Av.	**4,822**	**4,822**	**4,822**
2019-21 Av.	**0**	**0**	**0**
2016-18 Av.	**0**	**0**	**0**
2013-15 Av.	**0**	**0**	**0**
2010-12 Av.	**0**	**0**	**0**

Appendix D

Flow Meter Audit

REPORT & FINDINGS

EMR
Golden Grove

Flow Audit Report

Prepared For:
Electrical Team

Prepared by	Jake Munro	2nd May 2021
Checked by	Glenn Hagan	2nd May 2021
Approved by	Glenn Hagan	2nd May 2021

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HOW MUCH ARE YOUR INSTRUMENTS COSTING YOU?

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1.0 Introduction

In April 2022 Instrowest returned to Golden Grove after a request from the EMR Surface Electrical Department in conjunction with the Environmental Department, Instrowest visited your site to complete in-situ audits on multiple flow meters. This report will outline any issues found regarding the installations and performance of these flow meters, it will include details and figures recorded comparing values between your installed meters and our calibrated ultrasonic GE PT-900 flow unit.

1.1 Measuring Principle

Before we get into the findings it is best to explain the process of how we complete the flow meter audit with the clamp on meter and what variables can affect the overall set-up, accuracy and performance of the verification process.

1.1 Pipe Properties

Part of the set-up process of our test equipment is to select the pipe properties of where the sensors will be installed. It is very vital that these dimensions are correct as this will determine which sensors are to be used, how they are installed and will affect the echo to determine the accuracy of the flow being measured. If the wall thickness entered is incorrect it will affect the volumetric flow calculation based upon the unit's time of flight (TOF).

We were able to gather the pipe sizes on the steel pipes as they were stamped with then DN size. We were able to verify the wall thickness of the steel pipes using our wall thickness gauge. As for the poly pipes we could not find the pipe markings so physical measurements were taken. An off cut of pipe was also found to determine the wall thickness of the poly pipes. Our test units come with pre-installed pipe data so this data was used to perform the initial set-up for the steel pipes. From the physical measurements we had taken of the OD and wall thickness of the poly pipe we were able to manually input this pipe data into the unit, with this we are confident the data on the test units is correct.

2.0 Findings

As you can see from the table of results below you can see that most of the flow meters installed on site are not operating within tolerable accuracy. You will also notice that a zero may not have been taken from the installed flow meters and that it was due to operational restraints. Below is a list of transmitters we were asked to audit; further detail is available in section 3.0.

Tag	Service	Status
FIT3864	TSF3 Flow Dam End	VALIDATED
FIT3865	TSF3 Flow Dam End	VALIDATED
FIT3866	TSF3 H2O return	VALIDATED
FIT3867	TSF3 Underdrain	VALIDATED
FSL 4036	Village Bore	Unable to validate
	54P Bore	Unable to validate
FT-4098	RMB#4	Unable to validate
	Bald Hill Bore	VALIDATED
FIT4026	Magazine bore pump	VALIDATED
FIT4027	NUF bore	Unable to validate
FIT4051	Evap. To lake Wownamyina	VALIDATED
FIT4058	GH190 U/G to evap. B	VALIDATED
FIT4060	Evap A to Mill	VALIDATED
FIT4061	evap. A to Gossan Hill	VALIDATED
FIT4066	MWC to evap. B)	VALIDATED
FIT4069	Standpipe at Evap Pond	VALIDATED
FIT4080	Raw Water #1	VALIDATED
FIT4081	Process Raw Water	VALIDATED
FIT4082	Raw Water #2	Unable to validate
FIT4085	Gossan Hill mine water	VALIDATED
FIT4086	Scuddles mine water	Unable to validate
FIT4087	Gossan Hill to reactor tank	VALIDATED
FIT4097	HDEC44P bore flow	Unable to validate

While performing the audits it was observed a few meters are still installed incorrectly, either installed to close to an elbow, 'T' piece or on a decline. The way the meter is connected to the process piping is an issue that can affect readings. The plastic or poly pipe isn't connected to the meter via metal pipe spools which would ensure laminar flow through the meter. A number of the meters are not grounded correctly, if at all. This will cause issues with stray currents within the sensor and affect flow readings adversely.

Recommendations to fix these issues can be found on the following pages and under the recommendations section and will improve accuracies and repeatability.

3.0 Audit Data

3.1 FIT3864 (TSF3 Flow Dam End)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
315mm / 25mm [Poly(p)]	9193223 m3	9193315 m3	20.39	m3	270.75	298.55	1466	92	101.45	**10.26%**

1. No Earth Rings Installed
2. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube
3. Could not check the zero because we cannot turn-off the plant tails pumps nor isolate valves.

3.2 FIT3865 (TSF3 Flow Dam End)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
315mm / 25mm [Poly(p)]	10727956	10728054	22.23	m³/hr	264.50	282.97	1474m/s	98m3	104.84m3	**6.98%**

1. Zero not checked due to operational restraints.
2. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube
3. No Earth Rings installed

3.3 FIT3866 (TSF3 H2O return)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
315mm / 25mm [Poly(p)]	600411 m3 x 10	600426m3 x 10	20.5	m3	438.98	412.15	1401	150	140.83	**6.51%**

1. Zero check not performed due to operational restraints.
2. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube

3.4 FIT3867 (TSF3 Underdrain)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm / 8.16mm [Carbon Steel]	1637471m3	167480m3	5.62	m3/hr	96.15	88.01	1510m/s	9m3	8.516m3	**8.47%**

1. Zero Validated and ok.
2. No Earth Rings
3. Short sample taken due to capacity of sump

3.5 FIT4026 (Magazine bore pump)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm/ 6.02mm [Carbon Steel]	30851m3	30858m3	18.44	m3/hr	23.04	27.30	1483m/s	7m3	8.290m3	**18.85%**

1. Zero checks ok
2. Non-standard piping before and after flow meter may have different ID, introducing turbulence.

3.6 FIT4027 (NUF bore)

Could not complete, Bore pump kept tripping out with flow rates above 1.8L/sec.

3.7 FIT4051 (Evap. To lake Wownamyina)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm/ 8.16mm [Carbon Steel]	1699215	1669225	20.49	L/s	8.13	8.06	1478m/s	10000L	9918.39L	**0.86%**

1. Isolation valve installed within 2 pipe diameters.
2. Non return valve installed within 5 pipe diameters upstream (920mm)
3. Pipe tap in within 5 pipe diameters upstream
4. Fitted direct in steel pipes.

This installation is not ideal due to the non-return valve and pipe tap in both within 5 pipe diameters upstream of the flow sensor and the control valve within 2 pipe diameters downstream, however with the current piping arrangement there doesn't seem to be the provision to make the appropriate corrections.

3.8 FIT4058 (GH190 U/G to evap. B)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
315mm / 15mm [Carbon Steel]	4832854	4832875	12.16	m³/hr	103.65	111.06	1485m/s	21m3	22.5m3	**6.68%**

1. Zero checks ok
2. Suitable Installation

3.9 FIT4060 Evap A to Mill

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm / 8.17mm	4473094	4473119	12.85	L/hr	112097	117846	1468m/s	24000L	25231L	**4.88%**

1. Poly pipe out of flow meter. Poly could have a different ID than the tube. Steel spool recommended to be installed
2. Manual valve fitter within lead in diameters of the tube.
3. Recommend cleaning flow tube

3.10 FIT4061 (evap. A to Gossan Hill)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm/ 18.75mm [Poly(e)]	8817893	8817906	10.15	L/s	21.34	24.18	1552	13000	14732L	**12.75%**

1. Poly pipe out of flow meter. Poly could have a different ID than the tube. Steel spool recommended to be installed
2. No earthing rings, Fit Earthing to Flow tube.
3. Tap in point installed upstream of Flow Sensor within lead in diameters, potentially causing turbulence and an inaccurate reading

3.11 FIT4066 (MWC to evap. B)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
250mm/ 18.75mm [Poly(e)]	20762944	20762954	4.16	m3/hr	144.30	151.70	1489	10m3	10.513m3	**4.88%**

1. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed.
2. Zero not checked due to operational restraints.

3.12 FIT4069 (standpipe at Evap Pond)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
100mm/ 6.05mm [Carbon Steel]	238430	23840	7.6	L/s	21.94	24.61	1472	10000L	11216L	**10.85%**

1. Earthing rings fitted.
2. Zero Checks OK

3.13 FIT4080 (Raw Water #1)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
100mm/ 6.02mm [Carbon Steel]	2861145m3	2861157m3	13.56	m3/hr	53.09	62.96	1395m/s	12m3	14.229m3	**15.68%**

1. Zero check could not be performed due to operational restraints.
2. Correct installation.
3. Cleaning of flow tube and spooling recommended.

3.14 FIT4081 (Process Raw Water)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
315mm/ 19.7mm [Poly(e)]	59156125m 3	59156178m 3	5.91	m3/hr	538.07	595.58	1483m/s	53m3	58.665m3	**9.66%**

1. Flow Tube installed direct in Poly (emflux). Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube.
2. Zero not validated due to operational restrictions.

The pipe was determined to be DN315 PE100 PN10, stamped the side of the pipe.

3.15 FIT4084 (Raw Water #2)

1. Could not maintain a signal with our validation meter, as a result we could not validate the flow meter function.
2. Air was found in the pipe and bled out upstream. Pump seals may be leaking and introducing air into the line.
3. Raw water may have to high a sediment content, this is possibly causing signal losses in our validation meter.

3.16 FIT4085 (Gossan Hill mine water)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm/ 19mm [Poly(e)]	1372868m3	1372881m3	15.11	m3/hr	51.62	54.74	1532m/s	13m3	13.784m3	**5.70%**

1. Zero not checked due to operational restraints.
2. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube

3.17 FIT4086 (Scuddles mine water)

1. Flow Tube installed direct in Poly (emflux). Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube.
2. Coil Open Circuit alarm on totaliser – check wiring and installation, flow meter may be unserviceable. Validation not performed.

3.18 FIT4087 (Gossan Hill to reactor tank)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
250mm/ 18.4mm [Poly(e)]	8824386m3	8824395m3	3.25	m3/hr	166.05	184.39	1483m/s	9m3	9.994m3	**9.94%**

1. Flow Tube installed direct in Poly (emflux). Poly could have a different ID than the tube. Steel spool recommended to be installed.
2. Earth rings are installed.
3. Recommend cleaning flow tube
4. Zero not checked due to operational restrictions

3.19 FIT4097 (HDEC44P bore flow)

1. Bore no longer in use.

3.20 RMB4

1. Validation not performed. Pump C/B tagged out of service due to dry bore.
2. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube
3. Installed too close to bend steel spools would rectify.

3.21 Bald Hill Bore

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
80mm /2.62 [Carbon Steel]	243920m3	243930m3	12.92	L/s	12.90	13.29	1483m/s	10m3	10.302m3	**2.93%**

1. Correct installation
2. Zero Check OK

4.0 Recommendations

Due to operational constraints, a high percentage of flows could not be stopped. This prevents Instrowest from obtaining a true zero reading for the clamp on test meter.

Some of the process lines tested contained air bubbles due to the nature of the processes involved, air in the system adversely affects the accuracy of flow meters. The pipe configuration should avoid a buildup or accumulation of solids or air. Any entrained air should be carried out of the meter by flow. Magflow flowmeters are relatively sensitive to errors caused by nonsymmetrical velocity patterns or swirl. The general rule of thumb for straight piping is ten-diameter lengths of piping upstream and five-diameters downstream from the meter.

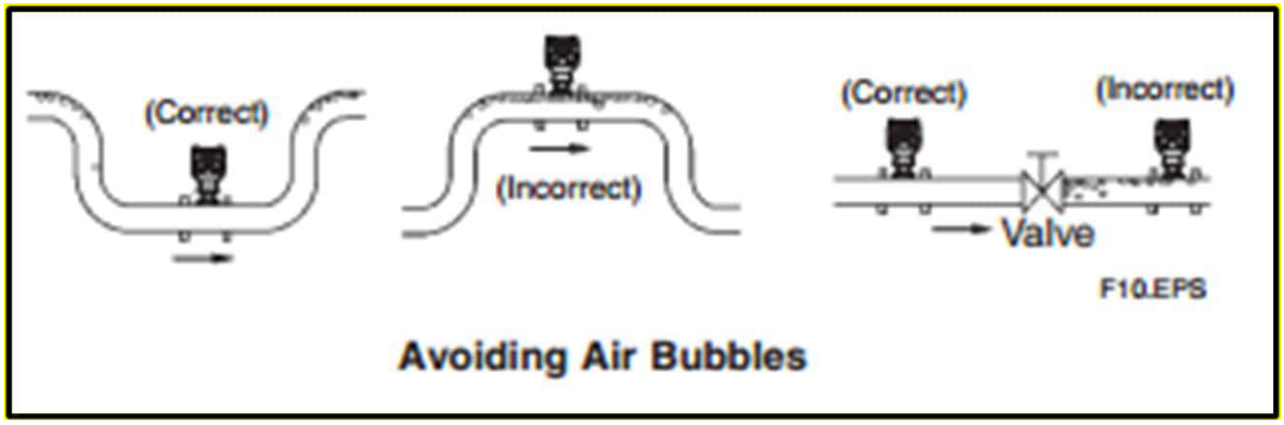

Figure 1: Required meter installation for greatest performance and accuracy

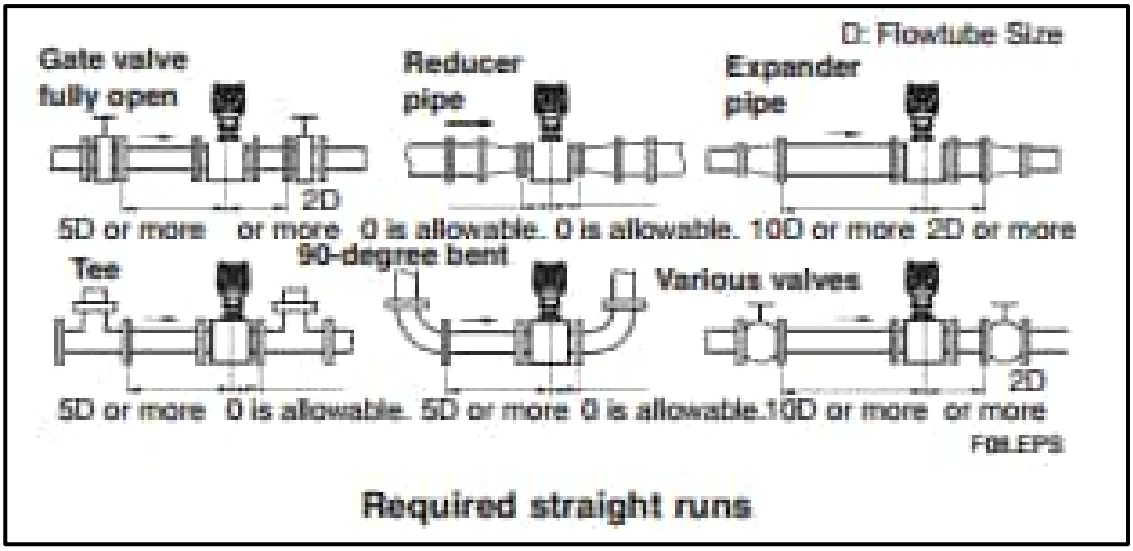

Figure 2: Required straight length runs for greatest performance and accuracy

Figure 3: FIT4051 Bad install as to close to elbow

Removal and cleaning of scale built up on the inside of flow meters. Due to the saltiness (high TDS) of the water an abnormal amount of scale can build up and affect the readings. Where the flow meter is reading low (negative error) cleaning of the tubes electrodes to remove scale could improve the meters performance and accuracy.

The magnetic field across the electrodes is very small, making the Magflow susceptible to stray ground currents in the pipeline. If the pipeline is made of non-conducting materials, such as plastic, or is lined with an insulating material, these stray ground potentials can cause significant measuring errors. Five or six millivolts of stray potential in the measuring section of the flowmeter can render the signal meaningless. The transmitter will confuse this stray potential with the actual signal and provide inaccurate flow readings.

A number of meters do not have adequate grounding. All plastic piping should have grounding rings or discs installed; steel spools fitted to the inlet and outlet also assist with grounding. Metal piping should have enough grounding through the process pipe itself but common practice is to ground the spools to the meter with an earth strap or tail.

5.0 Instrowest Intellectual Property

The client must maintain confidentiality and not use any ideas, systems or processes communicated or made available by Instrowest to the client without the written permission of Instrowest's Director. All ideas, systems and methods remain the intellectual property of Instrowest.

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NATA
WORLD RECOGNISED ACCREDITATION
No. 5471

The results of the test, calibration and/or measurements included in this document are traceable to an Australian/National standard.

Accredited for compliance with ISO/IEC 17025 - Calibration

METER TEST REPORT

REPORT No: MET-LAB-2021/0496/A

Customer: Instrowest Pty Ltd
Street Address: U3/12 Day Rd
Suburb: Rockingham, WA 6168
Customer Order No: 00009226

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Meter Make	Meter Type	Meter Number	Meter Size	Graduation Interval
GE Transport PT900	U/Sonic	M12190034	N/A	1 L

Test ID	Nominal Flow rate		Calibrated Volume	Time	Actual Flow Rate	Meter Readings			Error (%)	Uncertainty	Water Temp (°C)		Water Pressure (kPa)		
	L/s	kL/H	Litres	Sec	L/s	Initial	Final	Total			Start	Finish	Start	Read 1	Read 2
A	5.0	18.0	1889.1	417.7	4.52	10	1899	1889	0.00%	0.34%	18.8	18.8	20	20	20
B	20.0	72.0	5097.6	267.3	19.07	0	5062	5062	-0.70%	0.34%	19.0	19.0	20	20	20
C	40.0	144.0	10184.1	259.1	39.31	0	10189	10189	0.05%	0.34%	19.0	19.0	20	20	20
D	80.0	288.0	33510.9	425.9	78.68	0	33703	33703	0.57%	0.34%	19.2	19.2	30	30	30
E	120.0	432.0	41613.3	356.6	116.69	67	41878	41811	0.48%	0.34%	19.7	19.7	50	50	50

Comment: Transducer Type CRR-HT-596 Sn:01200764 &01200767
Test Parameters:
Pipe OD =219 mm, Thickness = 4.9mm, Material = Carbon Steel, No Liner, 2 passes , transducer spacing 176 mm, water used as test medium
Correction factor of 1.04 applied

Test Equipment Used:

Test Rig:	CW592
Magnetic Flow Meters:	100mm Line; RIMS:93003 (1 to 60 L/Sec) 200mm Line; RIMS:93005 (to 61-200 L/Sec)
Pressure Gauge:	93017
Thermometer:	93031
Calibration Procedure:	AMSI-W-133

Note:
1) Actual Flow Rate = (Calibrated Volume) / (Time)
2) Meter Readings (Total) = Final - Initial Meter Reading
3) % Error = ((Meter Registration (Total) - Calibrated Volume) / Calibrated Volume))*100
4) Reported error is calculated by using calibrated volume
5) Water used as test medium

Measurement Uncertainty:
Measurement Uncertainties are calculated on test volumes and reported at 95% confidence with a coverage factor of 2.

[redacted]

INSTRO West PTY LTD

29 Metals
Golden Grove
2023 Flow Meter Audit
29th to 31st March 2023

Written by Jake Munro 3rd April 2023

Reviewed by Glenn Hagan 3rd April 2023

INSTROWEST PTY LTD
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1.0 Introduction

Instrowest were engaged by the 29 Metals HSEC Team to complete the 12 monthly audits of site water flow measurement. This report delivers the data captured during our validations on each flow meter against our NATA traceable Ultrasonic flow meter (GE PT-900). issues found regarding the installations and performance of these flow meters, it will include details and figures recorded comparing values between your installed meters and our calibrated ultrasonic GE PT-900 flow unit.

1.1 Measuring Principle

Below is a brief overview of the process involved in determining the setup of the GE PT-900 Ultrasonic flow rig and variables that effect accuracy and performance of how we complete the flow meter audit with the clamp on meter and what variables can affect the overall set-up, accuracy and performance of the verification process.

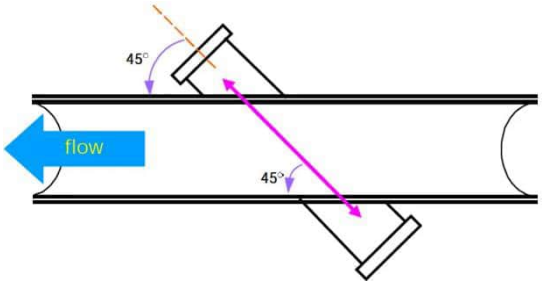
Understanding the principle of operation of an ultrasonic flow meter is critical to understanding the limitations of ultrasonic flow measurement. An ultrasonic sound wave is emitted from one sensor, which then travels through the pipe wall, process medium and back through the pipe wall again into a receiving sensor. The time this takes has a proportional relationship with fluid velocity depending on whether the signal is being sent upstream or downstream of the flow direction.

The first step is determining the placement of the flow rig along the pipe, this is critical as laminar flow within a full pipe will yield the most accurate indication of flow rate. Next the material construction, sizing and wall thickness is determined, this is usually as simple as acquiring them from the data stamped on piping, however this is not always available and dimensions are attained by physically measuring pipe OD and wall thickness with a tape measure and ultrasonic thickness gauge (the thickness gauge is verified against a thickness test block before each use to ensure accuracy). The model of sensor installed in the flow rig is determined by the aforementioned data collected at each individual test point; with the correct sensor selected the number of traverses and sensor distance within the flow rig assembly can be determined and the validation process can begin, verifying no flow (when operationally viable) and flow at normal operating conditions

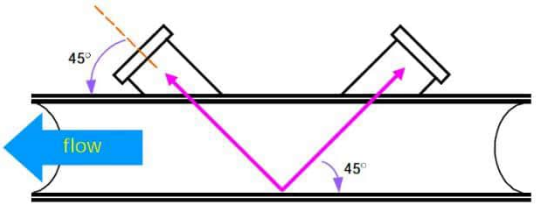
Factors that affect the accuracy of validation results are as follows:

1. Pipe Surface Condition –
   Rust, paint, dirt, and even deep scratches on the outside surface of a test area will interfere with the transference of sound energy from the transducer into the test material. Loose dirt or flakes of corrosion must be cleaned from the specimen with a wire brush or file before measurements are attempted. As long any rust is smooth and well bonded to the metal below it is still possible to make corrosion measurements through thin layers.
2. “Sound Scattering” –
   Pipes constructed from certain materials, such as cast stainless steel, cast carbon steel the sound energy is scattered from the individual crystallites in the casting or from dissimilar materials within the composite. This effect reduces the ability to discriminate a valid return echo from the back side of the material and limits the effective measurement that ultrasonic readability can achieve..
3. Number of Echo Traverses –
   The traverse of an echo is the amount of times and echo is reflected off a surface. In a single traverse the sound energy will travel directly between the two sensors, a dual traversal will see the echo move through the process and be reflected at a 45 degree angle towards to receiving sensor

(See Below). The more traverses the more accurate the reading, however the echo becomes more intolerant to poor flow conditions such as cavitation, turbulence and vortices. Typically, Instrowest will use a dual traverse configuration where possible.



Single traverse configuration



Dual Traverse configuration

4. Velocity Variations –
   Some materials used to construct piping can demonstrate substantial variations in sound velocity from point-to-point within the material. Cast Stainless Steel can exhibit this effect due to a relatively large grain size and the direction of sound velocity with respect to grain orientation. Plastic materials will have sound velocities change within the material change as they change in temperature, in outdoor environments this can become a challenge due to huge variations in ambient temperature affecting exterior pipe surface temperatures.
5. Sound Attenuation or Absorption –
   In many organic materials such as rubber lining or algae build up, the acoustic signal can be absorbed, and the echo can become diminished and difficult to measure.

While Instrowest takes all precautions to minimise any adverse effects on the validation results and due to variables outside of the Technicians control, the errors that have been calculated can vary quite considerably and are a validation of flow meter functionality only, not true indication of error present within the flow meters themselves.

2.0 Findings

Below is the list of flow meters Instrowest were asked to audit; further detail is available in section 3.0.

Tag	Service	Status
FIT3864	TSF3 Flow Dam End	VALIDATED
FIT3865	TSF3 Flow Dam End	VALIDATED
FIT3866	TSF3 H2O return	VALIDATED
FIT3867	TSF3 Underdrain	VALIDATED
FSL 4036	Village Bore	Unable to validate
	54P Bore	Unable to validate
FT-4098	RMB#4	Unable to validate
	Bald Hill Bore	VALIDATED
FIT4026	Magazine bore pump	VALIDATED
FIT4027	NUF bore	Unable to validate
FIT4051	Evap. To lake Wownamyina	VALIDATED
FIT4058	GH190 U/G to evap. B	VALIDATED
FIT4060	Evap A to Mill	VALIDATED
FIT4061	evap. A to Gossan Hill	VALIDATED
FIT4066	MWC to evap. B)	VALIDATED
FIT4069	Standpipe at Evap Pond	VALIDATED
FIT4080	Raw Water #1	VALIDATED
FIT4081	Process Raw Water	VALIDATED
FIT4082	Raw Water #2	VALIDATED
FIT4085	Gossan Hill mine water	VALIDATED
FIT4086	Scuddles mine water	VALIDATED
FIT4087	Gossan Hill to reactor tank	VALIDATED
FIT4097	New bore flow	VALIDATED

Observations throughout the audit have shown many flow meters are still installed outside of OEM and industry standard guidelines. Incorrect connection to the process piping can affect readings, if plastic or poly pipe isn't connected to the meter via metal pipe spools this can prevent laminar flow through the flow tube. A number of the meters are not grounded correctly, if at all. This causes stray eddy currents within the sensor that have the potential to introduce errors in flow rate displayed.

Recommendations to address these issues can be found on the following pages and under the recommendations section and will improve accuracies and repeatability.

3.0 Audit Data

3.1 FIT3864 (TSF3 Flow Dam End)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Calculated Error**
315mm / 25mm [Poly(p)]	11142178 m3	11142230 m3	15.14	L/s	57.24	63.09	1441.6	52m3	57.31m3	**9.27%**

1. No Earth Rings Installed
2. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube
3. Could not check the zero because we cannot turn-off the plant tails pumps nor isolate valves.

3.2 FIT3865 (TSF3 Flow Dam End)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Calculated Error**
315mm / 25mm [Poly(p)]	12676884	12676905	3.82	m³/hr	314	289.79	1474m/s	20m3	18.45 m3	**-8.52%**

1. Zero flow healthy.
2. Flow was intermittently turning off, this affected test duration.
3. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube
4. No Earth Rings installed

3.3 FIT3866 (TSF3 H2O return)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Calculated Error**
315mm / 25mm [Poly(p)]	844722 m3 x 10	844738 m3 x 10	15.88	m3/hr	604.53	651.15	1519.9	160	172.337	**7.16%**

1. Zero check not performed due to operational restraints.
2. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube.

3.4 FIT3867 (TSF3 Underdrain)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm / 8.16mm [Carbon Steel]	1962747 m3	1962754 m3	1.63	m3/hr	257.67	323.33	1591.5m/s	7m3	8.784m3	**20.31%**

1. Zero Validated and ok.
2. No Earth Rings
3. Short test duration due to small capacity of sump being drained to low level cut off for pump. This short sample size greatly affects the calculated error.
4. Gate valve (circled below) requires overhaul and new packing. Its current condition is allowing air into the line downstream of the sump pump, which is allowing water to be siphoned out of the sump while the pump is not running at a flow rate of approximately 5-15 Litres per second.

3.5 FIT4026 (Magazine bore pump)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm/ 6.02mm [Carbon Steel]	252912m3	252918m3	15.27	m3/hr	23.58	27.11	1559.8m/s	6m3	6.899m3	**13.03%**

1. Zero flow healthy
2. Non-standard piping before and after flow meter may have different ID, introducing turbulence.

3.6 FIT4027 (NUF bore)

Could not complete, Bore pump kept tripping out on high flow.

3.7 FIT4051 (Evap. To lake Wownamyina)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm/ 8.16mm [Carbon Steel]	1916219	1916240	15.19	L/s	23.04	23.09	1522m/s	21000L	21.046L	**0.23%**

1. Isolation valve installed within 2 pipe diameters.
2. Non return valve installed within 5 pipe diameters upstream (920mm)
3. Pipe tap in within 5 pipe diameters upstream
4. Fitted direct in steel pipes.
5. 1.501L/s observed when mag flow indicated no flow.
6. This installation is not in line with OEM recommendations due to the non-return valve and pipe tap in both within 5 pipe diameters upstream of the flow sensor and the control valve within 2 pipe diameters downstream, however with the current piping arrangement there doesn't seem to be the provision to make the appropriate corrections.

FIT4058 (GH190 U/G to evap. B)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
315mm / 15mm [Carbon Steel]	5518879	55158894	15.16	m³/hr	59.37	61.22	1483m/s	15m3	15.469m3	**3.03%**

1. Zero checks ok
2. Suitable Installation
3. Flow tube internals should be inspected and cleaned as required.

3.8 FIT4060 Evap A to Mill

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm / 8.17mm [Carbon Steel]	5281552	5281571	15.30	L/s	20.69	30.29	1488m/s	19000L	27807L	**31.67%**

1. Poly pipe out of flow meter. Poly could have a different ID than the tube. Steel spool recommended to be installed.
2. Audible cavitation and turbulence heard from within the pipework, this indicates a pipe not full which neither the mag flow nor the ultrasonic flow meters are able to measure with any measurable accuracy.
3. Manual valve fitter within lead in diameters of the tube.
4. Flow tube internals should be inspected and cleaned as required.

3.9 FIT4061 (evap. A to Gossan Hill)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm/ 18.75mm [Poly(e)]	9334762	8817906	15.80	L/s	16.88	16.20	1466	16000L	15353L	**-4.21%**

1. No earthing rings, fitment required.
2. Tap in point installed upstream of Flow Sensor within lead in diameters.
3. 0.06L/s observed when mag flow indicated no flow.

3.10 FIT4066 (MWC to evap. B)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
250mm/ 18.75mm [Poly(e)]	22171788	22171888	24.83	m3/hr	246.91	221.76	1508.2	100m3	89.813m3	**-11.34%**

1. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed.
2. Zero flow healthy.

3.11 FIT4069 (standpipe at Evap Pond)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
100mm/ 6.05mm [Carbon Steel]	329030	329035	10.65	L/s	7.82	5.92	1347.7	5000L	3783.2L	**-32.16%**

1. Earthing rings fitted.
2. Zero flow healthy
3. A volumetric test could be carried out in the future utilising a weigh bridge on site and a water cart in future tests to observe a more accurate result for validation.

3.12 FIT4080 (Raw Water #1)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
100mm/ 6.02mm [Carbon Steel]	3841165m3	3841170m3	16.98	m3/hr	17.67	15.95	1389.2m/s	5m3	4.514m3	**-10.77%**

1. Zero check could not be performed due to operational restraints.
2. Correct installation.
3. Cleaning of flow tube and spooling recommended.

3.13 FIT4081 (Process Raw Water)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
315mm/ 19.7mm [Poly(e)]	62951841m 3	62951988m 3	15.06	m3/hr	585.65	614.29	1494m/s	147m3	154.186m3	**4.67%**

1. Flow Tube installed direct in Poly which could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube.
2. Zero not validated due to operational restrictions.

3.14 FIT4084 (Raw Water #2)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
115mm/ 9.2mm [Carbon Steel]	2913700m3	2913712m3	15.633	m3/hr	46.07	69.83	1550.8m/s	12m3	18.192m3	**34.04%**

1. Zero Flow healthy.
2. Flow tube may have scaling built up inside.

3.15 FIT4085 (Gossan Hill mine water)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
200mm/ 19mm [Poly(e)]	1372868m3	1372881m3	15.11	m3/hr	51.62	54.74	1532m/s	13m3	13.784m3	**5.70%**

1. Zero flow healthy
2. Installation does not follow OEM installations due to vertical orientation. However due to low errors observed there is no need to amend its orientation.

3.16 FIT4086 (Scuddles mine water)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
116mm/ 17mm [Poly(e)]	30665.5m3	30677.2m3	15.11	m3/hr	46.46	45.42	1529.6m/s	11.7m3	11.439m3	**-2.28%**

As found the flow meter HMI was indicating a flow rate 0 to 0.01m3/hr with an indication on SCADA of 0 to 30m3/hr, both cycling ever 5 seconds. The HMI was also indicating a system fault. Further investigation found the wiring from the flow meter to the HMI incorrectly connected and the range parameters did not match the flow meter range or SCADA scaling. Both of these issues were rectified and the flow meter was returned to service.

3.17 FIT4087 (Gossan Hill to reactor tank)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Site Error**
250mm/ 18.4mm [Poly(e)]	9588939m3	9588953m3	16.61	m3/hr	50.57	38.51	1473m/s	14m3	10.66m3	**-31.33%**

1. Flow Tube installed direct in Poly which could have a different ID than the tube. Steel spool recommended to be installed.
2. Earth rings are installed.
3. Recommend cleaning flow tube
4. Zero flow healthy

3.18 FIT4097 (New bore location)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Calculated Error**
110mm/ 6.6mm [Carbon Steel]	92642m3	92686m3	26.01	m3/hr	9.227	11.363	1611.6m/s	4m3	4.926m3	**-23.15%**

1. Zero flow healthy
2. 10 Pipe O.D.s needed upstream of flow tube before reduction in pipe size.

3.19 RMB4

1. Validation not performed. Pump C/B tagged out of service due to dry bore.
2. This installation is an good example of an appropriate installation

3.20 IT40183 (Bald Hill Bore)

Pipe Size / Wall Thickness	Totalizer before	Totalizer after	Test Time (min)	Rate Units	As Found Avg Rate	GE PT-900 Avg Rate	Measured Sonic Velocity	Site Meter Total	GE PT-900 Total	**Calculated Error**
80mm /2.62 [Carbon Steel]	481451m3	481463m3	17.85	L/s	11.76	9.56	1305.2m/s	12m3	9.757m3	**-22.99%**

1. Correct installation
2. Zero Check OK
3. Installation not photographed.

4.0 Recommendations

Due to operational constraints, a high percentage of flows could not be stopped. This prevents Instrowest from obtaining a true zero reading for the clamp on test meter.

Some of the process lines tested contained air bubbles due to the nature of the processes involved, air in the system adversely affects the accuracy of flow meters. The pipe configuration should avoid a buildup or accumulation of solids or air. Any entrained air should be carried out of the meter by flow. Magflow flowmeters are relatively sensitive to errors caused by nonsymmetrical velocity patterns or swirl. The general rule of thumb for straight piping is ten-diameter lengths of piping upstream and five-diameters downstream from the meter.

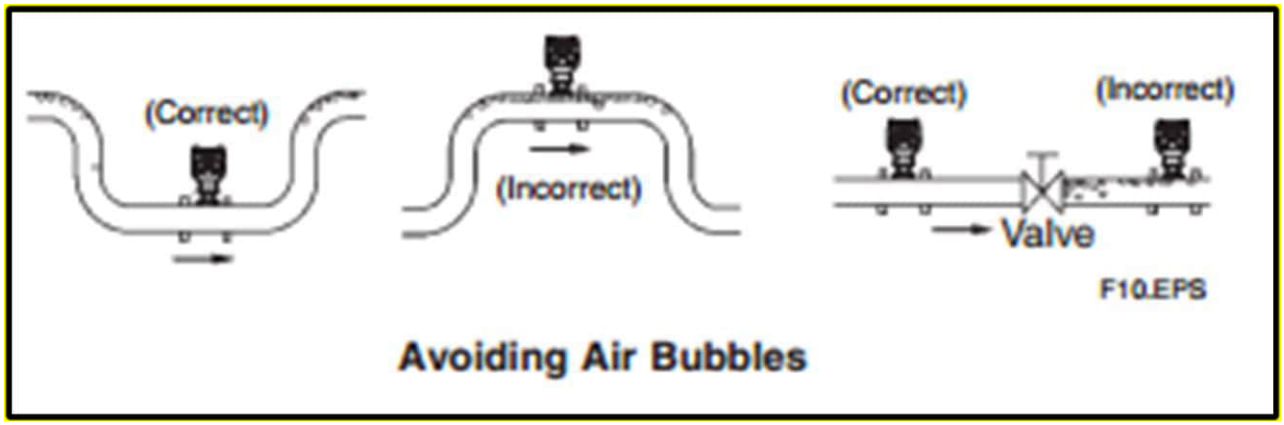


Figure 1: Required meter installation for greatest performance and accuracy

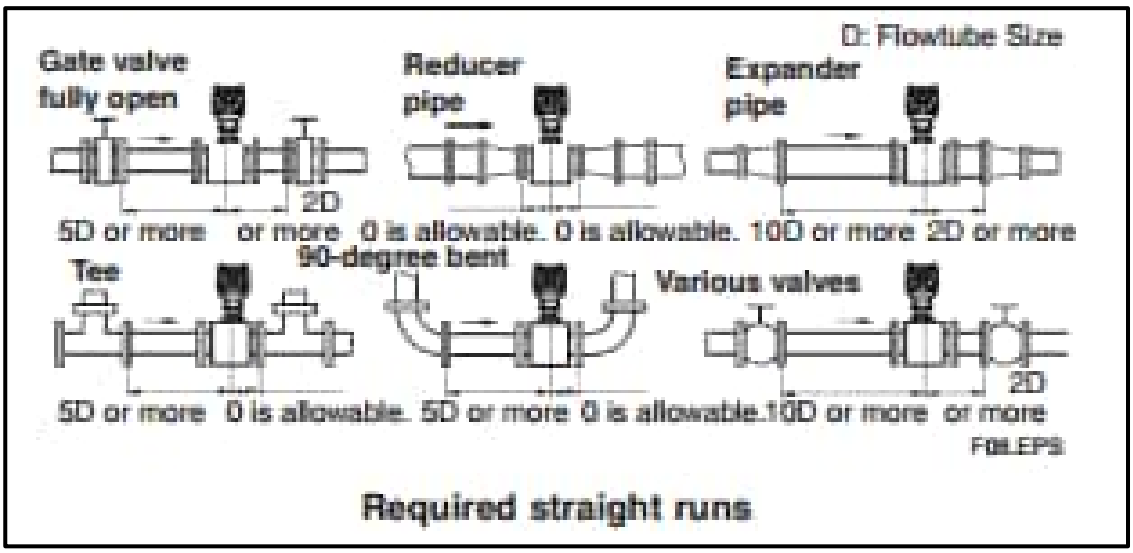


Figure 2: Required straight length runs for greatest performance and accuracy

Figure 3: FIT4051 Bad install as to close to elbow

Removal and cleaning of scale built up on the inside of flow meters. Due to the saltiness (high TDS) of the water an abnormal amount of scale can build up and affect the readings. Where the flow meter is reading low (negative error) cleaning of the tubes electrodes to remove scale could improve the meters performance and accuracy.

The magnetic field across the electrodes is very small, making the Magflow susceptible to stray ground currents in the pipeline. If the pipeline is made of non-conducting materials, such as plastic, or is lined with an insulating material, these stray ground potentials can cause significant measuring errors. Five

or six millivolts of stray potential in the measuring section of the flowmeter can render the signal meaningless. The transmitter will confuse this stray potential with the actual signal and provide inaccurate flow readings.

A number of meters do not have adequate grounding. All plastic piping should have grounding rings or discs installed; steel spools fitted to the inlet and outlet also assist with grounding. Metal piping should have enough grounding through the process pipe itself, but common practice is to ground the spools to the meter with an earth strap or tail.

To calibrate any of these flow meters that are installed on site, they must be removed and sent to a facility that have the appropriate flow test apparatus to perform a precise volumetric flow test under controlled laboratory conditions. This is the only way a calibration can be performed.

5.0 Instrowest Intellectual Property

The client must maintain confidentiality and not use any ideas, systems or processes communicated or made available by Instrowest to the client without the written permission of Instrowest's Director. All ideas, systems and methods remain the intellectual property of Instrowest.

Water Corporation

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NATA ACCREDITATION No. 5471

Measurement results for volume are traceable to SI units. Reference equipment has been calibrated by the National Measurement Institute or NATA accredited laboratories. Accredited for compliance with ISO/IEC 17025 - Calibration

METER TEST REPORT

REPORT No: MET-LAB-2022-0493-A

Customer: Instrowest Pty. Ltd.
Street Address: Unit 3, 12 Day Road
Suburb: Rockingham WA 6168
Customer Order No: 00011344

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Meter Make	Meter Type	Meter Number	Graduation Interval
GE Panametrics	PT900 / Ultrasonic	M12190034	0.01 L

Test ID	Nominal Flow rate		Calibrated Volume	Time	Actual Flow Rate	Meter Readings (L)			Error (%)	Uncertainty	Water Temp (°C)		Water Pressure (kPa)		
	L/s	kL/H	Litres	Sec	L/s	Initial	Final	Total			Start	Finish	Start	Read 1	Read 2
A	20.0	72.0	5773.2	296.7	19.46	0.00	5743.99	5743.99	-0.51%	0.34%	18.1	18.3	30	30	30
B	40.0	144.0	18959.5	482.6	39.29	0.00	18931.14	18931.14	-0.15%	0.34%	18.3	18.4	30	30	30
C	80.0	288.0	46866.6	588.7	79.61	0.00	46905.90	46905.90	0.08%	0.34%	18.4	18.7	30	30	30
D	105.0	378.0	70471.4	676.6	104.16	0.00	70994.51	70994.51	0.74%	0.34%	18.7	18.9	50	50	50

Comment: Transducer Type CRR-HT-596 - S/N 01200767 & 01200764
K-factor changed from 1.00 to 0.97
Water used as medium - average temperature of 18°C programmed
Transducer spacing 190.68mm
PVC pipe / 226.6mm OD / 9mm Wall Thickness

Test Equipment Used:

Test Rig:	CW592
Reference Flow Meters:	Asset ID: 93003; 100mm Line (1 to 60 L/Sec)
	Asset ID: 93005; 200mm Line (61-200 L/Sec)
Pressure Gauge:	Asset ID: 93017
Thermometer:	Asset ID: 93031
Timing Device:	Asset ID: 59045
Calibration Procedure:	AMSI-W-133

Note:
1) Actual Flow Rate = (Calibrated Volume) / (Time)
2) Meter Readings (Total) = Final - Initial Meter Reading
3) % Error = ((Meter Registration (Total) - Calibrated Volume) / Calibrated Volume))*100
4) Reported error is calculated by using calibrated volume
5) Water used as test medium

Measurement Uncertainty:
Measurement Uncertainties are calculated on test volumes and reported at 95% confidence with a coverage factor of 2.

[redacted]

INSTRO West PTY LTD

Water Corporation

Meter Testing Laboratory
37 Lemnos Street
Shenton Park, WA 6008

AMSI.Workshop@watercorporation.com.au

NATA No. 5471

Measurement results for volume are traceable to SI units. Reference equipment has been calibrated by the National Measurement Institute or NATA accredited laboratories. Accredited for compliance with ISO/IEC 17025 - Calibration

METER TEST REPORT

REPORT No: MET-LAB-2022-0493-B

Customer: Instrowest
Street Address: Unit 3, 12 Day Road
Suburb: Rockingham WA 6168
Customer Order No: 00011344

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Meter Make	Meter Type	Meter Number	Meter Size	Graduation Interval
GE Panametrics	Ultrasoniic	M12190034	50 mm	0.1 L

Test ID	Nominal Flow rate		Calibrated Volume	Time	Actual Flow Rate	Meter Readings (L)			Error (%)	Uncertainty	Water Temp (°C)		Water Pressure (kPa)		
	L/s	kL/H	Litres	Sec	L/s	Initial	Final	Total			Start	Finish	Start	Read 1	Read 2
A	0.5	1.8	664.1	1323.5	0.50	0.00	657.60	657.60	-0.98%	0.34%	20.7	20.7	115	115	115
B	1.0	3.6	1128.0	1128.9	1.00	0.00	1118.90	1118.90	-0.80%	0.34%	20.9	20.9	169	169	169
C	2.0	7.2	1231.7	616.2	2.00	0.00	1233.20	1233.20	0.12%	0.34%	21.1	21.1	70	70	70
D	4.0	14.4	2252.1	561.9	4.01	0.00	2263.90	2263.90	0.52%	0.34%	21.0	21.0	101	101	101

Comment: Transducer Type 536-037 - S/N 01200690 & 01200684
K-factor 1.00
Water used as medium - average temperature of 21°C programmed
Transducer spacing 58.15mm

Test Equipment Used:

Test Rig:	CW591
Reference Flow Meters:	Asset ID: 93067; 50mm line
Pressure Gauge:	Asset ID: 93037
Thermometer:	Asset ID: 30098
Timing Device:	Asset ID: 59046
Calibration Procedure:	AMSI-W-132

Note:
1) Actual Flow Rate = (Calibrated Volume) / (Time)
2) Meter Readings (Total) = Final - Initial Meter Reading
3) % Error = ((Meter Registration (Total) - Calibrated Volume) / Calibrated Volume))*100
4) Reported error is calculated by using calibrated volume
5) Water used as test medium

Measurement Uncertainty:
Measurement Uncertainties are calculated on test volumes and reported at 95% confidence with a coverage factor of 2.

[redacted]

29 Metals

Golden Grove

2024 Flow Meter Audit

8th to 10st May 2024

INSTROWEST PTY LTD
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Introduction

Instrowest were engaged by the 29 Metals HSEC Team to complete the 12 monthly audits of site water flow measurement. This report delivers the data captured during our validations on each flow meter against our NATA traceable Ultrasonic flow meter (GE PT-900). Issues found regarding the installations and performance of these flow meters, it will include details and figures recorded comparing values between your installed meters and our calibrated ultrasonic GE PT-900 flow unit.

1.1 Measuring Principle

Below is a brief overview of the process involved in determining the setup of the GE PT-900 Ultrasonic flow rig and variables that effect accuracy and performance of how we complete the flow meter audit with the clamp on meter and what variables can affect the overall set-up, accuracy and performance of the verification process.

Understanding the principle of operation of an ultrasonic flow meter is critical to understanding the limitations of ultrasonic flow measurement. An ultrasonic sound wave is emitted from one sensor, which then travels through the pipe wall, process medium and back through the pipe wall again into a receiving sensor. The time this takes has a proportional relationship with fluid velocity depending on whether the signal is being sent upstream or downstream of the flow direction.

The first step is determining the placement of the flow rig along the pipe, this is critical as laminar flow within a full pipe will yield the most accurate indication of flow rate. Next the material construction, sizing and wall thickness is determined, this is usually as simple as acquiring them from the data stamped on piping, however this is not always available and dimensions are attained by physically measuring pipe OD and wall thickness with a tape measure and ultrasonic thickness gauge (the thickness gauge is verified against a thickness test block before each use to ensure accuracy). The model of sensor installed in the flow rig is determined by the aforementioned data collected at each individual test point; with the correct sensor selected the number of traverses and sensor distance within the flow rig assembly can be determined and the validation process can begin, verifying no flow (when operationally viable) and flow at normal operating conditions

1.2 Factors Effecting Ultrasonic Flow Measurement.

Transit-time ultrasonic flow meters are affected by several variables that can influence their accuracy and reliability. These variables include:

Pipe Surface Condition –
Rust, paint, dirt, and even deep scratches on the outside surface of a test area will interfere with the transference of sound energy from the transducer into the test material. Loose dirt or flakes of corrosion must be cleaned from the specimen with a wire brush or file before measurements are attempted. As long any rust is smooth and well bonded to the metal below it is still possible to make corrosion measurements through thin layers.

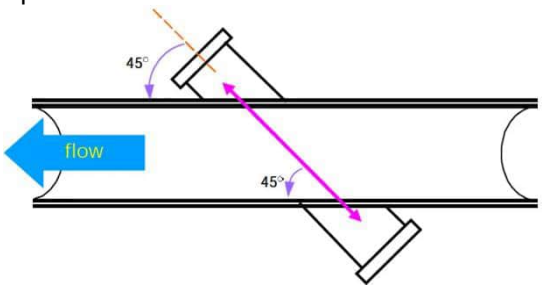
Fluid Density: The density of the fluid being measured affects the speed of sound, as the speed of sound is inversely proportional to the square root of the density of the medium. We assume a Specific Gravity of 1.000 for our validations, any changes in groundwater density should be negligible across site.

Fluid Temperature: Temperature variations in the fluid can cause changes in the speed of sound. Compensation for temperature effects is necessary to maintain accurate measurements. If a reliable measurement cannot be taken for fluid temperature, 20°C is typically assumed as the mean groundwater temperature.

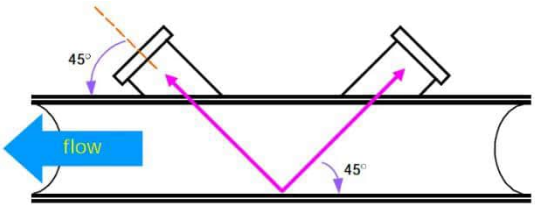
Flow Profile: Non-uniform and turbulent flow profiles can impact the accuracy of transit-time ultrasonic flow meters. Turbulent flow can introduce uncertainties in the measurement due to variations in flow velocity across the pipe diameter.

Pipe Material and Wall Thickness: The material and thickness of the pipe through which the fluid is flowing can affect the propagation of ultrasonic signals. Attenuation and reflection of the signals may occur depending on the properties of the pipe material. Some materials used to construct piping can demonstrate substantial variations in sound velocity from point-to-point within the material. Cast Stainless Steel can exhibit this effect due to a relatively large grain size and the direction of sound velocity with respect to grain orientation. Plastic materials will have sound velocities change within the material change as they change in temperature, in outdoor environments this can become a challenge due to huge variations in ambient temperature affecting exterior pipe surface temperatures. We use an ultrasonic depth gauge to measure wall thickness of steel measuring an offcut of the same pipe material with vernier callipers.

Number of Echo Traverses –
The traverse of an echo is the number of times and echo is reflected off a surface. In a single traverse the sound energy will travel directly between the two sensors, a dual traversal will see the echo move through the process and be reflected at a 45-degree angle towards to receiving sensor (See Below). The more traverses the more accurate the reading, however the echo becomes more intolerant to poor flow conditions such as cavitation, turbulence, and vortices. Typically, Instrowest will use a dual traverse configuration where possible.



Single traverse configuration



Dual Traverse configuration

Transducer Alignment and Mounting: Proper alignment of the ultrasonic transducers is crucial for accurate measurement. Misalignment can lead to inaccuracies in the transit-time measurements and affect the reliability of the flow meter. The mounting position and method of the transducers on the pipe can influence the measurement accuracy. Secure and stable mounting is necessary to ensure consistent measurements over time. Our Transducer spacing is calculated based on parameters we enter in the PT-900 interface, we then utilise the OEM supplied cradle to precisely mount and align the transducer over the pipe.

Signal Attenuation: Attenuation of the ultrasonic signal as it travels through the fluid can occur due to factors such as absorption and scattering. In many organic materials such as rubber lining or algae build up, the acoustic signal can be absorbed, and the echo can become diminished and difficult to measure. Compensation for signal attenuation is essential for maintaining measurement accuracy, especially in long pipe runs.

Signal Reflection: Reflection of the ultrasonic signal at interfaces within the fluid, such as bubbles or particles, can affect transit-time measurements. The presence of such discontinuities should be considered and accounted for in the measurement process. If the pipe is not full there will be another transitional media, and sound propagates much more poorly though air than water.

Electrical Noise: Electrical noise in the measurement system can interfere with the ultrasonic signals, leading to inaccuracies. Proper shielding and filtering techniques are necessary to minimize the effects of electrical noise on the measurement.

Transducer Degradation: Over time, the performance of ultrasonic transducers may degrade, affecting the accuracy of measurements. Regular calibration and maintenance are essential to ensure the continued accuracy and reliability of transit-time ultrasonic flow meters. Our Transducers are calibrated by a NATA accredited laboratory yearly to ensure their accuracy.

1.3 Interpreting Validation Results

Pipe Size / Wall Thickness	The dimensions of the pipe and wall thickness where the PT-900 has been attached, determined either from a direct measurement or from pipe markings that denote nominal bore and pipe schedule.
Pipe Material	The pipe construction material where the PT-900 was mounted.
Totalizer before	The totalizer the Magflow under test displayed at the start of validation.
Totalizer after	The totalizer the Magflow under test displayed at the end of validation.
Test Duration (mm:ss)	The duration of time validation test period.
Rate Units	The rate of flow used by the Magflow.
As Found Avg Rate	Average flow rate of the Magflow under test over the duration of the validation
GE PT-900 Avg Rate	Average flow rate of the PT-900 over the duration of the validation
Measured Sonic Velocity	The sonic velocity measured by the PT-900 transducers, this should be approximately 1500m/s. readings outside of ±100m/s may indicate suboptimal conditions inside the pipe such as scale build up, corrosion, organic build up, air bubbles/entrained air, cavitation, or turbulent flow profiles.
Site Meter Total	The Magflow volumetric total at the conclusion of the validation test period.
GE PT-900 Total	The PT-900 volumetric total at the conclusion of the validation test period.
Calculated Error	The error between the PT-900 and the Magflow under test. While Instrowest takes all precautions to minimise any adverse effects on the validation results, there are still variables outside of the Technicians control. Calculated errors can vary quite considerably and are a validation of flow meter functionality only, not true indication of error present within the flow meters themselves.

2.0 Completion List

Below is the list of flow meters Instrowest audited; further detail is available in section 3.0.

Tag	Service	Status
FIT3864	TSF3 Flow Dam End	VALIDATED
FIT3865	TSF3 Flow Dam End	VALIDATED
FIT3866	TSF3 H2O return	VALIDATED
FIT3867	TSF3 Underdrain	VALIDATED
FIT4036	53P Village Bore	Unable to validate
	54P Bore	Unable to validate
FIT4098	RMB#4	Unable to validate
FIT40183	Bald Hill Bore	VALIDATED
FIT4026	Magazine bore pump	VALIDATED
FIT4027	NUF bore	VALIDATED
FIT4051	Evap. To lake Wownamyina	VALIDATED
FIT4058	GH190 U/G to evap. B	VALIDATED
FIT4060	Evap A to Mill	VALIDATED
FIT4061	evap. A to Gossan Hill	VALIDATED
FIT4066	MWC to evap. B	VALIDATED
FIT4069	Standpipe at Evap Pond	VALIDATED
FIT4080	Raw Water #1	VALIDATED
FIT4081	Process Raw Water	VALIDATED
FIT4082	Raw Water #2	VALIDATED
FIT4085	Gossan Hill mine water	VALIDATED
FIT4086	Scuddles mine water	Unable to validate
FIT4087	Gossan Hill to reactor tank	VALIDATED
FIT4097	New bore flow	VALIDATED
FIT40262	Gossan Valley to Evap Pond	VALIDATED
FIT40257	Gossan Valley Bore	VALIDATED

3.0 Audit Data

3.1 FIT3864 (TSF3 Flow Dam End)

Pipe Size / Wall Thickness	315mm / 25mm
Pipe Material	Poly(p)
Totalizer before	13492684 m³
Totalizer after	13492735 m³
Test Duration (mm:ss)	10:16
Rate Units	m³/hr
As Found Avg Rate	298.05 m³/hr
GE PT-900 Avg Rate	274.15 m³/hr
Measured Sonic Velocity	1440.8 m/s
Site Meter Total	51.000 m³
GE PT-900 Total	46.910 m³
Calculated Error	**8.02%**

1. No Earth Rings Installed
2. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces down prior to and after flow tube.
3. Could not check the zero because we cannot turn-off the plant tails pumps nor isolate valves.

3.2 FIT3865 (TSF3 Flow Dam End)

Pipe Size / Wall Thickness	315mm / 25mm
Pipe Material	Poly(p)
Totalizer before	14954759 m³
Totalizer after	14954806 m³
Test Duration (mm:ss)	10:52
Rate Units	m³/hr
As Found Avg Rate	259.51 m³/hr
GE PT-900 Avg Rate	245.08 m³/hr
Measured Sonic Velocity	1447.1 m/s
Site Meter Total	47.000 m³
GE PT-900 Total	44.386 m³
Calculated Error	**5.56%**

1. Could not stop flow to verify zero.
2. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces in diameter prior to and after flow tube.
3. No Earth Rings installed.

3.3 FIT3866 (TSF3 H2O return)

Pipe Size / Wall Thickness	315mm / 25mm
Pipe Material	Poly(p)
Totalizer before	1131799 x10 m³
Totalizer after	1131809 x10 m³
Test Duration (mm:ss)	10:16
Rate Units	m³/hr
As Found Avg Rate	525.97 m³/hr
GE PT-900 Avg Rate	449.29 m³/hr
Measured Sonic Velocity	1401.4 m/s
Site Meter Total	90.000 m³
GE PT-900 Total	76.879 m³
Calculated Error	**17.07%**

1. Zero check not performed due to operational restraints.
2. Pipe was not full during testing; this severely effects the accuracy of the validation.
3. No valves are nearby to release trapped air in the pipe, air traps need to be installed to purge pipework of air for accurate measurement during operation.
4. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed. Pipe diameter reduces prior to and after flow tube.

3.4 FIT3867 (TSF3 Underdrain)

Pipe Size / Wall Thickness	200mm / 8.16mm
Pipe Material	Carbon Steel
Totalizer before	2391348 m³
Totalizer after	2391362 m³
Test Duration (mm:ss)	9:56
Rate Units	m³/hr
As Found Avg Rate	84.56 m³/hr
GE PT-900 Avg Rate	83.75 m³/hr
Measured Sonic Velocity	1462.0 m/s
Site Meter Total	14.000 m³
GE PT-900 Total	13.865 m³
Calculated Error	**0.97%**

1. Zero Validated and ok.
2. No Earth Rings

3.5 FIT4036 (Village Bore pump)

Pipe Size / Wall Thickness	No Data
Pipe Material	Stainless Steel
Totalizer before	No Data
Totalizer after	No Data
Test Duration (mm:ss)	-
Rate Units	m³/hr
As Found Avg Rate	-
GE PT-900 Avg Rate	-
Measured Sonic Velocity	No Data
Site Meter Total	No Data
GE PT-900 Total	No Data
Calculated Error	**-**

Initially good flow was observed, however the bore quickly ran dry and flow tapered off too low to validate, pump them kept tripping out due to no flow.

3.6 FIT4026 (Magazine bore pump)

Pipe Size / Wall Thickness	120mm /5.55mm
Pipe Material	Carbon Steel
Totalizer before	605554 m³
Totalizer after	605558 m³
Test Duration (mm:ss)	10:15
Rate Units	m³/hr
As Found Avg Rate	23.41 m³/hr
GE PT-900 Avg Rate	25.36 m³/hr
Measured Sonic Velocity	1534.2 m/s
Site Meter Total	4.000 m³
GE PT-900 Total	4.332 m³
Calculated Error	**-7.66%**

1. Zero flow healthy
2. Non-standard piping before and after flow meter may have different ID, introducing turbulence.
3. Carbon steel spooling may have corrosion build up inside as acquiring echo was very difficult to obtain.

3.7 FIT4027 (NUF bore)

Pipe Size / Wall Thickness	116mm / 5.68mm
Pipe Material	Carbon Steel
Totalizer before	41700635 m³
Totalizer after	41700637 m³
Test Duration (mm:ss)	11:17
Rate Units	m³/hr
As Found Avg Rate	10.64 m³/hr
GE PT-900 Avg Rate	14.30 m³/hr
Measured Sonic Velocity	1578.0 m/s
Site Meter Total	2.000 m³
GE PT-900 Total	2.690 m³
Calculated Error	**-25.65%**

1. Zero flow healthy
2. Audible entrained air, with air getting trapped at the highest point of the line, which is at the bore head.
3. Line needs an air trap installed just downstream of the flow tube, the flow tube currently runs with trapped air which will provide inaccuracies during operation.
4. Due to the air in the line, it is difficult to ascertain which flow meter readings were the most accurate during this test without taking a bulk sample and measuring the actual volumetric flow over a set sample time. This is impractical to do in the field and is typically performed under laboratory conditions in a flow rig.

3.8 FIT4051 (Evap. To lake Wownamyina)

Pipe Size / Wall Thickness	200mm / 8.18mm
Pipe Material	Carbon Steel
Totalizer before	2010238 m³
Totalizer after	2010248 m³
Test Duration (mm:ss)	10:18
Rate Units	m³/hr
As Found Avg Rate	58.25 m³/hr
GE PT-900 Avg Rate	54.79 m³/hr
Measured Sonic Velocity	1500.2 m/s
Site Meter Total	10.000 m³
GE PT-900 Total	9.405 m³
Calculated Error	**6.33%**

1. Non return valve installed within 5 pipe diameters upstream (920mm)
2. Pipe tap in within 5 pipe diameters upstream.
3. Fitted direct in steel pipes.
4. Zero Check Ok.
5. This installation is not in line with OEM recommendations due to the non-return valve and pipe tap in both within 5 pipe diameters upstream of the flow sensor and the control valve within 2 pipe diameters downstream, however with the current piping arrangement there doesn't seem to be the provision to make the appropriate corrections.

3.9 FIT4058 (GH190 U/G to evap. B)

Pipe Size / Wall Thickness	315mm / 11mm
Pipe Material	Carbon Steel
Totalizer before	6406639 m³
Totalizer after	6406674 m³
Test Duration (mm:ss)	10:34
Rate Units	m³/hr
As Found Avg Rate	198.74 m³/hr
GE PT-900 Avg Rate	185.91 m³/hr
Measured Sonic Velocity	1498.7 m/s
Site Meter Total	35.000 m³
GE PT-900 Total	32.741 m³
Calculated Error	**6.90%**

1. Zero checks ok
2. Suitable Installation.
3. Flow tube internals should be inspected and cleaned as required.

3.10 FIT4060 Evap A to Mill

Pipe Size / Wall Thickness	200mm / 8.17mm
Pipe Material	Carbon Steel
Totalizer before	6306242 m³
Totalizer after	6306256 m³
Test Duration (mm:ss)	10:34
Rate Units	m³/hr
As Found Avg Rate	79.50 m³/hr
GE PT-900 Avg Rate	89.12 m³/hr
Measured Sonic Velocity	1498.7 m/s
Site Meter Total	14.000 m³
GE PT-900 Total	15.695 m³
Calculated Error	**-10.80%**

1. Poly pipe out of flow meter. Poly could have a different ID than the tube. Steel spool recommended to be installed.
2. Manual valve fitter within lead in diameters of the tube.
3. Flow tube internals should be inspected and cleaned as required.

3.11 FIT4061 (evap. A to Gossan Hill)

Pipe Size / Wall Thickness	200mm /18.75mm
Pipe Material	Poly(p)
Totalizer before	9913302 m³
Totalizer after	9913329 m³
Test Duration (mm:ss)	20:02
Rate Units	m³/hr
As Found Avg Rate	80.87 m³/hr
GE PT-900 Avg Rate	74.03 m³/hr
Measured Sonic Velocity	1433.1 m/s
Site Meter Total	27.000 m³
GE PT-900 Total	24.718 m³
Calculated Error	**9.23%**

1. No earthing rings, fitment required.
2. Tap in point installed upstream of Flow Sensor within lead in diameters.
3. Zero Check Ok.

3.12 FIT4066 (MWC to evap. B)

Pipe Size / Wall Thickness	250mm /9.27mm
Pipe Material	Carbon Steel
Totalizer before	23888414 m³
Totalizer after	23888422 m³
Test Duration (mm:ss)	5:32
Rate Units	m³/hr
As Found Avg Rate	86.75 m³/hr
GE PT-900 Avg Rate	93.29 m³/hr
Measured Sonic Velocity	1505.0 m/s
Site Meter Total	8.000 m³
GE PT-900 Total	8.603 m³
Calculated Error	**-7.01%**

1. Flow Tube installed direct in Poly. Poly could have a different ID than the tube. Steel spool recommended to be installed.
2. Zero flow healthy.

3.13 FIT4069 (standpipe at Evap Pond)

Pipe Size / Wall Thickness	100mm /6.05mm
Pipe Material	Carbon Steel
Totalizer before	7545644 m³
Totalizer after	7545653 m³
Test Duration (mm:ss)	5:00
Rate Units	m³/hr
As Found Avg Rate	108.00 m³/hr
GE PT-900 Avg Rate	145.76 m³/hr
Measured Sonic Velocity	1467.3 m/s
Site Meter Total	9.000 m³
GE PT-900 Total	12.147 m³
Calculated Error	**-25.91%**

1. Earthing rings fitted.
2. Zero flow healthy
3. Flow tube requires descaling.
4. A volumetric test could be carried out in the future utilising a weigh bridge on site and a water cart in future tests to observe a more accurate result for validation.
5. Lots of noise within pipe is likely affecting acoustic attenuation and giving a false reading.

3.14 FIT4080 (Raw Water #1)

Pipe Size / Wall Thickness	100mm / 6.02mm
Pipe Material	Carbon Steel
Totalizer before	3288841 m³
Totalizer after	3288859 m³
Test Duration (mm:ss)	22:01
Rate Units	m³/hr
As Found Avg Rate	49.05 m³/hr
GE PT-900 Avg Rate	52.41 m³/hr
Measured Sonic Velocity	1387.7 m/s
Site Meter Total	18.000 m³
GE PT-900 Total	19.230 m³
Calculated Error	**-6.40%**

1. Zero check could not be performed due to operational restraints.
2. Correct installation.
3. Flow tube may have scaling built up inside, removal from service and a descale should be conducted.
4. Lots of noise within pipe from the pumps upstream are likely affecting acoustic attenuation and giving a false reading from the PT-900.

3.15 FIT4081 (Process Raw Water)

Pipe Size / Wall Thickness	315mm/19.7mm
Pipe Material	Poly(e)
Totalizer before	67641480 m³
Totalizer after	67641580 m³
Test Duration (mm:ss)	11:34
Rate Units	m³/hr
As Found Avg Rate	518.73 m³/hr
GE PT-900 Avg Rate	503.53 m³/hr
Measured Sonic Velocity	1378.0 m/s
Site Meter Total	100.000 m³
GE PT-900 Total	97.069 m³
Calculated Error	**3.02%**

1. Flow Tube installed direct in Poly which could have a different ID than the tube. Steel spool recommended to be installed. Pipe reduces in diameter prior to and after flow tube.
2. Zero not validated due to operational restrictions.

3.16 FIT4084 (Raw Water #2)

Pipe Size / Wall Thickness	115mm / 9.2mm
Pipe Material	Carbon Steel
Totalizer before	3111090 m³
Totalizer after	3111100 m³
Test Duration (mm:ss)	10:58
Rate Units	m³/hr
As Found Avg Rate	54.71 m³/hr
GE PT-900 Avg Rate	68.50 m³/hr
Measured Sonic Velocity	1542.7 m/s
Site Meter Total	10.000 m³
GE PT-900 Total	12.521 m³
Calculated Error	**-20.13%**

1. Zero Flow healthy.
2. Flow tube may have scaling built up inside, removal from service and a descale should be conducted.
3. Lots of noise within pipe from the pumps upstream are likely affecting acoustic attenuation and giving a false reading from the PT-900.

3.17 FIT4085 (Gossan Hill mine water)

Pipe Size / Wall Thickness	100mm / 6.02mm
Pipe Material	Carbon Steel
Totalizer before	3288841 m³
Totalizer after	3288859 m³
Test Duration (mm:ss)	22:01
Rate Units	m³/hr
As Found Avg Rate	49.05 m³/hr
GE PT-900 Avg Rate	52.41 m³/hr
Measured Sonic Velocity	1387.7 m/s
Site Meter Total	18.000 m³
GE PT-900 Total	19.230 m³
Calculated Error	**-6.40%**

1. Zero flow healthy
2. Installation does not follow OEM installations due to vertical orientation. However due to low errors observed there is no need to amend its orientation.

3.18 FIT4086 (Scuddles mine water)

Pipe Size / Wall Thickness	No Data
Pipe Material	Stainless Steel
Totalizer before	No Data
Totalizer after	No Data
Test Duration (mm:ss)	-
Rate Units	m³/hr
As Found Avg Rate	-
GE PT-900 Avg Rate	-
Measured Sonic Velocity	No Data
Site Meter Total	No Data
GE PT-900 Total	No Data
Calculated Error	**-**

Unable to perform flow validation as the pumps were out of service due to a burst pipe underground downstream.

3.19 FIT4087 (Gossan Hill to reactor tank)

Pipe Size / Wall Thickness	250mm/18.4mm
Pipe Material	Poly(p)
Totalizer before	10586347 m³
Totalizer after	10586363 m³
Test Duration (mm:ss)	6:54
Rate Units	m³/hr
As Found Avg Rate	139.13 m³/hr
GE PT-900 Avg Rate	109.18 m³/hr
Measured Sonic Velocity	1468.3 m/s
Site Meter Total	16.000 m³
GE PT-900 Total	14.556 m³
Calculated Error	**9.92%**

1. Flow Tube installed direct in Poly which could have a different ID than the tube. Steel spool recommended to be installed.
2. Earth rings are installed.
3. Flow tube requires yearly inspections and cleaning.
4. Zero flow healthy

3.20 FIT4097

Pipe Size / Wall Thickness	110mm / 6.6mm
Pipe Material	Poly(e)
Totalizer before	157820 m³
Totalizer after	157824 m³
Test Duration (mm:ss)	26:49
Rate Units	m³/hr
As Found Avg Rate	8.95 m³/hr
GE PT-900 Avg Rate	8.83 m³/hr
Measured Sonic Velocity	1344.2 m/s
Site Meter Total	4.000 m³
GE PT-900 Total	3.948 m³
Calculated Error	**1.32%**

1. Zero flow healthy
2. 10 Pipe O.D.s needed upstream of flow tube before reduction in pipe size.
3. Turbulent flow inside pipe and possible cavitation due to butterfly valve being choked downstream of the ultrasonic clamp on meter, identifiable by the lower measured sonic velocity.

3.21 FIT4098 (RMB4 Bore)

Pipe Size / Wall Thickness	No Data
Pipe Material	Stainless Steel
Totalizer before	No Data
Totalizer after	No Data
Test Duration (mm:ss)	-
Rate Units	m³/hr
As Found Avg Rate	-
GE PT-900 Avg Rate	-
Measured Sonic Velocity	No Data
Site Meter Total	No Data
GE PT-900 Total	No Data
Calculated Error	**-**

1. Validation not performed. Dry bore, no flow available.
2. Correct Installation

3.22 FIT40183 (Bald Hill Bore)

Pipe Size / Wall Thickness	80mm / 5.5mm
Pipe Material	Stainless Steel
Totalizer before	682168 m³
Totalizer after	682174 m³
Test Duration (mm:ss)	11:08
Rate Units	m³/hr
As Found Avg Rate	32.34 m³/hr
GE PT-900 Avg Rate	32.37 m³/hr
Measured Sonic Velocity	1495.7 m/s
Site Meter Total	6.000 m³
GE PT-900 Total	6.007 m³
Calculated Error	**-0.12%**

1. Correct installation
2. Zero Check OK

3.23 FIT40262 (Gossan Valley to Evap Pond)

Pipe Size / Wall Thickness	80mm / 5.48mm
Pipe Material	Stainless Steel
Totalizer before	486980 x10² L
Totalizer after	487430 x10² L
Test Duration (mm:ss)	19:19
Rate Units	L/s
As Found Avg Rate	1397.76 L/s
GE PT-900 Avg Rate	1452.92 L/s
Measured Sonic Velocity	1495.7 m/s
Site Meter Total	450.00 L
GE PT-900 Total	467.76 L
Calculated Error	**-3.80%**

1. Correct installation
2. Zero Check OK
3. Water inside pipe was potentially aerated during test.

3.24 FIT40257 (Gossan Valley Bore)

Pipe Size / Wall Thickness	80mm / 5.4mm
Pipe Material	Stainless Steel
Totalizer before	65043 m³
Totalizer after	65054 m³
Test Duration (mm:ss)	10:10
Rate Units	m³/hr
As Found Avg Rate	64.92 m³/hr
GE PT-900 Avg Rate	65.07 m³/hr
Measured Sonic Velocity	1498.1 m/s
Site Meter Total	11.000 m³
GE PT-900 Total	11.026 m³
Calculated Error	**-0.24%**

No Photo

1. Correct Installation.
2. Zero Check ok.

4.0 Recommendations

Due to operational constraints, some flows could not be stopped. This prevents Instrowest from obtaining a true zero reading for the clamp on test meter.

Some of the process lines tested contained air bubbles due to the nature of the processes involved, air in the system adversely affects the accuracy of flow meters. The pipe configuration should avoid a buildup or accumulation of solids or air. Any entrained air should be carried out of the meter by flow. Magflow flowmeters are relatively sensitive to errors caused by nonsymmetrical velocity patterns or swirl. The general rule of thumb for straight piping is ten-diameter lengths of piping upstream and five-diameters downstream from the meter.

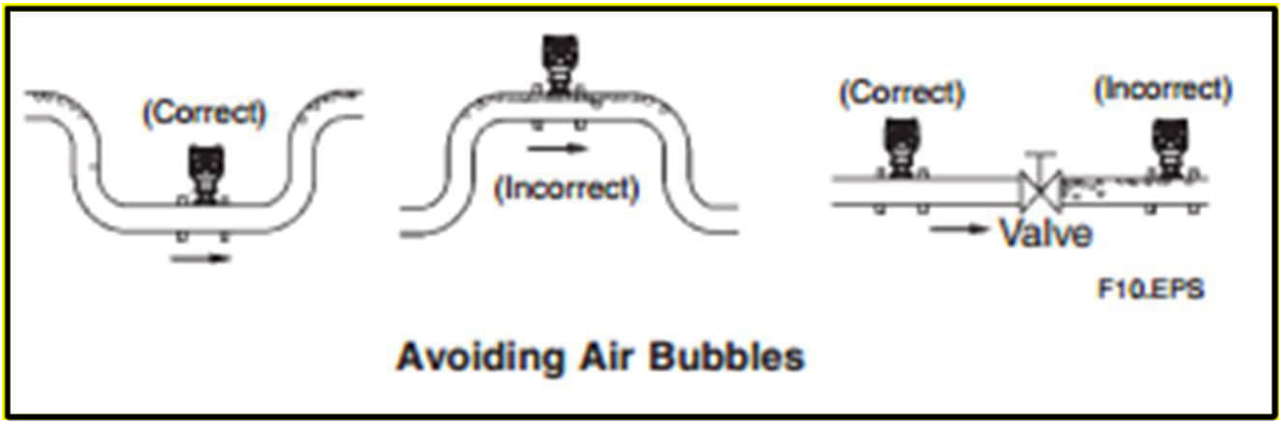


Figure 1: Required meter installation for greatest performance and accuracy

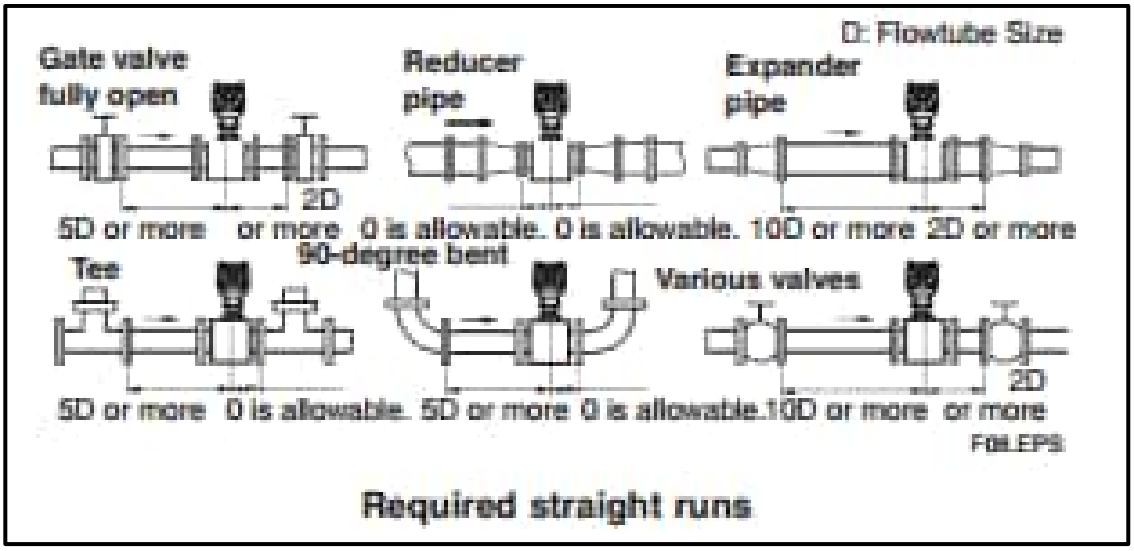


Figure 2: Required straight length runs for greatest performance and accuracy

Figure 3: FIT4051 Bad install as to close to elbow

Removal and cleaning of scale built up on the inside of flow meters. Due to the saltiness (high TDS) of the water an abnormal amount of scale can build up and affect the readings. Where the flow meter is reading low (negative error) cleaning of the tubes electrodes to remove scale could improve the meters performance and accuracy.

The magnetic field across the electrodes is very small, making the Magflow susceptible to stray ground currents in the pipeline. If the pipeline is made of non-conducting materials, such as plastic, or is lined with an insulating material, these stray ground potentials can cause significant measuring errors. Five or six millivolts of stray potential in the measuring section of the flowmeter can render the signal meaningless. The transmitter will confuse this stray potential with the actual signal and provide inaccurate flow readings.

Several meters still do not have adequate grounding. All plastic piping should have grounding rings or discs installed; steel spools fitted to the inlet and outlet also assist with grounding. Metal piping should have enough grounding through the process pipe itself, but common practice is to ground the spools to the meter with an earth strap or tail.

To calibrate any of these flow meters that are installed on site, they must be removed and sent to a facility that have the appropriate flow test apparatus to perform a precise volumetric flow test under controlled laboratory conditions. This is the only way a calibration can be performed. Typically, Magflows are very accurate and repeatable instruments for measuring flow if they are installed correctly to provide a full pipe with laminar flow and are regularly maintained and inspected.

5.0 Instrowest Intellectual Property

The client must maintain confidentiality and not use any ideas, systems or processes communicated or made available by Instrowest to the client without the written permission of Instrowest's Director. All ideas, systems and methods remain the intellectual property of Instrowest.

6.0 Test Equipment Traceability and Certification

Mobile: 0428 942 007
Phone: 08 9388 9128
Fax: 08 6323 1113
Email: admin@instrowest.com.au
Web: www.instrowest.com.au

Instrowest Pty Ltd

Instrument Calibration Data Sheet

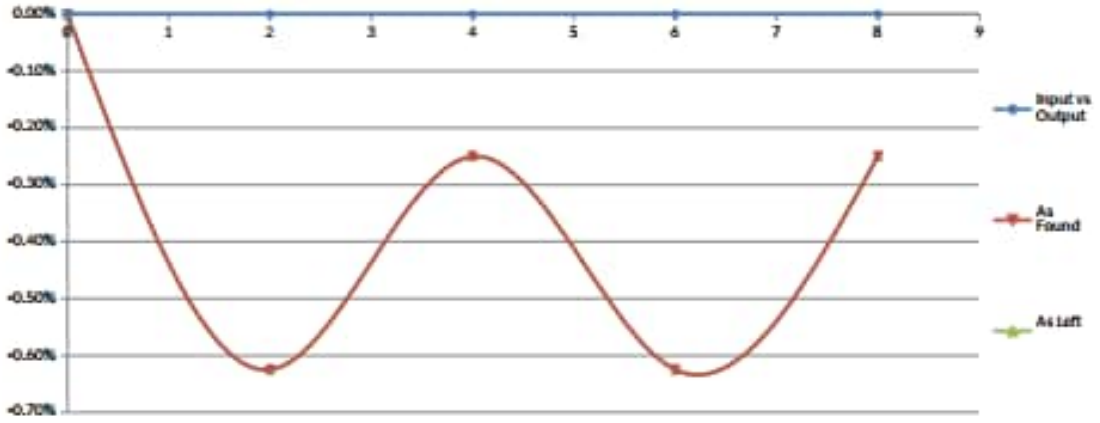
Client	Instrowest Pty Ltd
Site	Workshop
Area	N/A
Tag #	POCKETMIKE
Description	GE Thickness Gauge
Calibrated by	Tim Payne
Date	16-11-2023 12:30
Work Order #	

Calibrated Span (input) :	From: 0	To: 8	Acceptable Error
Output ☐ Square Root Extraction On	From: 0	To: 8	
	Input Units mm	Output Units mm	2.00%

Calibration Data

% of Input	Input	Output	As Found	As Found Error	As Left	As Left Error
0% ↑	0 mm	0 mm	0 mm	0.00%	0 mm	0.00%
25% ↑	2 mm	2 mm	1.95 mm	-0.63%	1.95 mm	-0.63%
50% ↑	4 mm	4 mm	3.98 mm	-0.25%	3.98 mm	-0.25%
75% ↑	6 mm	6 mm	5.95 mm	-0.63%	5.95 mm	-0.63%
100% ↑ ↓	8 mm	8 mm	7.98 mm	-0.25%	7.98 mm	-0.25%
75% ↓	6 mm	6 mm	5.98 mm	-0.25%	5.98 mm	-0.25%
50% ↓	4 mm	4 mm	3.98 mm	-0.25%	3.98 mm	-0.25%
25% ↓	2 mm	2 mm	1.98 mm	-0.25%	1.98 mm	-0.25%
0% ↓	0 mm	0 mm	0 mm	0.00%	0 mm	0.00%

Instrument Calibration Error % ↑



Comments

Values can fluctuate if not enough ultrasonic coupling is used. Beware of this whilst using the thickness transmitter.

Test Instrument (or Instruments) Used

Asset Number	Manufacturer	Model #	Serial #	Calibration Certificate Hyperlink
GE Thickness Standard	GE	D600365	2439	Download Certificates

Water Corporation

Meter Testing Laboratory
37 Lemnos Street
Shenton Park, WA 6008

AMSLWorkshop@watercorporation.com.au

NATA
WORLD RECOGNISED ACCREDITATION
No. 5471

Measurement results for volume are traceable to SI units. Reference equipment has been calibrated by the National Measurement Institute or NATA accredited laboratories. Accredited for compliance with ISO/IEC 17025 - Calibration

METER TEST REPORT

REPORT No: MET-LAB-2023-0789-B

Customer: Instrowest Pty. Ltd.
Street Address: Unit 3, 12 Day Road
Suburb: Rockingham WA 6168
Customer Order No: PO00013865

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Meter Make	Meter Type	Meter Number	Graduation Interval
GE Panametrics	PT900 / Ultrasonic	M12190034	0.01 L

Test ID	Nominal Flow rate		Calibrated Volume	Time	Actual Flow Rate	Meter Readings (L)			Error (%)	Uncertainty	Water Temp (°C)		Water Pressure (kPa)		
	L/s	kL/H	Litres	Sec	L/s	Initial	Final	Total			Start	Finish	Start	Read 1	Read 2
A	20.0	72.0	15209.3	766.6	19.84	0	15303	15303	0.61%	0.42%	20.3	20.2	40	40	40
B	40.0	144.0	17065.5	423.7	40.28	0	17178	17178	0.66%	0.43%	20.2	20.0	40	40	40
C	80.0	288.0	76469.4	957.0	79.91	0	76894	76894	0.55%	0.39%	19.8	19.7	50	50	50
D	100.0	360.0	42870.7	429.5	99.82	0	42321	42321	-1.28%	0.39%	19.8	19.8	60	60	60

Comment:

Transducer Type CRR-HT-596 - S/N 01200767 & 01200764
K-factor changed from 0.935 to 1.01
Water used as medium - average temperature of 18°C programmed
Transducer spacing 177.68mm
PVC pipe / 226.6mm OD / 9mm Wall Thickness

Test Equipment Used:

Test Rig:	CW592
Reference Flow Meter:	Asset ID: 93024; 100mm Line (1 to 60 L/Sec)
Reference Flow Meter:	Asset ID: 93026; 200mm Line (61-200 L/Sec)
Pressure Gauge:	Asset ID: 93018
Timing Device:	Asset ID: 59045
Thermometer:	Asset ID: 93031
Calibration Procedure:	AMSI-W-133

Note:

1) Actual Flow Rate = (Calibrated Volume) / (Time)
2) Meter Readings (Total) = Final - Initial Meter Reading
3) % Error = ((Meter Registration (Total) - Calibrated Volume) / Calibrated Volume))*100
4) Reported error is calculated by using calibrated volume
5) Water used as test medium

Measurement Uncertainty:

Measurement Uncertainties are calculated on test volumes and reported at 95% confidence with a coverage factor of 2.

[redacted]

Water Corporation

Meter Testing Laboratory
37 Lemnos Street
Shenton Park, WA 6008

AMSI.Workshop@watercorporation.com.au

Measurement results for volume are traceable to SI units. Reference equipment has been calibrated by the National Measurement Institute or NATA accredited laboratories. Accredited for compliance with ISO/IEC 17025 - Calibration

No. 5471

METER TEST REPORT

REPORT No: MET-LAB-2023-0789-A

Customer: Instrowest Pty. Ltd.
Street Address: Unit 3, 12 Day Road
Suburb: Rockingham WA 6168
Customer Order No: PO00013865

THIS DOCUMENT SHALL NOT BE REPRODUCED EXCEPT IN FULL

Meter Make	Meter Type	Meter Number	Graduation Interval
GE Panametrics	PT900 / Ultrasonic	M12190034	0.01 L

Test ID	Nominal Flow rate		Calibrated Volume	Time	Actual Flow Rate	Meter Readings (L)			Error (%)	Uncertainty	Water Temp (°C)		Water Pressure (kPa)		
	L/s	kL/H	Litres	Sec	L/s	Initial	Final	Total			Start	Finish	Start	Read 1	Read 2
A	20.0	72.0	6707.0	328.3	20.43	0	6696	6696	-0.16%	0.43%	22.1	22.6	40	40	40
B	40.0	144.0	27197.9	672.9	40.42	0	27534	27534	1.24%	0.42%	22.0	23.0	40	40	40
C	80.0	288.0	33030.4	413.7	79.84	0	33086	33086	0.17%	0.4%	25.0	25.7	50	50	50
D	100.0	360.0	44691.6	448.0	99.76	0	44498	44498	-0.43%	0.39%	25.7	25.8	60	60	60

Comment:

Transducer Type C-RR-591 - S/N 12210039 & 12210047
K-factor changed from 0.935 to 1.05
Water used as medium - average temperature of 18°C programmed
Transducer spacing 198.94mm
PVC pipe / 226.6mm OD / 9mm Wall Thickness

Test Equipment Used:

Test Rig:	CW592
Reference Flow Meter:	Asset ID: 93024; 100mm Line (1 to 60 L/Sec)
Reference Flow Meter:	Asset ID: 93026; 200mm Line (61-200 L/Sec)
Pressure Gauge:	Asset ID: 93018
Timing Device:	Asset ID: 59045
Thermometer:	Asset ID: 93031
Calibration Procedure:	AMSI-W-133

Note:

1) Actual Flow Rate = (Calibrated Volume) / (Time)
2) Meter Readings (Total) = Final - Initial Meter Reading
3) % Error = ((Meter Registration (Total) - Calibrated Volume) / Calibrated Volume))*100
4) Reported error is calculated by using calibrated volume
5) Water used as test medium

Measurement Uncertainty:

Measurement Uncertainties are calculated on test volumes and reported at 95% confidence with a coverage factor of 2.

[redacted]

Appendix E

Production and Monitoring Bore Schedule

Appendix E - Golden Grove Mine Schedule of Groundwater Production and Monitoring Bores

Bore Number	Easting (MGA z50)	Northing (MGA z50)	Ground Elevation (mAHD)	Datum Elevation (mAHD)	Drilled Depth (mbgl)	Casing Depth (mbgl)	Stickup Height (magl)	Dip	Azimuth	Slotted Interval (mbgl)	Casing Diameter (mm)	Gravel Packed (mbgl)	Annular Seal (mbgl)	Airlift Yield (kL/d)	Original Salinity (mg/L)	Original Salinity Date	Original SWL (mAHD)	Original SWL Date	2024 SWL (mAHD)	Purpose
Water Supply Production Bores																				
GGW53P	494307.8	6816564.6	356.41	356.64	N.D.	59.3	0.20	-90	0	29.25 - 59.25	154	0.0 - 59.3	N.D.	N.D.	840	3/05/1989	332.65	6/05/1989	Shut in	Potable Production
GGW54P	494519.6	6816228.7	360.00	360.20	N.D.	77.2	0.20	-90	0	29.20 - 77.20	154	0.0 - 77.2	N.D.	N.D.	360	3/05/1989	336.38	5/03/1989	Shut in	Potable Production
GGW67P	494055.4	6820308.0	370.77	371.07	201.0	200.5	0.30	-90	0	68.32 - 200.5	203	0.0 - 200.5	N.D.	365	935	17/06/1993	285.11	11/07/1993	Pumping	Potable Production
GGW69P	493639.9	6820692.3	372.14	372.44	190.0	188.5	0.30	-90	0	70.0 - 188.5	203	0.0 - 188.5	N.D.	1440	700	17/06/1993	329.50	11/07/1993	Pumping	Potable Production
GGW93P	493342.0	6817715.0	364.30	364.80	140.2	120.0	0.50	-90	0	30.0 - 120.0	200	0.0 - 120.0	N.D.	N.D.	356	14/12/2019	324.62	12/12/2019	Pumping	Potable Production
GHDEC44P	496299.9	6817683.7	361.59	361.89	N.D.	114.0	0.30	-90	0	47.5 - 113.7	154	0.0 - 114.0	N.D.	N.D.	1110	28/09/1994	318.10	29/03/1995	Shut in	Gossan Hill Production
GHDEC37R	496303.3	6817729.0	361.61	362.11	N.D.	120.0	0.50	-90	0	49.4 - 119.4	154	0.0 - 119.4	N.D.	N.D.	N.D.	N.D.	333.99	9/10/1994	Pumping	Gossan Hill Production
RMB4	493841.8	6817293.2	364.03	364.48	N.D.	65.8	0.50	-90	0	N.D.	154	N.D.	N.D.	N.D.	256	1/05/1994	335.88	1/05/1994	Pumping	Potable Production
GFWB002	499256.3	6812904.0	366.45	366.75	N.D.	120.0	0.30	-90	0	N.D.	125	N.D.	N.D.	N.D.	2,530	25/04/2012	325.50	13/08/2020	Pumping	GV Production
GVW005P	499746.7	6812082.9	351.35	351.70	128.0	128.0	0.34	-90	0	58-124	219	1.5-128.0	0.0-1.5	3.8	2,530	13/08/2020	322.79	13/08/2020	322.905	GV Production
GVW007P	500903.4	6810719.0	352.02	352.62	157.5	157.5	0.60	-90	0	31.5-157.5	219	2.5-164	0.0-2.5	10.9	1,490	13/08/2020	320.72	13/08/2020	318.64	GV Production
Water Supply Monitoring Bores																				
GGW69	493639.9	6820692.3	371.8	372.44	170	83.2	N.D.	-90	0	170	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	329.28	1/07/1993	295.6	Potable Monitoring
GGW73	494260	6816646.8	N.D.	351.99	N.D.	N.D.	0	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	329.62	27/04/1989	288.61	Potable Monitoring
GGW90	493700.3	6817168.7	358.25	358.91	60	60	0.6	-90	0	42.0 - 60.0	55	40.0 - 60.0	38.0 - 40.0	N.D.	N.D.	N.D.	312.91	8/07/2018	314.41	Potable Monitoring
GGW91	497992.5	6816660.9	363.9	364.54	60	60	N.D.	-90	0	42.0 - 60.0	55	40.0 - 60.0	38.0 - 40.0	N.D.	N.D.	N.D.	360.54	9/07/2018	326.46	Potable Monitoring
GGW92	493381	6817750	367.1	367.6	120	120	0.5	-90	0	30.0 - 120.0	200	0.0 - 120.0	N.D.	N.D.	473	1/12/2019	324.62	12/12/2019	310.42	Potable Monitoring
SC073	494055.1	6820310.8	370.37	371.07	N.D.	95.43	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	286.51	11/07/1993	N.D.	Potable Monitoring
Scuddles Mine Monitoring Bores																				
GGW6A	495977.6	6819265.4	367.95	368.19	62.7	62.7	0.2	-90	0	49.0 - 60.0	152	0.0 - 60.0	N.D.	N.D.	560	Nov-85	336.03	1976	314.99	Scuddles Monitoring
GGW49	495062.6	6819396	369.65	370.15	90	60	0.5	-90	0	30.0 - 60.0	55	0.0 - 60.0	N.D.	250	850	25/11/1985	336.25	25/11/1985	290.39	Scuddles Monitoring
GGW50	493411.9	6821487.3	360.66	360.88	90.5	90	0.2	-90	0	54.0 - 90.0	55	0.0 - 90.0	N.D.	125	375	24/11/1985	337.11	24/11/1985	323.39	Scuddles Monitoring
GGW62	495312.9	6819210.8	366.6	367.2	120	120	N.D.	-90	0	60.0 - 120.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	333.67	1/06/1989	290.1	Scuddles Monitoring
GGW70	495352.7	6818737.4	359.99	360.81	98	95.9	0.8	-90	0	65.9 - 95.9	55	0.0 - 95.9	65.8	130	1000	29/06/1993	330.65	3/07/1993	299.09	Scuddles Monitoring
GGW74	495822.7	6818246.8	360.71	361.19	102	100.05	0.5	-90	0	70.1 - 100.1	55	Nil	70.1	85	830	9/07/1993	334.25	11/07/1993	296.96	Scuddles Monitoring
SC075	494408	6820130	366.62	367.22	N.D.	101.86	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	286.76	3/07/1993	N.D.	Scuddles Monitoring
SC080	493727	6820471.3	371.3	371.4	N.D.	100	0.1	-68	90	N.D.	100	N.D.	N.D.	N.D.	N.D.	N.D.	303.4	25/02/2000	280.86	Scuddles Monitoring

Appendix E - Golden Grove Mine Schedule of Groundwater Production and Monitoring Bores

Bore Number	Easting (MGA z50)	Northing (MGA z50)	Ground Elevation (mAHD)	Datum Elevation (mAHD)	Drilled Depth (mbgl)	Casing Depth (mbgl)	Stickup Height (magl)	Dip	Azimuth	Slotted Interval (mbgl)	Casing Diameter (mm)	Gravel Packed (mbgl)	Annular Seal (mbgl)	Airlift Yield (kL/d)	Original Salinity (mg/L)	Original Salinity Date	Original SWL (mAHD)	Original SWL Date	2024 SWL (mAHD)	Purpose
Gossan Hill Mine Monitoring Bores																				
CUDD001	497588.5	6815309.3	349.8	350.44	N.D.	N.D.	N.D.	-67	90	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	317.08	2/09/2008	304.27	Gossan Hill Monitoring
GG102	496905.6	6815934.2	354.49	354.64	300	0	0.2	-70	90	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	328.82	27/10/1996	N.D.	Gossan Hill Monitoring
GG269	496432.9	6815837.7	348.24	348.24	1515.8	0	0	-76	84	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	270.35	8/08/2006	N.D.	Gossan Hill Monitoring
GG280D2	496060.9	6816072.3	350.56	348.51	1146	0	0.1	-72	81	N.D.	N.D.	N.D.	N.D.	274.69	N.D.	N.D.	274.69	8/08/2006	317.7	Gossan Hill Monitoring
GG290	497058	6816225.6	364.9	364.9		0	0	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	283.9	24/10/2003	280.78	Gossan Hill Monitoring
GGW75A	497234.8	6816984	365.33	366.15	88	70	0.8	-90	0	58.0 - 70.0	55	0.0 - 70.0	N.D.	9	1780	16/03/2007	319.33	30/06/2007	N.D.	Gossan Hill Monitoring
GGW75B	497229	6816980	N.D.	N.D.	N.D.	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	*46.69*	16/04/2007	N.D.	Gossan Hill Monitoring
GGW80	497498.1	6815605.3	353.63	354.33	N.D.	79	0.7	-90	0	42.0 - 79.0	55	0.0 - 79.0	N.D.	N.D.	N.D.	N.D.	307.51	24/10/2003	311.32	Gossan Hill Monitoring
GGW81	496908	6815241.7	348.26	348.94	N.D.	98	0.7	-90	0	54.0 - 98.0	55	0.0 - 98.0	N.D.	N.D.	N.D.	N.D.	302.12	24/10/2003	280.16	Gossan Hill Monitoring
GGW83	496060	6817193.5	364.18	364.28	N.D.	180	0.1	-90	0	140.0 - 180.0	55	0.0 - 180.0	N.D.	N.D.	N.D.	N.D.	317.46	24/10/2003	229.36	Gossan Hill Monitoring
GHDEC10R	496343	6817527	361.15	361.31	100	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	239.61	27/10/1996	267.66	Gossan Hill Monitoring
GHDEC36R	496299.8	6817678.7	361.71	361.87	N.D.	120	0.2	-90	0	42.6 - 112.6	154	0.0 - 112.6	N.D.	N.D.	N.D.	N.D.	333.94	9/10/1994	281.75	Gossan Hill Monitoring
GHDEC38R	496311.3	6817793.5	361.72	362.42	N.D.	119.5	0.7	-90	0	N.D.	154	0.0 - 120.0	N.D.	N.D.	N.D.	N.D.	317.84	16/03/1995	279.95	Gossan Hill Monitoring
BJDD003	495548.2	6814333.9	388.35	388.6	250.3	N.D.	0.3	-49	280	250.3	140	Nil	N.D.	N.D.	N.D.	N.D.	338.29	15/11/2005	N.D.	Regional Monitoring
BJDD004	493315	6817709	360.25	360.25	124.2	N.D.	0	-60.4	211.1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	332.73	15/08/2008	*N.D.*	Regional Monitoring
Old South Bore	495196.8	6814779.9	368.12	368.36	71.8	2	0.2	-90	0	71.8	250	Nil	N.D.	N.D.	400	2/05/2006	328.6	15/11/2005	*N.D.*	Regional Monitoring
SC093	493644.8	6821706.9	359.65	359.9	523	N.D.	0.3	-64	125	N.D.	55	Nil	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	281.7	Regional Monitoring
TSF1 Monitoring Bores																				
MB11	494896.9	6819193.5	365.21	365.47	63	63	0.3	-90	0	33.0 - 63.0	100	30.0 - 63.0	N.D.	37	680	1/02/1994	328.14	1/02/1994	Dry	TSF1 Monitoring - Saprock
MB12B	494597.3	6818741	358.65	359.21	50.9	51.9	0.6	-90	0	45.9 - 51.9	N.D.	42.6 - 51.9	0.0 - 42.6	17	5780	13/12/2011	339.92	13/12/2011	345.73	TSF1 Monitoring - Saprock
MB13	494131.8	6819069.7	360.42	360.89	60	60	0.5	-90	0	30.0 - 60.0	100	25.0 - 30.0	N.D.	18	960	2/02/1994	330.41	2/02/1994	Dry	TSF1 Monitoring - Saprock
MB14	494269.6	6818762.8	357.35	358.16	58	58	0.8	-90	0	22.0 - 58.0	100	16.0 - 58.0	N.D.	65	980	5/02/1994	331.23	5/02/1994	304.59	TSF1 Monitoring - Saprock
MB14B	494282.8	6818750.9	358.47	359.13	79.2	79	0.7	-90	0	67.0 - 79.0	N.D.	66.0 - 79.0	60.0 - 66.0	29	1320	13/12/2011	314.29	13/12/2011	304.59	TSF1 Monitoring - Saprock
MB15	494435.5	6818588.3	356.92	357.48	48	48	0.6	-90	0	24.0 - 48.0	100	22.0 - 48.0	N.D.	5	2450	6/02/1994	333.59	6/02/1994	Dry	TSF1 Monitoring - Saprock
MB15B	494426.7	6818586.2	357.13	357.73	59.2	59	0.6	-90	0	47.0 - 59.0	N.D.	38.0 - 59.0	7.0 - 13.0 and 32.0 - 38	<1	2300	12/12/2011	317.27	12/12/2011	Dry	TSF1 Monitoring - Saprock
MB16	494660.4	6818421.1	354.85	355.45	58	58	0.6	-90	0	28.0 - 58.0	100	23.0 - 58.0	N.D.	5	1030	5/02/1994	333.41	5/02/1994	309.47	TSF1 Monitoring - Saprock

Appendix E - Golden Grove Mine Schedule of Groundwater Production and Monitoring Bores

Bore Number	Easting (MGA z50)	Northing (MGA z50)	Ground Elevation (mAHD)	Datum Elevation (mAHD)	Drilled Depth (mbgl)	Casing Depth (mbgl)	Stickup Height (magl)	Dip	Azimuth	Slotted Interval (mbgl)	Casing Diameter (mm)	Gravel Packed (mbgl)	Annular Seal (mbgl)	Airlift Yield (kL/d)	Original Salinity (mg/L)	Original Salinity Date	Original SWL (mAHD)	Original SWL Date	2024 SWL (mAHD)	Purpose
MB16B	494651.7	6818414.7	356.23	356.83	59.4	59.4	0.6	-90	0	41.4 - 59.4	N.D.	41.0 - 59.4	5.0 - 9.0 and 35.0 - 41		1480	12/12/2011	318.67	12/12/2011	309.47	TSF1 Monitoring - Saprock
MB18	494912.5	6818426.6	354.77	355.37	50	50	0.6	-90	0	32.0 - 50.0	55	27.0 - 50.0	N.D.	12	900	4/02/1994	331.62	4/02/1994	311.07	TSF1 Monitoring - Saprock
MB18B	494892.8	6818422.9	355.98	356.55	75.3	75.3	0.6	-90	0	69.3 - 75.3	N.D.	66.3 - 75.3	0.0 - 66.3	3	4650	11/12/2011	322.32	7/12/2011	311.07	TSF1 Monitoring - Saprock
MB19	494826.2	6818320.4	354.71	355.31	43	43	0.6	-90	0	31.0 - 43.0	55	5.0-24.0, 25.0-43.0	4.0 - 5.0, 24.0 - 25.0	108	960	Jan-96	332.34	Jan-96	Dry	TSF1 Monitoring - Saprock
MB21	494341.9	6818474.6	358.2	358.68	77	77	0.5	-90	0	65.0 - 77.0	55	62.0 - 77.0	38.0 - 40.0	13	900	Jan-96	332.66	Jan-96	306.56	TSF1 Monitoring - Saprock
MB22	494149.9	6818628.9	360.54	361.1	56	56	0.6	-90	0	48.0 - 56.0	55	45.0 - 56.0	43.0 - 45.0	60	640	Jan-96	330.69	Jan-96	dry	TSF1 Monitoring - Saprock
MB23	494881.8	6818715.2	357.66	358.22	60	59	0.6	-90	0	47.0 - 59.0	55	45.0 - 60.0	43.0 - 45.0		830	Jan-96	328.56	Jan-96	301.29	TSF1 Monitoring - Saprock
MB24	494344.4	6819354.2	362.62	363.32	76	76	0.7	-90	0	56.0 - 76.0	55	56.0 - 76.0	54.0 - 56.0	86	400	Jan-96	325.43	Jan-96	295.05	TSF1 Monitoring - Saprock
MB33	494713.3	6818625.9	357.62	358.2	26.8	26.8	0.6	-90	0	20.8 - 26.8	N.D.	14.8 - 26.8	0.0 - 14.8	60	5380	13/12/2011	332.48	Dec-11	*N.D.*	TSF1 Monitoring - Saprock
MB34	494738.1	6818524.3	355.98	356.61	39.4	39.4	0.6	-90	0	27.4 - 39.4	N.D.	24.4 - 39.4	0.0 - 24.4	2	5900	13/12/2011	329.78	Dec-11	N.D.	TSF1 Monitoring - Saprock
MB44	494817.4	6818540.3	355.78	356.27	55	55	0.5	-90	0	43.0 - 55.0	55	N.D.	N.D.	N.D.	N.D.	N.D.	325.43	12/11/1999	307.19	TSF1 Monitoring - Saprock
MB44B	494802.8	6818539	356.3	356.82	60.2	60.2	0.5	-90	0	58.2 - 60.2	N.D.	42.6 - 60.2	0.0 - 42.6	86	6210	13/12/2011	329.24	13/12/2011	N.D.	TSF1 Monitoring - Saprock
MB45	494862.1	6818494.8	355.58	356.18	57	57	0.6	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	TSF1 Monitoring - Saprock
MB75	494836.9	6818592.9	357.09	357.65	60.2	56	0.6	-90	0	41.0 - 56.0	N.D.	40.0. - 56.0	0.0 - 40.0	3	4200	13/12/2011	311.27	13/12/2011	308.54	TSF1 Monitoring - Saprock
TSF2 Seepage Recovery Bores																				
MB40	494095.5	6821816.3	361.74	362.51	40	40	0.8	-90	0	28.0 - 40.0	125	N.D.	N.D.	N.D.	N.D.	N.D.	332.09	24/02/1999	327.06	TSF2 Recovery Bores
MB41	493764.3	6821918.7	357.62	357.91	40	40	0.3	-90	0	28.0 - 40.0	125	N.D.	N.D.	N.D.	N.D.	N.D.	335.51	24/02/1999	*N.D.*	TSF2 Recovery Bores
MB43	493961.3	6820857.3	375.38	375.89	65	65	0.5	-90	0	53.0 - 65.0	125	N.D.	N.D.	N.D.	N.D.	N.D.	317.78	24/02/1999	311.35	TSF2 Recovery Bores
RB1	494256.2	6821173.5	371.29	373.02	57	49	1	-90	0	40.0 - 49.0	102	0.0 - 15.0, 16.0 - 49.0	15 - 16	0.8	2700	8/03/2007	347.09	8/03/2007	N.D.	TSF2 Recovery Bores
RB2	494315.5	6821327.6	371.06	372	58	55	1	-90	0	37.0 - 55.0	102	0.0 - 5.0, 6.0 - 55.0	5-Jun	1.2	6867	13/03/2007	348.6	13/03/2007	N.D.	TSF2 Recovery Bores
RB3	493718.3	6821087.4	374.25	375.6	82	85.5	0.9	-90	0	55.5 - 85.5	102	0.0 - 5.0, 6.0 - 85.5.0	5-Jun	1.1	2898	14/03/2007	N.D.	N.D.	N.D.	TSF2 Recovery Bores

Appendix E - Golden Grove Mine Schedule of Groundwater Production and Monitoring Bores

Bore Number	Easting (MGA z50)	Northing (MGA z50)	Ground Elevation (mAHD)	Datum Elevation (mAHD)	Drilled Depth (mbgl)	Casing Depth (mbgl)	Stickup Height (magl)	Dip	Azimuth	Slotted Interval (mbgl)	Casing Diameter (mm)	Gravel Packed (mbgl)	Annular Seal (mbgl)	Airlift Yield (kL/d)	Original Salinity (mg/L)	Original Salinity Date	Original SWL (mAHD)	Original SWL Date	2024 SWL (mAHD)	Purpose
RB4	494087.4	6821827.5	361.8	362.4	41	40.5	0.6	-90	0	18.0 - 40.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	340.9	11/06/2010	N.D.	TSF2 Recovery Bores
RB5	494092.6	6821016.3	372.9	373.5	51.5	51.3	0.6	-90	0	33.3 - 51.3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	357.2	13/06/2010	N.D.	TSF2 Recovery Bores
TSF2 Monitoring Bores																				
MB42	493560.8	6821312.1	365.32	366.3	N.D.	60	0.8	-90	0	48.0 - 60.0	125	N.D.	N.D.	N.D.	N.D.	N.D.	320.85	24/02/1999	N.D.	TSF2 Monitoring - Saprock
MB47	494403.3	6818551.4	357.12	357.6	42	42	0.5	-90	0	30.0 - 42.0	55	N.D.	N.D.	N.D.	N.D.	N.D.	328.58	12/11/1999	49.45	TSF2 Monitoring - Saprock
MB48	493788.8	6820937.3	376.85	377.11	109	109	0.2	-90	0	70.0 - 100.0	55	50.0 - 100.0	44.0 - 50.0	N.D.	N.D.	N.D.	329.11	7/12/2004	77.34	TSF2 Monitoring - Saprock
MB49	494019.6	6820939.9	372.51	372.88	82	82	0.3	-90	0	60.0 - 82.0	55	45.0 - 82.0	40.0 - 50.0	N.D.	N.D.	N.D.	333.88	7/12/2004	58.87	TSF2 Monitoring - Saprock
MB50	494298.8	6821478.9	368.99	369.1	50	50	0.1	-90	0	38.0 - 50.0	55	30.0 - 50.0	25.0 - 30.0	N.D.	N.D.	N.D.	341.4	2/10/2004	37.61	TSF2 Monitoring - Saprock
MB51	494049.8	6821756.6	362.45	363.24	50	50	0.7	-90	0	38.0 - 50.0	55	30.0 - 50.0	25.0 - 30.0	N.D.	N.D.	N.D.	339.87	2/10/2004	31.13	TSF2 Monitoring - Saprock
MB52	493794.5	6821795.7	358.8	358.93	62	62	0.1	-90	0	46.0 - 62.0	55	40.0 - 62.0	30.0 - 40.0	N.D.	N.D.	N.D.	341.87	2/10/2004	na	TSF2 Monitoring - Saprock
MB53	494264.6	6820962.2	374.98	375.5	49	49	0.9	-90	0	36.0 - 48.0	55	0.0 - 22.0, 23.0 - 48.0	22 - 23	0.5	3415	9/03/2007	346.92	9/03/2007	331.85	TSF2 Monitoring - Saprock
MB54	494204.2	6821090.1	372.02	372	40	40	0.8	-90	0	34.0 - 40.0	55	0.0 - 18.0, 20.0 - 40.0	18 - 20	0.09	11900	1/03/2007	349.89	1/03/2007	N.D.	TSF2 Monitoring - Saprock
MB55	494265.6	6821169.8	371.16	372	40	39	0.8	-90	0	33.0 - 39.0	55	0.0 - 5.0, 6.0 - 39.0	5-Jun	0.1	N.D.	13/03/2007	348.48	13/03/2007	Dry	TSF2 Monitoring - Saprock
MB56	494317.4	6821329.9	371.07	372	56	53.5	0.8	-90	0	47.5 - 53.5	55	0.0 - 38.0, 40.0 - 53.5	38 - 40	0.7	2700	26/02/2007	346.12	26/02/2007	332.66	TSF2 Monitoring - Saprock
MB57	493728.6	6821084.1	374.4	375	100	100	0.7	-90	0	94.0 - 100.0	55	0.0 - 43.0 45.0 - 100.0	43 - 45	0.1	2930	28/02/2007	328.51	28/02/2007	305.86	TSF2 Monitoring - Saprock
MB58	494438.4	6821646.1	367.32	368	67	67	0.9	-90	0	49.0 - 55.0	55	0.0 - 47.0 49.0 - 55.0	47 - 49	0.2	493	23/02/2007	343.48	23/02/2007	N.D.	TSF2 Monitoring - Saprock
MB59	493962.7	6821897.6	359.41	363.5	49	49	0.7	-90	0	43.0 - 49.0	55	0.0 - 28.0 30.0 - 49.0	28 - 30	0.33	1900	4/03/2007	340.06	4/03/2007	333.9	TSF2 Monitoring - Saprock
MB60	493561	6821386.9	362.99	365.5	106	106	0.6	-90	0	94.0 - 106.0	55	0.0 - 38.0 40.0 - 106.0	38 - 40	0.5	706	26/02/2007	326.37	26/02/2007	359.5	TSF2 Monitoring - Saprock
MB61	493780	6821835.9	358.15	359	50	50	0.6	-90	0	44.0 - 50.0	55	0.0 - 33.0 35.0 - 50.0	33 - 35	0.06	3400	3/03/2007	339.81	3/03/2007	353	TSF2 Monitoring - Saprock
MB62	493549.2	6821548.2	361.38	362	115	115	0.5	-90	0	109.0 - 115.0	55	0.0 - 58.0 60.0 - 115.0	58 - 60	0.3	795	2/03/2007	333.74	2/03/2007	356	TSF2 Monitoring - Saprock
MB63	493410	6821716.1	357.78	358	87	87	0.6	-90	0	81.0 - 87.0	55	0.0 - 64.0 66.0 - 87.0	64 - 66	0.2	776	25/02/2007	333.16	25/02/2007	N.D.	TSF2 Monitoring - Saprock

Appendix E - Golden Grove Mine Schedule of Groundwater Production and Monitoring Bores

Bore Number	Easting (MGA z50)	Northing (MGA z50)	Ground Elevation (mAHD)	Datum Elevation (mAHD)	Drilled Depth (mbgl)	Casing Depth (mbgl)	Stickup Height (magl)	Dip	Azimuth	Slotted Interval (mbgl)	Casing Diameter (mm)	Gravel Packed (mbgl)	Annular Seal (mbgl)	Airlift Yield (kL/d)	Original Salinity (mg/L)	Original Salinity Date	Original SWL (mAHD)	Original SWL Date	2024 SWL (mAHD)	Purpose
MB64	493602.7	6822039	N.D.	355.7	81	80.5	N.D.	-90	0	68.5 - 80.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	335.7	10/06/2010	332.39	TSF2 Monitoring - Saprock
MB65	493856.6	6822096.3	N.D.	356.8	80	80	N.D.	-90	0	74.0 - 80.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	336.1	11/06/2010	330.61	TSF2 Monitoring - Saprock
TSF3 Monitoring Bores																				
MB67	493555.9	6819553.3	368.86	369.57	85	85	0.7	-90	0	79-85	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	308.57	20/05/2010	299.25	TSF3 Monitoring - Saprock
MB68A	493776.7	6819755.5	364.92	365.56	67	67	0.7	-90	0	59 - 65	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Dry	TSF3 Monitoring - Saprock
MB69	494029.7	6819968.5	364.35	365.08	75	75	0.7	-90	0	69 - 75	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	Dry	TSF3 Monitoring - Saprock
MB70A	494256.5	6819782.9	364.58	365.28	130.3	130.3	0.7	-90	0	124.3 - 130.3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	304.1	25/05/2010	Dry	TSF3 Monitoring - Saprock
MB71A	494454.2	6819532	364.72	365.35	110	110	0.6	-90	0	104 - 110	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	304.15	27/05/2010	294.92	TSF3 Monitoring - Saprock
MB73A	493969.4	6818928.6	362.82	363.46	78	78	0.7	-90	0	72 - 78	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	314.26	23/05/2010	303.67	TSF3 Monitoring - Saprock
MB74	493628.3	6819125.6	369.23	369.81	85	85	0.6	-90	0	71 - 77	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	320.21	21/05/2010	N.D.	TSF3 Monitoring - Saprock
TSF4 Monitoring Bores																				
MB87	491959.8	6822567.3	344.24	344.88	109.0	61.0	0.63	-90	0	61-109	54	30.4-109	23.8-30.4	288	1755	1/05/2023	332.781	1/05/2023	12.09	TSF4 Monitoring - Saprock
MB89	492969.7	6821850.7	353.88	354.55	103.0	43.0	0.67	-90	0	43-103	54	33-103	27-33	144	991	2/05/2023	330.735	2/05/2023	24.07	TSF4 Monitoring - Saprock
MB90	492665.7	6822444.6	347.46	348.13	80.0	38.0	0.67	-90	0	38-80	54	30-80	24-30	54	1932	1/05/2023	332.278	1/05/2023	16.31	TSF4 Monitoring - Saprock
MB91	492006.8	6820839.9	360.80	361.48	91.0	61.0	0.68	-90	0	61-91	54	46.8-91	40-46.8	144	1306	2/05/2023	333.19	2/05/2023	30.43	TSF4 Monitoring - Saprock
MB92	491761.8	6821704.9	355.86	356.54	103.0	37.0	0.68	-90	0	37-103	54	30-103	24-30	29	1440	2/05/2023	333.209	2/05/2023	23.51	TSF4 Monitoring - Saprock
MB93	491289.4	6821946.4	*367.00*	N.D.	89.5	89.5	N.D.	-90	0	71.5-89.5	50	51.5-71.5	47-51.5	13	N.D.	N.D.	30.49	5/12/2024	30.43	TSF4 Monitoring - Saprock
RB6	491845.5	6822666.9	*348.00*	N.D.	77.5	76.4	N.D.	-90	0	29-77	50	24-77	13.5-16.5	276	Dry	13/11/2024	12.09	5/12/2024	12.09	TSF4 Monitoring - Saprock
BH5	492917.4	6822081.6	350.91	351.86	20.0	20.3	0.95	-90	0	N.D.	50	N.D.	N.D.	Dry	Dry	6/03/2023	Dry	6/03/2023	Dry	TSF4 Monitoring - Saprolite
BH10	492669.0	6822428.7	347.46	348.50	20.0	N.D.	1.03	-90	0	N.D.	50	N.D.	N.D.	Dry	Dry	2/03/2023	Dry	2/03/2023	Dry	TSF4 Monitoring - Saprolite
TP01	492608.2	6821260.4	*362.00*	N.D.	7.7	7.6	0.67	-90	0	1.6-7.6	50	1.2-7.7	0.5-1.2	Dry	Dry	11/11/2024	Dry	11/11/2024	Dry	TSF4 Monitoring - Caprock

Appendix E - Golden Grove Mine Schedule of Groundwater Production and Monitoring Bores

Bore Number	Easting (MGA z50)	Northing (MGA z50)	Ground Elevation (mAHD)	Datum Elevation (mAHD)	Drilled Depth (mbgl)	Casing Depth (mbgl)	Stickup Height (magl)	Dip	Azimuth	Slotted Interval (mbgl)	Casing Diameter (mm)	Gravel Packed (mbgl)	Annular Seal (mbgl)	Airlift Yield (kL/d)	Original Salinity (mg/L)	Original Salinity Date	Original SWL (mAHD)	Original SWL Date	2024 SWL (mAHD)	Purpose
ROM Pad Monitoring Bores																				
ROM 1	495845.5	6818063.3	359.9	360.45	6	6	0.6	-90	0	0.0 - 6.0	N.D.	N.D.	N.D.	Dry	Dry	20/07/2008	360.04	20/07/2008	na	ROM Pad Monitoring
ROM 2	495810.5	6817982.3	359	359.58	7	7	0.6	-90	0	0.0 - 5.0	N.D.	N.D.	N.D.	Dry	Dry	20/07/2008	Dry	20/07/2008	Dry	ROM Pad Seepage Recovery
ROM 3	495766.5	6817828.3	357.7	358.13	8	8	0.4	-90	0	0.0 - 6.0	N.D.	N.D.	N.D.	Dry	Dry	20/07/2008	Dry	20/07/2008	Dry	ROM Pad Monitoring
ROM 4	495770.5	6817708.3	356.9	357.16	7	7	0.3	-90	0	0.0 - 5.0	N.D.	N.D.	N.D.	Dry	Dry	20/07/2008	356.58	20/07/2008	Dry	ROM Pad Monitoring
ROM 5	495814.5	6817628.3	357.5	358.23	N.D.	N.D.	0.7	-90	0	N.D.	N.D.	N.D.	N.D.	Dry	Dry	20/07/2008	Dry	20/07/2008	Dry	ROM Pad Monitoring
ROM 6	495878.5	6817553.3	358.3	358.82	N.D.	N.D.	0.5	-90	0	N.D.	N.D.	N.D.	N.D.	Dry	Dry	20/07/2008	Dry	20/07/2008	Dry	ROM Pad Monitoring
ROM 7	495957.5	6817480.3	358.4	358.78	N.D.	N.D.	0.4	-90	0	N.D.	N.D.	N.D.	N.D.	Dry	Dry	20/07/2008	Dry	20/07/2008	N.D.	ROM Pad Monitoring
ROM 8	N.D.	N.D.	355.73	356.21	6	6	0.5	-90	0	4.0 - 6.0	N.D.	N.D.	N.D.	Dry	Dry	20/07/2008	355.75	20/07/2008	N.D.	ROM Pad Monitoring
ROM 9	495848.5	6818071	359.58	360.18	8.8	8.8	0.6	-90	0	2.8 - 8.8	N.D.	N.D.	0.0 - 2.0	Dry	Dry	12/12/2011	353.37	12/12/2011	cemented	ROM Pad Seepage Recovery
ROM10	495767.2	6817698.1	356.51	357.11	8.8	8.8	0.6	-90	0	2.8 - 8.8	N.D.	N.D.	0.0 - 2.0	Dry	Dry	N.D.	Dry	N.D.	Dry	ROM Pad Monitoring
ROM11	495737.0	6818002.0	N.D.	N.D.	8.3	7.9	0.45	-90	0	0.9-6.9	50	0.9-8.3	0.4-0.9	Dry	Dry	9/05/2024	Dry	9/05/2024	Dry	ROM Pad Monitoring
ROM12	495596.0	6817806.0	N.D.	N.D.	7.9	7.9	0.45	-90	0	0.9-6.9	50	0.9-7.9	0.4-0.9	Dry	Dry	8/05/2024	Dry	8/05/2024	Dry	ROM Pad Monitoring
ROM13	495567.0	6817591.0	N.D.	N.D.	8.0	7.9	0.45	-90	0	0.9-6.9	50	0.9-8.0	0.4-0.9	Dry	Dry	8/05/2024	Dry	8/05/2024	Dry	ROM Pad Monitoring
ROM14	495700.0	6817498.0	N.D.	N.D.	8.1	7.9	0.45	-90	0	0.9-6.9	50	0.9-8.0	0.4-0.9	Dry	Dry	8/05/2024	Dry	8/05/2024	Dry	ROM Pad Monitoring
ROM15	495851.0	6817372.0	N.D.	N.D.	8.9	8.9	0.45	-90	0	1.9-7.9	50	1.5-8.9	1.0-1.5	Dry	Dry	7/05/2024	Dry	7/05/2024	Dry	ROM Pad Monitoring
ROM16	495982.0	6817301.0	N.D.	N.D.	8.1	7.9	0.45	-90	0	0.9-6.9	50	0.9-8.1	0.4-0.9	Dry	Dry	7/05/2024	Dry	7/05/2024	Dry	ROM Pad Monitoring
Gossan Valley Monitoring Bores																				
HIRD008	503003.0	6808940.0	328.609	328.718	N.D.	N.D.	0.109	-45	-60	43.0 - 48.0	30	N.D.	N.D.	N.D.	N.D.	13/08/2020	315.65	13/08/2020	315.50	GV Monitoring
GVW001	499249.7	6812917.1	366.33	366.766	86.0	86	0.436	-90	0	74-86	50	5.5-86.0	0.0-5.5	3.3	4057.60	13/08/2020	325.32	13/08/2020	325.07	GV Monitoring
GVW002	499988.7	6811356.1	343.715	344.162	78.0	78	0.447	-90	0	66-78	50	6.0-66.0	0.0-6.0	0.5	1403.52	13/08/2020	322.43	13/08/2020	322.01	GV Monitoring
GVW003	498944.2	6812136.1	352.763	353.245	73.0	72	0.482	-90	0	60-72	50	3.0-73.0	0.0-3.0	0.8	3590.40	13/08/2020	325.33	13/08/2020	325.02	GV Monitoring
GVW004	499450.7	6812326.1	355.446	355.977	128.0	128	0.531	-90	0	80-122	50	2.5-128.0	0.0-2.5	3.4	6470.40	13/08/2020	324.71	13/08/2020	324.48	GV Monitoring
GVW005	499753.5	6812089.6	351.373	351.827	130.0	130	0.454	-90	0	70-124	50	3.0-130	0.0-3.0	4.0	3270.40	13/08/2020	323.03	13/08/2020	322.75	GV Monitoring
GVW006	499989.6	6811970.8	350.319	350.864	140.0	140	0.545	-90	0	40-64	50	3.0-70.0	0.0-3.0	3.3	2656.00	13/08/2020	322.33	13/08/2020	322.01	GV Monitoring
GVW008	500784.4	6811029.9	357.807	358.188	96.0	96	0.381	-90	0	72-96	50	3.0-96.0	0.0-3.0	0.2	2291.20	13/08/2020	321.14	13/08/2020	318.04	GV Monitoring
GVW009	500830.9	6810912.8	364.59	365.25	122.0	122	0.66	-90	0	53-65	50	2.5-65.0	0.0-2.5	2.5	1637.12	13/08/2020	320.80	13/08/2020	314.02	GV Monitoring
GVW010d	502122.4	6808794.7	325.097	325.521	90.0	90	0.424	-90	0	78-90	50	3.7-90.0	0.0-3.7	1.5	1580.80	13/08/2020	316.63	13/08/2020	316.53	GV Monitoring
GVW010s	502124.8	6808794.8	325.097	325.552	20.0	17.7	0.455	-90	0	3.7-17.7	50	2.5-17.7	0.0-2.5	0.1	1433.60	13/08/2020	316.72	13/08/2020	316.59	GV Monitoring

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GVW011d	501501.0	6809162.3	327.554	328.011	72.0	53.5	0.457	-90	0	47.5-53.5	50	11.7-15.0	0.0-6.0	2.2	2483.20	13/08/2020	318.91	13/08/2020	318.46	GV Monitoring
GVW011s	501501.0	6809162.3	327.554	328.011	12.0	11.7	0.457	-90	0	5.7-11.7	50	6.0-11.7	0.0-6.0	2.2	N.D.	13/08/2020	318.62	13/08/2020	318.27	GV Monitoring
GVW012d	500867.6	6809639.9	331.527	332.063	64.0	64	0.536	-90	0	51-63	50	11.7-13.7	0.0-2.5	0.8	1088.00	13/08/2020	319.82	13/08/2020	319.25	GV Monitoring
GVW012s	500867.6	6809639.9	331.527	332.063	11.7	11.7	0.536	-90	0	5.7-11.7	50	2.5-11.7	0.0-2.5	0.0	N.D.	13/08/2020	320.31	13/08/2020	320.24	GV Monitoring
GVW013	500054.8	6810409.6	336.884	337.419	96.0	96	0.535	-90	0	72-96	50	2.5-96	0.0-2.5	2.0	1134.72	13/08/2020	321.65	13/08/2020	321.27	GV Monitoring
GVW014	501652.2	6811408.0	334.285	334.734	72.0	72	0.449	-90	0	60-72	50	2.5-72.0	0.0-2.5	0.8	4076.80	13/08/2020	319.62	13/08/2020	319.35	GV Monitoring
GVW015	500892.0	6811754.2	339.525	340.053	88.0	88	0.528	-90	0	76-88	50	2.5-88.0	0.0-2.5	1.3	3901.44	13/08/2020	321.35	13/08/2020	320.55	GV Monitoring
GVW016	499807.2	6812464.6	349.141	349.695	96.0	96	0.554	-90	0	60-96	50	2.5-96.0	0.0-2.5	0.3	4505.60	13/08/2020	323.48	13/08/2020	323.29	GV Monitoring
GVW017	500465.9	6811429.3	350.485	350.944	146.0	146	0.459	-90	0	56-146	50	2.0-146.0	0.0-2.0	1.4	1574.40	13/08/2020	321.92	13/08/2020	321.25	GV Monitoring
GVW018	500985.9	6811256.5	342.126	342.61	108.0	108	0.484	-90	0	90-108	50	3.0-108.0	0.0-3.0	0.8	2284.80	13/08/2020	321.15	13/08/2020	319.86	GV Monitoring
GVW019	501119.6	6811054.5	345.544	346.237	91.4	91.4	0.693	-90	0	37.4-91.4	50	2.5-91.4	0.0-2.5	2.0	1824.00	13/08/2020	321.12	13/08/2020	319.69	GV Monitoring
GVW020	500813.6	6811195.8	350.716	351.299	109.7	109.7	0.583	-90	0	49.7-61.7	50	2.5-109.7	0.0-2.5	0.6	1340.80	13/08/2020	321.37	13/08/2020	320.15	GV Monitoring
Station Wells																				
Boolgarra	524217.3	6827731.5	N.D.	N.D.	N.D.	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	700	31/01/1997	*16.4*	29/01/1989	9.37	Station Well
Bore 3	521263.8	6822748.1	N.D.	354.83	N.D.	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	1200	23/12/1995	333.81	2/12/1995	333.97	Station Well
Cattle E	518755.7	6827583.9	N.D.	N.D.	N.D.	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	1900	31/01/1997	*3.35*	10/01/1993	*N.D.*	Station Well
Cattle W	519477.2	6827460.9	N.D.	N.D.	N.D.	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	2200	31/01/1997	*7.45*	10/01/1993	3.94	Station Well
Newton	524568.8	6822857.3	N.D.	N.D.	N.D.	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	2300	31/01/1997	*5.11*	10/01/1993	7.81	Station Well
Minjar	494836.9	6818592.9	331.23	331.68	N.D.	N.D.	0.5	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	1500	23/12/1995	328.18	29/01/1989	327.6	Station Well
Scorpion	511849.7	6823729.2	N.D.	N.D.	N.D.	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	2200	31/01/1997	*17.4*	30/09/1989	16.56	Station Well
Shadow	509776.2	6819696.8	N.D.	355	N.D.	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	1400	31/01/1997	346.25	30/09/1989	346.87	Station Well
Theuraweed y	512013	6831318.1	N.D.	N.D.	N.D.	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	1200	31/01/1997	*6.69*	10/01/1993	6.47	Station Well
Tims	529358.8	6829548.9	N.D.	N.D.	N.D.	N.D.	N.D.	-90	0	N.D.	N.D.	N.D.	N.D.	N.D.	3600	31/01/1997	*2.25*	10/01/1993	N.D.	Station Well

Note: Underlined readings are depth below datum. Underlined and italicised readings are estimated from the long-term hydrographs.

Appendix F

Monitoring Bore Water Level Data

Appendix F - Monitoring Bore Water Level Data

Gossan Hill Area

CUDD001 — Datum = 350.44; Dip = 90.00

Date	(m bgl)	(m AHD)
2-Sep-08	33.36	317.08
5-Oct-08	33.50	316.94
29-Oct-08	33.50	316.94
24-Dec-08	33.64	316.80
2-Jan-09	33.63	316.81
8-Feb-09	33.67	316.77
21-Mar-09	33.86	316.58
15-May-09	33.97	316.47
14-Jun-09	34.01	316.43
11-Jul-09	34.09	316.35
6-Aug-09	34.19	316.25
15-Sep-09	34.29	316.15
13-Oct-09	34.47	315.97
22-Dec-09	34.42	316.02
19-Jan-10	34.60	315.84
19-Feb-10	34.74	315.70
1-Mar-10	Not Measured	
4-Apr-10	34.82	315.62
2-May-10	34.83	315.61
22-Jun-10	Not Measured	
26-Jul-10	35.00	315.44
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	35.21	315.23
12-Nov-10	35.23	315.21
24-Dec-10	35.36	315.08
19-Jan-11	35.42	315.02
6-Mar-11	35.61	314.83
13-Apr-11	35.58	314.86
21-Jun-11	35.75	314.69
24-Jul-11	35.85	314.59
8-Aug-11	Not Measured	
2-Sep-11	35.85	314.59
29-Oct-11	36.04	314.40
10-Nov-11	36.06	314.38
11-Dec-11	36.14	314.30
19-Jan-12	36.20	314.24
15-Feb-12	36.25	314.19
4-Mar-12	36.21	314.23
14-Apr-12	36.20	314.24
16-May-12	36.18	314.26
9-Jun-12	36.58	313.86
15-Jul-12	36.15	314.29
15-Aug-12	36.17	314.27
15-Sep-12	36.79	313.65
15-Oct-12	36.79	313.65
9-Nov-12	37.16	313.28
14-Jan-13	36.16	314.28
10-Feb-13	37.48	312.96
12-Mar-13	37.63	312.81
14-Apr-13	37.77	312.67
12-May-13	37.86	312.58
17-Jun-13	37.83	312.61
10-Jul-13	38.25	312.19
18-Aug-13	38.40	312.04
12-Sep-13	38.38	312.06
12-Oct-13	No tape for SWL	
12-Nov-13	No tape for SWL	
19-Dec-13	38.68	311.76
15-Mar-14	39.28	311.16
8-Apr-14	39.30	311.14
15-May-14	39.49	310.95
15-Jun-14	38.81	311.63
17-Jul-14	39.60	310.84
26-Aug-14	39.74	310.70
23-Sep-14	39.73	310.71
7-Oct-14	39.94	310.50
21-Nov-14	40.04	310.40
15-Dec-14	40.01	310.43
26-Jan-15	40.00	310.44
19-Feb-15	40.23	310.21
12-Mar-15	40.00	310.44
27-Apr-15	40.25	310.19
8-May-15	40.35	310.09
7-Jun-15	40.41	310.03
16-Jul-15	40.39	310.05
14-Aug-15	40.49	309.95
23-Sep-15	40.47	309.97
21-Oct-15	40.47	309.97
4-Nov-15	40.50	309.94
1-Dec-15	40.48	309.96
10-Feb-16	40.47	309.97
7-Mar-16	40.77	309.67
14-Apr-16	40.77	309.67
26-Jun-16	40.77	309.67
28-Jul-16	40.97	309.47
20-Aug-16	40.97	309.47
28-Sep-16	40.96	309.48
29-Oct-16	41.26	309.18
29-Dec-16	41.28	309.16
22-Jan-17	41.30	309.14
11-Feb-17	41.34	309.10
15-Mar-17	41.28	309.16
14-Apr-17	41.44	309.00
28-May-17	41.67	308.77
17-Jun-17	41.70	308.74
27-Jul-17	42.66	307.78
18-Aug-17	41.69	308.75
23-Sep-17	41.72	308.72
20-Oct-17	41.81	308.63
26-Nov-17	41.84	308.60
22-Dec-17	41.87	308.57
22-Feb-18	42.03	308.41
15-Mar-18	41.96	308.48
7-Apr-18	41.94	308.50
15-May-18	42.07	308.37
25-Jun-18	42.12	308.32
13-Jul-18	42.13	308.31
22-Aug-18	42.19	308.25
15-Oct-18	42.23	308.21
23-Nov-18	42.31	308.13
30-Dec-18	42.37	308.07
22-Jan-19	42.45	307.99
16-Feb-19	42.34	308.10
20-Mar-19	42.45	307.99
19-Apr-19	42.42	308.02
12-Jul-19	42.55	307.89
19-Aug-19	42.50	307.94
12-Sep-19	42.54	307.90
3-Oct-19	42.62	307.82
14-Nov-19	42.72	307.72
17-Dec-19	42.63	307.81
25-Jan-20	42.73	307.71
8-Feb-20	39.56	310.88
11-Mar-20	39.55	310.89
17-Apr-20	42.72	307.72
20-May-20	42.72	307.72
5-Jul-20	42.70	307.74
27-Aug-20	42.70	307.74
11-Sep-20	42.77	307.67
22-Oct-20	42.76	307.68
7-Nov-20	42.80	307.64
17-Jan-21	43.00	307.44
11-May-21	42.93	307.51
8-Jun-21	39.46	310.98
15-Jul-21	43.29	307.15
14-Aug-21	43.32	307.12
25-Sep-21	43.38	307.06
9-Nov-21	Blocked	
16-Dec-21	43.47	306.97
14-Jan-22	43.40	307.04
11-Feb-22	43.44	307.00
10-Mar-22	43.67	306.77
9-Apr-22	43.66	306.78
7-May-22	43.76	306.68
7-Jun-22	43.70	306.74
3-Jul-22	43.76	306.68
25-Aug-22	43.72	306.72
25-Sep-22	43.75	306.69
23-Oct-22	43.73	306.71
20-Nov-22	43.75	306.69
29-Dec-22	43.79	306.65
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	44.01	306.43
18-May-23	44.04	306.40

CUDD003 — Datum = 350.70; Dip = 90.00

Date	(m bgl)	(m AHD)
24-Dec-08	42.50	308.20
2-Jan-09	42.50	308.20
8-Feb-09	42.70	308.00
21-Mar-09	42.80	307.90
1-Apr-09	42.82	307.88
15-May-09	42.99	307.71
14-Jun-09	43.05	307.65
11-Jul-09	43.15	307.55
6-Aug-09	43.23	307.47
15-Sep-09	43.35	307.35
2-Sep-08	42.13	308.57
5-Oct-08	42.30	308.40
29-Oct-08	42.39	308.31
21-Mar-09	42.80	307.90
1-Apr-09	42.82	307.88
15-May-09	42.99	307.71
23-Jun-09	43.05	307.65
7-Jul-09	43.15	307.55
5-Aug-09	43.23	307.47
15-Sep-09	43.35	307.35
13-Oct-09	43.49	307.21
13-Nov-09	43.45	307.25
22-Dec-09	38.41	312.29
24-Dec-10	Blocked with roots	
19-Jan-10	43.76	306.94
19-Feb-10	34.94	315.76
1-Mar-10	Not Measured	
4-Apr-10	44.06	306.64
2-May-10	44.08	306.62
1-Mar-10	Not Measured	
26-Jul-10	44.10	306.60
1-Sep-10	Not Measured	
16-Oct-10	Blocked with roots	
12-Nov-10	Blocked with roots	
24-Dec-10	Blocked with roots	
19-Jan-11	Blocked with roots	
6-Mar-11	Blocked with roots	
13-Apr-11	Blocked with roots	
21-Jun-11	Blocked with roots	
24-Jul-11	Blocked with roots	
8-Aug-11	Not Measured	
2-Sep-11	Blocked with roots	
29-Oct-11	Blocked with roots	
10-Nov-11	Blocked with roots	
11-Dec-11	Blocked with roots	
19-Jan-12	Blocked with roots	
15-Feb-12	Blocked with roots	
4-Mar-12	Blocked with roots	
14-Apr-12	Blocked with roots	
16-May-12	Blocked with roots	
9-Jun-12	Blocked with roots	
15-Jul-12	Blocked with roots	
15-Aug-12	Blocked with roots	
15-Sep-12	Blocked with roots	
15-Oct-12	Blocked with roots	
9-Nov-12	Blocked with roots	
14-Jan-13	44.69	306.01
10-Feb-13	Blocked with roots	
12-Mar-13	Blocked with roots	
14-Apr-13	Blocked with roots	
12-May-13	Blocked with roots	
17-Jun-13	Blocked with roots	
10-Jul-13	Blocked with roots	
18-Aug-13	Blocked with roots	
12-Sep-13	Blocked with roots	
12-Oct-13	No tape for SWL	
12-Nov-13	No tape for SWL	
19-Dec-13	Blocked with roots	
28-Jan-16	Blocked	
10-Feb-16	Blocked	
7-Mar-16	Blocked	
14-Apr-16	Blocked	
26-Jun-16	Blocked	
28-Jul-16	Blocked	
20-Aug-16	No Go	
28-Sep-16	Blocked	
29-Oct-16	Blocked	
22-Jan-17	Blocked	
11-Feb-17	Blocked	
15-Mar-17	Blocked	
14-Apr-17	Blocked	
28-May-17	NA	
17-Jun-17	NA	
27-Jul-17	NT	
18-Aug-17	NT	
23-Sep-17	NS	
20-Oct-17	Blocked	
26-Nov-17	NT	
22-Dec-17	ND	
22-Feb-18	No result	
15-Mar-18	Blocked	
7-Apr-18	Blocked	
15-May-18	Blocked	
25-Jun-18	Blocked	
13-Jul-18	Blocked	
15-Oct-18	Blocked	
23-Nov-18	Blocked	
30-Dec-18	Blocked	
22-Jan-19	Blocked	
16-Feb-19	Blocked	
20-Mar-19	Blocked	
19-Apr-19	Blocked	
12-Jul-19	Blocked	
19-Aug-19	Blocked	
12-Sep-19	Blocked	
3-Oct-19	Blocked	
14-Nov-19	Blocked	
16-Dec-19	Blocked	
25-Jan-20	Blocked	
11-Mar-20	Blocked	
17-Apr-20	Blocked	
20-May-20	Blocked	
5-Jul-20	Blocked	
27-Aug-20	Blocked	
11-Sep-20	Blocked	
22-Oct-20	Blocked	
7-Nov-20	Blocked	
17-Jan-21	Blocked	
11-May-21	Blocked	
8-Jun-21	Blocked	
15-Jul-21	Blocked	

GG102 — Datum = 354.49; Dip = 70.00

Date	(m bgl)	(m AHD)
31-Jan-97	28.40	327.80
28-Feb-97	28.65	327.57
31-Mar-97	28.83	327.40
31-Oct-97	30.75	325.59
30-Nov-97	31.17	325.20
31-Dec-97	31.64	324.76
30-Apr-98	32.97	323.51
31-May-98	33.15	323.34
31-Jul-98	33.72	322.80
31-Aug-98	34.04	322.50
30-Sep-98	34.43	322.14
31-Oct-98	34.77	321.82
30-Nov-98	35.10	321.51
31-Dec-98	35.40	321.22
31-Jan-99	35.86	320.79
28-Feb-99	36.10	320.57
31-Mar-99	36.87	319.84
30-May-99	37.87	318.90
30-Jun-99	38.15	318.64
1-Aug-99	38.70	318.12
2-Sep-99	39.32	317.54
4-Oct-99	39.80	317.09
5-Nov-99	40.22	316.70
6-Dec-99	40.51	316.42
9-Jan-00	40.93	316.03
4-Feb-00	41.23	315.75
25-Feb-00	41.51	315.48
2-Apr-00	41.90	315.12
28-Apr-00	42.28	314.76
6-Jun-00	45.16	312.05
12-Jul-00	48.83	308.60
12-Aug-00	48.15	309.24
26-Aug-00	48.93	308.51
7-Oct-00	53.87	303.87
28-Oct-00	54.69	303.10
22-Nov-00	56.31	301.58
30-Dec-00	57.46	300.50
5-Feb-01	56.87	301.05
5-Mar-01	57.03	300.90
29-Mar-01	57.45	300.50
30-Apr-01	58.15	299.85
29-May-01	56.98	300.95
9-Nov-01	62.22	296.02
2-Dec-01	62.39	295.86
24-Dec-01	62.45	295.81
9-Apr-02	63.38	294.93
30-Apr-02	63.45	294.87
28-May-02	63.77	294.57
25-Jun-02	64.00	294.35
6-Aug-02	64.41	293.96
30-Aug-02	64.70	293.69
17-Oct-02	65.10	293.32
2-Nov-02	65.26	293.17
1-Dec-02	65.48	292.96
20-Dec-02	65.64	292.81
27-Jan-03	65.96	292.51
3-Apr-03	66.76	291.76
30-Apr-03	66.92	291.61
4-Jun-03	67.07	291.46
27-Jun-03	67.19	291.35
31-Jul-03	67.41	291.15
30-Aug-03	67.54	291.02
29-Sep-03	67.64	290.93
31-Oct-03	67.81	290.77
29-Nov-03	67.94	290.65
31-Dec-03	59.10	298.95
31-Mar-04	68.54	290.08
30-May-04	68.81	289.83
2-Aug-04	69.27	289.40
2-Sep-04	69.46	289.22
1-Oct-04	69.67	289.02
2-Nov-04	69.87	288.83
3-Jan-05	70.27	288.46
3-Feb-05	70.42	288.32
7-Mar-05	71.55	287.25
1-Apr-05	70.70	288.05
30-Apr-05	70.79	287.97
31-May-05	70.94	287.83
2-Jul-05	71.06	287.72
3-Aug-05	71.23	287.56
2-Sep-05	71.35	287.44
4-Oct-05	71.46	287.34
25-Oct-05	71.54	287.26
4-Jan-06	71.86	286.96
30-Jan-06	71.99	286.84
11-Mar-06	72.12	286.72
4-Apr-06	72.27	286.58
6-May-06	72.26	286.59
1-Jun-06	72.47	286.39
11-Jul-06	72.62	286.25
30-Jul-06	72.69	286.18
4-Sep-06	72.82	286.06
3-Oct-06	72.95	285.94
30-Oct-06	73.04	285.85
9-Dec-06	73.23	285.68
8-Jan-07	73.25	285.66
6-Feb-07	73.35	285.56
1-May-07	73.50	285.42
3-Jun-07	73.62	285.31
30-Jun-07	73.66	285.27
29-Jul-07	73.77	285.17
4-Sep-07	73.86	285.08
2-Nov-07	74.03	284.92
10-Jan-08	74.28	284.69
8-Mar-08	74.66	284.33
4-Apr-08	74.78	284.22
16-May-08	74.86	284.14
5-Oct-08	75.23	283.80
29-Oct-08	75.24	283.79
24-Dec-08	75.38	283.66
2-Jan-09	75.41	283.63
21-Mar-09	75.55	283.50
1-Apr-09	75.55	283.50
15-May-09	75.62	283.43
23-Jun-09	75.65	283.40
7-Jul-09	75.71	283.35
5-Aug-09	75.74	283.32
15-Sep-09	75.83	283.23
13-Oct-09	75.86	283.20
11-Nov-09	75.85	283.21
22-Dec-09	75.88	283.19
19-Jan-10	75.93	283.14
16-Feb-10	75.98	283.09
19-Mar-10	75.98	283.09
4-Apr-10	76.06	283.02
2-May-10	76.10	282.98
9-Jun-10	76.11	282.97
26-Jul-10	76.15	282.93
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	76.25	282.84
12-Nov-10	76.18	282.90
24-Dec-10	76.20	282.89
19-Jan-11	76.18	282.90
06-Mar-11	76.30	282.79
13-Apr-11	76.32	282.77
21-Jun-11	76.35	282.74
24-Jul-11	76.35	282.74
08-Aug-11	76.33	282.76
02-Sep-11	76.36	282.74
29-Oct-11	76.42	282.68
10-Nov-11	76.42	282.68
11-Dec-11	76.45	282.65
19-Jan-12	76.50	282.60
15-Feb-12	76.53	282.58
04-Mar-12	76.57	282.54
14-Apr-12	76.58	282.53
16-May-12	76.59	282.52
15-Jul-12	76.58	282.53
15-Aug-12	76.59	282.52
15-Sep-12	76.84	282.28
15-Oct-12	76.84	282.28
09-Nov-12	77.10	282.04
13-Jan-13	76.39	282.71
14-Jan-13	76.39	282.71
10-Feb-13	76.77	282.35
15-Feb-13	76.77	282.35

GG269 — Datum = 348.24; Dip = 76.00

Date	(m bgl)	(m AHD)
8-Aug-06	80.27	270.35
16-Jan-07	81.92	268.75
10-Mar-07	82.12	268.56
6-Apr-07	82.64	268.05
1-May-07	82.76	267.94
3-Jun-07	83.02	267.69
30-Jun-07	83.23	267.48
29-Jul-07	83.79	266.94
4-Sep-07	84.19	266.55
2-Nov-07	84.84	265.92
10-Jan-08	86.00	264.79
8-Mar-08	86.77	264.05
4-Apr-08	87.13	263.70
16-May-08	87.82	263.03
5-Oct-08	91.90	259.07
29-Oct-08	Dry	
24-Dec-08	Dry	
02-Jan-09	93.36	257.65
08-Feb-09	Dry	
01-Apr-09	94.31	256.73
15-May-09	94.85	256.21
14-Jun-09	91.20	259.75
11-Jul-09	96.03	255.06
06-Aug-09	96.40	254.70
15-Sep-09	96.72	254.39
13-Oct-09	97.06	254.06
11-Nov-09	97.30	253.83
22-Dec-09	97.67	253.47
19-Jan-10	98.25	252.91
16-Feb-10	98.40	252.76
19-Mar-10	98.41	252.75
04-Apr-10	98.69	252.48
02-May-10	98.67	252.50
09-Jun-10	99.03	252.15
26-Jul-10	99.10	252.08
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	Dry	
12-Nov-10	98.17	252.99
24-Dec-10	86.05	264.75
19-Jan-11	Dry	
06-Mar-11	103.00	248.30
13-Apr-11	103.00	248.30
21-Jun-11	Not Measured	
24-Jul-11	Not Measured	
08-Aug-11	Not Measured	
02-Sep-11	Dry	
10-Nov-11	Not Measured	
11-Dec-11	Dry	
19-Jan-12	106.34	245.06
15-Feb-12	Dry	
04-Mar-12	106.42	244.98
14-Apr-12	106.41	244.99
16-May-12	106.43	244.97
15-Jul-12	106.45	244.95
15-Aug-12	106.48	244.92
15-Sep-12	98.30	252.86
15-Oct-12	98.30	252.86
09-Nov-12	90.56	260.37
13-Jan-13	98.64	252.53
14-Jan-13	98.64	252.53
10-Feb-13	99.48	251.71
15-Feb-13	99.48	251.71
12-Mar-13	99.69	251.51
15-Mar-13	99.69	251.51
14-Apr-13	99.88	251.33
15-Apr-13	99.88	251.33
12-May-13	100.11	251.10
15-May-13	100.11	251.10
15-Jun-13	100.09	251.12
17-Jun-13	100.09	251.12
10-Jul-13	100.41	250.81
15-Jul-13	100.41	250.81
15-Aug-13	101.06	250.18
18-Aug-13	101.06	250.18
12-Sep-13	101.05	250.19
15-Sep-13	101.05	250.19
19-Dec-13	101.25	250.00
15-Mar-14	100.71	250.52
08-Apr-14	100.71	250.52
15-May-14	102.12	249.15
15-Jun-14	101.43	249.82
17-Jul-14	102.39	248.89
26-Aug-14	102.41	248.87
23-Sep-14	102.43	248.85
07-Oct-14	102.83	248.46
21-Nov-14	102.98	248.32
15-Dec-14	102.96	248.34
26-Jan-15	102.95	248.35
19-Feb-15	102.93	248.37
12-Mar-15	102.96	248.34
27-Apr-15	95.38	255.69
08-May-15	99.49	251.71
07-Jun-15	99.46	251.73
16-Jul-15	99.52	251.68
07-Mar-16	101.50	249.75
14-Apr-16	101.53	249.73
26-Jun-16	101.53	249.73
28-Jul-16	102.11	249.16
20-Aug-16	102.10	249.17
28-Sep-16	102.09	249.18
29-Oct-16	102.50	248.78
29-Dec-16	102.47	248.81
22-Jan-17	102.67	248.62
11-Feb-17	102.65	248.64
15-Mar-17	102.65	248.64
14-Apr-17	102.89	248.41
28-May-17	103.02	248.28
17-Jun-17	103.07	248.23
27-Jul-17	103.18	248.12
18-Aug-17	103.32	247.99
23-Sep-17	103.35	247.96
20-Oct-17	103.60	247.72
26-Nov-17	103.61	247.71
22-Dec-17	103.68	247.64
15-Mar-18	103.65	247.67
07-Apr-18	103.96	247.37
15-May-18	104.08	247.25
25-Jun-18	104.28	247.06
13-Jul-18	104.29	247.05
22-Aug-18	104.52	246.82
15-Oct-18	104.50	246.84
23-Nov-18	Open pit area	
22-Jan-19	Dry	
16-Feb-19	Dry	
19-Apr-19	133.31	
12-Jul-19	133.47	218.73
19-Aug-19	133.52	218.69
12-Sep-19	133.45	218.75
03-Oct-19	133.58	218.63
14-Nov-19	132.70	219.48
17-Dec-19	132.60	219.58
25-Jan-20	132.65	219.53
08-Feb-20	131.78	220.37
19-Mar-20	132.62	219.56
17-Apr-20	132.66	219.52
20-May-20	132.78	219.40
05-Jul-20	130.96	221.17
27-Aug-20	Dry	
11-Sep-20	131.52	220.63
22-Oct-20	131.73	220.42
07-Nov-20	131.79	220.36
17-Jan-21	130.49	221.63
11-May-21	Dry	
08-Jun-21	Dry	
15-Jul-21	Dry	
14-Aug-21	Dry	
24-Sep-21	Dry	
12-Oct-21	131.28	220.86
9-Nov-21	131.29	220.85
16-Dec-21	131.26	220.88
14-Jan-22	131.32	220.82
11-Feb-22	131.30	220.84
10-Mar-22	Bore Destroyed	
9-Apr-22	Dry	

GG280D2 — Datum = 348.51; Dip = 72.00

Date	(m bgl)	(m AHD)
8-Aug-06	77.62	274.69
16-Jan-07	78.90	273.47
10-Mar-07	79.14	273.24
6-Apr-07	79.70	272.71
1-May-07	79.81	272.61
3-Jun-07	80.12	272.31
30-Jun-07	80.49	271.96
29-Jul-07	80.98	271.49
4-Sep-07	81.42	271.07
2-Nov-07	82.46	270.09
10-Jan-08	83.55	269.05
8-Mar-08	84.52	268.13
4-Apr-08	84.96	267.71
16-May-08	85.62	267.08
2-Sep-08	87.75	265.05
05-Oct-08	88.33	264.50
29-Oct-08	88.40	264.44
24-Dec-08	89.00	263.87
02-Jan-09	89.13	263.74
08-Feb-09	89.55	263.34
21-Mar-09	89.89	263.02
01-Apr-09	89.97	262.94
15-May-09	90.44	262.50
14-Jun-09	88.49	264.35
11-Jul-09	91.37	261.61
06-Aug-09	91.27	261.71
15-Sep-09	91.97	261.04
13-Oct-09	92.41	260.62
11-Nov-09	92.43	260.60
22-Dec-09	92.72	260.33
19-Jan-10	93.00	260.06
19-Feb-10	93.40	259.68
19-Mar-10	93.40	259.68
04-Apr-10	93.59	259.50
02-May-10	93.56	259.53
09-Jun-10	93.95	259.16
26-Jul-10	94.23	258.89
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	94.67	258.47
12-Nov-10	94.66	258.48
24-Dec-10	94.76	258.39
19-Jan-11	94.91	258.25
06-Mar-11	95.35	257.83
13-Apr-11	95.33	257.85
21-Jun-11	95.62	257.57
24-Jul-11	Not Measured	
08-Aug-11	Not Measured	
02-Sep-11	95.89	257.31
29-Oct-11	96.30	256.92
10-Nov-11	96.32	256.90
11-Dec-11	96.42	256.81
19-Jan-12	96.43	256.80
15-Feb-12	96.45	256.78
04-Mar-12	96.53	256.70
14-Apr-12	96.54	256.70
16-May-12	96.53	256.70
15-Jul-12	96.54	256.70
15-Aug-12	96.57	256.67
15-Sep-12	100.00	253.40
15-Oct-12	100.00	253.40
09-Nov-12	90.00	262.91
13-Jan-13	96.45	256.78
14-Jan-13	96.45	256.78
10-Feb-13	100.40	253.02
15-Feb-13	100.40	253.02
12-Mar-13	100.32	253.10
15-Mar-13	100.32	253.10
14-Apr-13	100.39	253.03
15-Apr-13	100.39	253.03
12-May-13	100.46	252.97
15-May-13	100.46	252.97
15-Jun-13	100.48	252.95
17-Jun-13	100.48	252.95
10-Jul-13	100.44	252.99
15-Jul-13	100.44	252.99
15-Aug-13	100.59	252.84
18-Aug-13	100.59	252.84
12-Sep-13	100.61	252.82
15-Sep-13	100.61	252.82
19-Dec-13	100.70	252.74
15-Mar-14	65.70	286.03
08-Apr-14	65.68	286.04
15-May-14	101.04	252.42
15-Jun-14	100.67	252.77
17-Jul-14	101.17	252.29
26-Aug-14	101.12	252.34
23-Sep-14	101.13	252.33
07-Oct-14	101.28	252.19
21-Nov-14	101.36	252.11
15-Dec-14	101.39	252.08
26-Jan-15	101.41	252.06
19-Feb-15	101.44	252.03
12-Mar-15	101.36	252.11
27-Apr-15	101.46	252.02
08-May-15	101.55	251.93
07-Jun-15	101.56	251.92
16-Jul-15	101.56	251.92
14-Aug-15	101.54	251.94
23-Sep-15	101.55	251.93
21-Oct-15	101.55	251.93
04-Nov-15	101.68	251.81
01-Dec-15	101.66	251.83
10-Feb-16	101.69	251.80
07-Mar-16	101.94	251.56
14-Apr-16	101.90	251.60
26-Jun-16	101.90	251.60
28-Jul-16	102.14	251.37
20-Aug-16	102.15	251.36
28-Sep-16	102.15	251.36
29-Oct-16	102.24	251.27
29-Dec-16	102.24	251.27
22-Jan-17	102.30	251.22
11-Feb-17	102.33	251.19
15-Mar-17	102.33	251.19
14-Apr-17	102.45	251.07
28-May-17	102.47	251.06
17-Jun-17	104.48	249.14
27-Jul-17	102.49	251.04
18-Aug-17	102.59	250.94
23-Sep-17	102.60	250.93
20-Oct-17	102.83	250.71
26-Nov-17	102.77	250.77
22-Dec-17	102.78	250.76
22-Feb-18	102.86	250.68
15-Mar-18	102.75	250.79
07-Apr-18	103.00	250.55
15-May-18	103.09	250.47
25-Jun-18	103.08	250.48
13-Jul-18	103.10	250.46
22-Aug-18	103.27	250.29
15-Oct-18	103.30	250.27
23-Nov-18	103.67	249.91
30-Dec-18	103.83	249.76
22-Jan-19	103.92	249.68
16-Feb-19	104.00	249.60
20-Mar-19	104.10	249.51
19-Apr-19	104.08	249.52
12-Jul-19	104.34	249.28
19-Aug-19	104.30	249.31
12-Sep-19	104.34	249.28
03-Oct-19	104.36	249.26
14-Nov-19	103.72	249.87
17-Dec-19	104.54	249.09
25-Jan-20	103.94	249.66
08-Feb-20	104.60	249.03
19-Mar-20	103.99	249.61
17-Apr-20	104.01	249.59
20-May-20	104.13	249.48
05-Jul-20	104.17	249.44
27-Aug-20	104.10	249.51
11-Sep-20	104.11	249.50
22-Oct-20	104.13	249.48
07-Nov-20	104.12	249.49
17-Jan-21	104.17	249.44
13-Feb-21	104.23	249.38
11-May-21	104.19	249.42

GG290 — Datum = 364.87; Dip = 90.00

Date	(m bgl)	(m AHD)
31-Oct-03	81.00	283.87
16-Nov-05	74.64	290.23
4-Jan-06	74.60	290.27
16-Jan-07	77.18	287.69
15-Jan-08	76.38	288.49
8-Mar-08	69.72	295.15
4-Apr-08	73.49	291.38
16-May-08	75.21	289.66
2-Sep-08	75.26	289.61
05-Oct-08	75.23	289.64
29-Oct-08	77.00	287.87
24-Dec-08	77.28	287.59
02-Jan-09	77.23	287.64
08-Feb-09	70.00	287.64
21-Mar-09	72.43	294.87
01-Apr-09	73.51	292.44
15-May-09	73.66	291.21
14-Jun-09	74.99	289.88
11-Jul-09	71.00	293.87
06-Aug-09	71.73	293.14
15-Sep-09	75.45	289.42
13-Oct-09	76.73	288.14
11-Nov-09	73.53	291.34
22-Dec-09	62.74	302.13
19-Jan-10	71.07	293.80
16-Feb-10	74.21	290.66
19-Mar-10	75.87	289.00
04-Apr-10	77.86	287.01
02-May-10	77.90	286.97
09-Jun-10	68.50	296.37
26-Jul-10	74.63	290.24
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	72.68	292.19
12-Nov-10	74.58	290.29
24-Dec-10	64.39	300.48
19-Jan-11	66.19	298.68
06-Mar-11	70.15	294.72
13-Apr-11	70.17	294.70
21-Jun-11	66.79	298.08
24-Jul-11	63.92	300.95
08-Aug-11	70.26	294.61
02-Sep-11	71.93	292.94
29-Oct-11	84.10	280.77
10-Nov-11	84.06	280.81
11-Dec-11	64.02	300.85
15-Feb-12	67.84	297.03
15-Aug-12	7.70	357.17
15-Sep-12	75.05	289.82
15-Oct-12	75.05	289.82
09-Nov-12	63.68	301.19
14-Jan-13	64.00	300.87
10-Feb-13	66.09	298.78
15-Feb-13	66.09	298.78
12-Mar-13	61.52	303.35
15-Mar-13	61.52	303.35
14-Apr-13	63.36	301.51
15-Apr-13	63.36	301.51
12-May-13	60.70	304.17
15-May-13	60.70	304.17
15-Jun-13	60.73	304.14
17-Jun-13	60.73	304.14
10-Jul-13	65.50	299.37
15-Jul-13	65.50	299.37
15-Aug-13	65.86	299.01
18-Aug-13	65.86	299.01
12-Sep-13	65.87	299.00
15-Sep-13	65.87	299.00
19-Dec-13	65.69	299.18
15-Mar-14	61.00	303.87
08-Apr-14	59.98	304.89
15-Jun-14	65.67	299.20
17-Jul-14	77.36	287.51
26-Aug-14	74.49	290.38
23-Sep-14	74.46	290.41
07-Oct-14	72.73	292.14
21-Nov-14	74.00	290.87
15-Dec-14	74.06	290.81
26-Jan-15	74.11	290.76
19-Feb-15	74.12	290.75
12-Mar-15	74.11	290.76
27-Apr-15	66.39	298.48
08-May-15	69.07	295.80
07-Jun-15	69.10	295.77
16-Jul-15	66.41	298.46
14-Aug-15	63.51	301.36
23-Sep-15	63.50	301.37
21-Oct-15	63.55	301.32
04-Nov-15	74.29	290.58
01-Dec-15	74.30	290.57
10-Feb-16	74.32	290.55
07-Mar-16	74.45	290.42
14-Apr-16	74.44	290.43
26-Jun-16	74.43	290.44
28-Jul-16	73.67	291.20
20-Aug-16	73.69	291.18
28-Sep-16	73.65	291.22
29-Oct-16	77.74	287.13
29-Dec-16	77.77	287.10
22-Jan-17	77.59	287.28
11-Feb-17	79.59	285.28
15-Mar-17	79.63	285.24
14-Apr-17	75.90	288.97
28-May-17	77.83	287.04
17-Jun-17	78.49	286.38
27-Jul-17	79.54	285.33
18-Aug-17	76.61	288.26
23-Sep-17	76.58	288.29
20-Oct-17	75.81	289.06
26-Nov-17	77.64	287.23
22-Dec-17	78.42	286.45
22-Feb-18	70.09	294.78
15-Mar-18	71.51	293.36
07-Apr-18	71.54	293.33
15-May-18	73.07	291.80
25-Jun-18	72.45	292.42
13-Jul-18	72.48	292.39
15-Oct-18	Open pit area	
23-Nov-18	Dry	
30-Dec-18	Open pit area	
22-Jan-19	Open pit area	
16-Feb-19	Open pit area	
20-Mar-19	Open pit area	
19-Apr-19	Open pit area	
12-Jul-19	81.37	283.50
19-Aug-19	81.93	282.94
12-Sep-19	82.02	282.85
03-Oct-19	82.30	282.57
14-Nov-19	82.67	282.20
16-Dec-19	83.99	280.88
25-Jan-20	82.62	282.25
08-Feb-20	82.60	282.27
19-Mar-20	82.61	282.26
17-Apr-20	83.20	281.67
20-May-20	83.20	281.67
05-Jul-20	82.88	281.99
27-Aug-20	76.32	288.55
11-Sep-20	77.23	287.64
22-Oct-20	79.02	285.85
07-Nov-20	78.90	285.97
17-Jan-21	80.95	283.92
11-May-21	81.80	283.07
08-Jun-21	81.34	283.53
15-Jul-21	82.67	282.20
14-Aug-21	79.67	285.20
25-Sep-21	79.80	285.07
12-Oct-21	81.07	283.80
9-Nov-21	81.10	283.77
16-Dec-21	81.11	283.76
14-Jan-22	81.15	283.72
11-Feb-22	81.77	283.10
10-Mar-22	82.92	281.95
9-Apr-22	83.08	281.79
7-May-22	83.09	281.78
7-Jun-22	83.11	281.76
3-Jul-22	83.17	281.70
25-Aug-22	83.15	281.72

GHDEC10R — Datum = 361.38; Dip = 90.00

Date	(m bgl)	(m AHD)
26-Aug-00	81.08	280.30
7-Oct-00	81.38	280.00
28-Oct-00	81.37	280.01
22-Nov-00	81.53	279.85
30-Dec-00	81.53	279.85
5-Feb-01	81.60	279.78
5-Mar-01	82.70	278.68
29-Mar-01	81.82	279.56
30-Apr-01	81.95	279.43
29-May-01	82.00	279.38
7-Jul-01	82.37	279.01
27-Jul-01	82.45	278.93
25-Aug-01	82.56	278.82
1-Oct-01	82.76	278.62
9-Nov-01	82.96	278.42
2-Dec-01	83.04	278.34
24-Dec-01	83.12	278.26
3-Feb-02	83.29	278.09
4-Mar-02	83.37	278.01
9-Apr-02	83.56	277.82
30-Apr-02	83.63	277.75
28-May-02	83.71	277.67
25-Jun-02	83.65	277.73
6-Aug-02	83.79	277.59
30-Aug-02	83.78	277.60
17-Oct-02	84.08	277.30
2-Nov-02	84.23	277.15
1-Dec-02	84.35	277.03
20-Dec-02	83.42	277.96
27-Jan-03	84.55	276.83
3-Apr-03	84.79	276.59
30-Apr-03	84.92	276.46
4-Jun-03	85.05	276.33
27-Jun-03	85.05	276.33
31-Jul-03	85.27	276.11
30-Aug-03	84.37	277.01
29-Sep-03	85.39	275.99
31-Oct-03	85.44	275.94
29-Nov-03	85.52	275.86
31-Dec-03	85.58	275.80
31-Mar-04	85.75	275.63
30-May-04	85.84	275.54
2-Aug-04	86.14	275.24
2-Sep-04	86.27	275.11
1-Oct-04	86.38	275.00
2-Nov-04	86.43	274.95
3-Jan-05	86.55	274.83
3-Feb-05	86.61	274.77
7-Mar-05	86.64	274.74
1-Apr-05	86.69	274.69
30-Apr-05	86.75	274.63
31-May-05	86.87	274.51
2-Jul-05	86.97	274.41
3-Aug-05	87.12	274.26
2-Sep-05	87.20	274.18
4-Oct-05	87.32	274.06
25-Oct-05	87.34	274.04
4-Jan-06	87.45	273.93
30-Jan-06	87.52	273.86
11-Mar-06	87.55	273.83
4-Apr-06	87.65	273.73
6-May-06	87.74	273.64
1-Jun-06	87.80	273.58
11-Jul-06	87.93	273.45
30-Jul-06	87.97	273.41
4-Sep-06	83.05	278.33
3-Oct-06	88.07	273.31
30-Oct-06	88.07	273.31
9-Dec-06	89.01	272.37
8-Jan-07	88.21	273.17
8-Jan-07	88.21	273.17
6-Feb-07	88.24	273.14
10-Mar-07	88.15	273.23
16-Apr-07	88.19	273.19
1-May-07	88.22	273.16
3-Jun-07	88.34	273.04
30-Jun-07	88.36	273.02
29-Jul-07	88.49	272.89
4-Sep-07	88.57	272.81
2-Nov-07	88.77	272.61
10-Jan-08	88.82	272.56
8-Mar-08	89.88	271.50
4-Apr-08	88.96	272.42
16-May-08	89.05	272.33
02-Sep-08	89.26	272.12
05-Oct-08	89.30	272.08
29-Oct-08	89.31	272.07
24-Dec-08	89.35	272.03
02-Jan-09	89.36	272.02
08-Feb-09	89.38	272.00
21-Mar-09	89.42	271.96
01-Apr-09	89.16	272.22
15-May-09	89.48	271.90
14-Jun-09	89.50	271.88
11-Jul-09	89.44	271.94
06-Aug-09	86.55	274.83
15-Sep-09	89.63	271.75
13-Oct-09	89.60	271.78
11-Nov-09	88.19	273.19
22-Dec-09	89.70	271.68
19-Jan-10	89.63	271.75
16-Feb-10	89.76	271.62
19-Mar-10	89.79	271.59
04-Apr-10	89.71	271.67
02-May-10	89.69	271.69
09-Jun-10	89.75	271.63
26-Jul-10	89.71	271.67
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	89.73	271.65
12-Nov-10	89.67	271.71
24-Dec-10	89.83	271.55
19-Jan-11	89.62	271.76
06-Mar-11	88.94	272.44
13-Apr-11	88.91	272.47
21-Jun-11	89.83	271.55
24-Jul-11	89.80	271.58
08-Aug-11	89.78	271.60
02-Sep-11	89.87	271.51
29-Oct-11	89.85	271.53
10-Nov-11	89.84	271.54
11-Dec-11	89.85	271.53
19-Jan-12	89.84	271.54
15-Feb-12	89.92	271.46
04-Mar-12	59.85	301.53
14-Apr-12	89.83	271.55
16-May-12	89.80	271.58
15-Jul-12	89.79	271.59
15-Aug-12	89.75	271.63
15-Sep-12	90.05	271.33
15-Oct-12	90.05	271.33
09-Nov-12	90.34	271.04
13-Jan-13	89.90	271.48
14-Jan-13	89.90	271.48
10-Feb-13	90.09	271.29
15-Feb-13	40.09	321.29
12-Mar-13	89.90	271.48
15-Mar-13	89.90	271.48
14-Apr-13	89.87	271.51
15-Apr-13	89.87	271.51
12-May-13	89.84	271.54
15-May-13	89.84	271.54
15-Jun-13	89.87	271.51
17-Jun-13	89.87	271.51
10-Jul-13	89.89	271.49
15-Jul-13	89.89	271.49
15-Aug-13	89.98	271.40
18-Aug-13	89.98	271.40
12-Sep-13	89.95	271.43
15-Sep-13	89.95	271.43
19-Dec-13	89.95	271.43
15-Mar-14	89.94	271.44
08-Apr-14	89.95	271.43
15-May-14	90.19	271.19
15-Jun-14	89.90	271.48
17-Jul-14	90.17	271.21
26-Aug-14	90.14	271.24

Appendix F - Monitoring Bore Water Level Data

Gossan Hill Area

CUDD001		
Date	Datum =	350.44
	Dip =	90.00
	(m bgl)	(m AHD)
17-Jun-23	44.03	306.41
13-Jul-23	44.15	306.29
13-Aug-23	44.57	305.87
15-Sep-23	44.10	306.34
15-Oct-23		
17-Nov-23	44.20	306.24
29-Dec-23	44.10	306.34
30-Jan-24		
25-Feb-24	44.19	306.25
23-Mar-24	44.30	306.14
15-Apr-24	44.19	306.25
20-May-24	44.17	306.27
15-Jun-24	44.17	306.27
16-Jul-24	45.56	304.88
15-Aug-24	46.50	303.94
29-Sep-24	46.15	304.29
16-Oct-24	46.15	304.29
15-Nov-24	46.17	304.27
13-Dec-24	46.17	304.27
18-Jan-25		
20-Feb-25		
14-Mar-25	44.40	306.04

CUDD003		
Date	Datum =	350.70
	Dip =	90.00
	(m bgl)	(m AHD)

GG102		
Date	Datum =	354.49
	Dip =	70.00
	(m bgl)	(m AHD)
12-Mar-13	76.82	282.30
15-Mar-13	76.82	282.30
14-Apr-13	76.80	282.32
15-Apr-13	76.80	282.32
12-May-13	76.82	282.30
15-May-13	76.82	282.30
15-Jun-13	76.80	282.32
17-Jun-13	76.80	282.32
10-Jul-13	76.87	282.26
15-Jul-13	76.87	282.26
15-Aug-13	76.96	282.17
18-Aug-13	76.96	282.17
12-Sep-13	76.93	282.20
15-Sep-13	76.93	282.20
19-Dec-13	76.96	282.17
15-Mar-14	77.12	282.02
08-Apr-14	77.11	282.03
15-Jun-14	76.97	282.16
17-Jul-14	77.15	281.99
26-Aug-14	77.18	281.96
23-Sep-14	77.84	281.34
07-Oct-14	77.15	281.99
21-Nov-14	77.24	281.91
15-Dec-14	77.21	281.94
26-Jan-15	77.24	281.91
19-Feb-15	77.28	281.87
12-Mar-15	77.18	281.96
27-Apr-15	77.19	281.96
08-May-15	77.18	281.96
07-Jun-15	77.20	281.95
16-Jul-15	77.20	281.95
14-Aug-15	77.24	281.91
23-Sep-15	77.25	281.90
21-Oct-15	77.24	281.91
04-Nov-15	77.28	281.87
01-Dec-15	77.27	281.88
10-Feb-16	77.27	281.88
07-Mar-16	77.43	281.73
14-Apr-16	77.45	281.71
26-Jun-16	77.43	281.73
28-Jul-16	77.53	281.64
20-Aug-16	77.53	281.64
28-Sep-16	77.50	281.66
29-Oct-16	77.56	281.61
29-Dec-16	77.57	281.60
22-Jan-17	77.66	281.51
11-Feb-17	77.68	281.49
15-Mar-17	77.64	281.53
14-Apr-17	77.85	281.33
28-May-17	78.00	281.19
17-Jun-17	78.07	281.13
27-Jul-17	78.11	281.09
18-Aug-17	78.16	281.04
23-Sep-17	78.18	281.02
20-Oct-17	78.25	280.96
26-Nov-17	78.27	280.94
22-Dec-17	78.35	280.87
22-Feb-18	78.50	280.72
15-Mar-18	78.44	280.78
07-Apr-18	78.45	280.77
15-May-18	78.53	280.70
25-Jun-18	78.56	280.67
13-Jul-18	78.55	280.68
15-Oct-18	Open pit area	
23-Nov-18	Open Pit Area	
30-Dec-18	Open Pit Area	
22-Jan-19	Open Pit Area	
16-Feb-19	Open Pit Area	
20-Mar-19	Open Pit Area	
19-Apr-19	Open Pit Area	
12-Jul-19	78.86	280.39
19-Aug-19	78.88	280.37
12-Sep-19	78.89	280.36
3-Oct-19	78.91	280.34
14-Nov-19	78.92	280.33
16-Dec-19	78.98	280.27
25-Jan-20	78.99	280.26
8-Feb-20	70.02	288.69
19-Mar-20	78.93	280.32
22-Apr-20	79.02	280.24
20-May-20	78.95	280.30
5-Jul-20	79.04	280.22
27-Aug-20	78.96	280.29
11-Sep-20	79.03	280.23
22-Oct-20	79.05	280.21
7-Nov-20	79.05	280.21
17-Jan-21	79.08	280.18
13-Feb-21	79.14	280.12
11-May-21	79.03	280.23
8-Jun-21	78.94	280.31
15-Jul-21	79.34	279.93
14-Aug-21	79.37	279.91
25-Sep-21	79.35	279.93
9-Nov-21	Blocked	
16-Dec-21	Blocked	
14-Jan-22	Blocked	
11-Feb-22	Blocked	
10-Mar-22	79.60	279.69
9-Apr-22	79.60	279.69
7-May-22	79.62	279.67
7-Jun-22	79.65	279.64
3-Jul-22	79.77	279.53
25-Aug-22	79.78	279.52
25-Sep-22	79.85	279.46
23-Oct-22	79.79	279.51
20-Nov-22	79.81	279.49
29-Dec-22	79.92	279.39
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	79.93	279.38
18-May-23	79.96	279.35
17-Jun-23	79.97	279.34
13-Jul-23	80.03	279.29
13-Aug-23	79.20	280.07
15-Sep-23	79.81	279.49
15-Oct-23		
17-Nov-23	79.95	279.36
29-Dec-23	79.81	279.49
30-Jan-24		
25-Feb-24		
23-Mar-24		
15-Apr-24		
20-May-24		
15-Jun-24		
16-Jul-24		
15-Aug-24		
29-Sep-24		
16-Oct-24		
15-Nov-24		
13-Dec-24		
18-Jan-25		
20-Feb-25		
14-Mar-25		

GG269		
Date	Datum =	348.24
	Dip =	76.00
	(m bgl)	(m AHD)

GG280D2		
Date	Datum =	348.51
	Dip =	72.00
	(m bgl)	(m AHD)
08-Jun-21	103.91	249.69
15-Jul-21	104.38	249.24
14-Aug-21	104.34	249.28
25-Sep-21	104.35	249.27
09-Nov-21	Blocked	
16-Dec-21	Blocked	
14-Jan-22	Blocked	
11-Feb-22	Blocked	
10-Mar-22	104.64	248.99
9-Apr-22	104.78	248.86
7-May-22	104.76	248.88
7-Jun-22	104.78	248.86
3-Jul-22	104.83	248.81
25-Aug-22	104.81	248.83
25-Sep-22	104.85	248.79
23-Oct-22	104.91	248.73
20-Nov-22	104.94	248.71
29-Dec-22	104.97	248.68
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	105.25	248.41
18-May-23	105.27	248.39
17-Jun-23	105.25	248.41
13-Jul-23	105.32	248.34
13-Aug-23	105.37	248.30
15-Sep-23	105.37	248.30
15-Oct-23		
17-Nov-23	105.53	248.15
29-Dec-23	105.37	248.30
30-Jan-24		
25-Feb-24	105.67	248.01
23-Mar-24	105.73	247.95
15-Apr-24	105.82	247.87
20-May-24	105.84	247.85
15-Jun-24	105.84	247.85
16-Jul-24	105.89	247.80
15-Aug-24	105.88	247.81
29-Sep-24	105.85	247.84
16-Oct-24	105.85	247.84
15-Nov-24	32.39	317.71
13-Dec-24	32.40	317.70
18-Jan-25	106.26	247.45
20-Feb-25	106.38	247.34
14-Mar-25	106.93	246.81

GG290		
Date	Datum =	364.87
	Dip =	90.00
	(m bgl)	(m AHD)
25-Sep-22	83.21	281.66
23-Oct-22	83.15	281.72
20-Nov-22	83.21	281.66
29-Dec-22	83.25	281.62
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	84.01	280.86
18-May-23	84.09	280.78
17-Jun-23	84.05	280.82
13-Jul-23	84.11	280.76
13-Aug-23	81.62	283.25
15-Sep-23	84.48	280.39
15-Oct-23		
17-Nov-23	83.16	281.71
29-Dec-23	84.48	280.39
30-Jan-24		
25-Feb-24	83.69	281.18
23-Mar-24	83.87	281.00
15-Apr-24	83.91	280.96
20-May-24	83.96	280.91
15-Jun-24	83.96	280.91
16-Jul-24	84.05	280.82
15-Aug-24	84.11	280.76
29-Sep-24	84.06	280.81
16-Oct-24	84.06	280.81
15-Nov-24	84.07	280.80
13-Dec-24	84.09	280.78
18-Jan-25	84.63	280.24
20-Feb-25	85.05	279.82
14-Mar-25	84.76	280.11

GHDEC10R		
Date	Datum =	361.38
	Dip =	90.00
	(m bgl)	(m AHD)
23-Sep-14	90.12	271.26
07-Oct-14	90.20	271.18
21-Nov-14	90.23	271.15
15-Dec-14	90.25	271.13
26-Jan-15	90.28	271.10
19-Feb-15	90.30	271.08
12-Mar-15	90.26	271.12
27-Apr-15	90.26	271.12
08-May-15	90.31	271.07
07-Jun-15	90.33	271.05
16-Jul-15	90.25	271.13
14-Aug-15	90.37	271.01
23-Sep-15	90.38	271.00
21-Oct-15	90.35	271.03
04-Nov-15	90.33	271.05
01-Dec-15	90.34	271.04
10-Feb-16	90.35	271.03
07-Mar-16	91.52	269.86
14-Apr-16	91.55	269.83
26-Jun-16	91.54	269.84
28-Jul-16	89.64	271.74
20-Aug-16	89.67	271.71
28-Sep-16	89.63	271.75
29-Oct-16	90.67	270.71
29-Dec-16	90.65	270.73
22-Jan-17	90.70	270.68
11-Feb-17	90.73	270.65
15-Mar-17	90.67	270.71
14-Apr-17	90.87	270.51
28-May-17	90.87	270.51
17-Jun-17	90.84	270.54
27-Jul-17	90.85	270.53
18-Aug-17	90.93	270.45
23-Sep-17	90.88	270.50
20-Oct-17	90.01	271.37
26-Nov-17	90.97	270.41
22-Dec-17	91.10	270.28
22-Feb-18	91.22	270.16
15-Mar-18	91.24	270.14
07-Apr-18	91.21	270.17
15-May-18	91.43	269.95
25-Jun-18	91.46	269.92
13-Jul-18	91.44	269.94
22-Aug-18	91.37	270.01
15-Oct-18	91.38	270.00
23-Nov-18	91.38	270.00
30-Dec-18	91.33	270.05
22-Jan-19	91.65	269.73
16-Feb-19	91.70	269.68
20-Mar-19	91.75	269.63
19-Apr-19	91.17	270.21
12-Jul-19	91.81	269.57
19-Aug-19	91.73	269.65
12-Sep-19	91.76	269.62
03-Oct-19	91.77	269.61
14-Nov-19	91.83	269.55
10-Dec-19	91.87	269.51
25-Jan-20	91.85	269.53
08-Feb-20	91.87	269.51
11-Mar-20	91.88	269.50
17-Apr-20	91.90	269.48
20-May-20	92.06	269.32
05-Jul-20	92.14	269.24
27-Aug-20	92.29	269.09
11-Sep-20	92.72	268.66
22-Oct-20	91.98	269.40
07-Nov-20	90.48	270.90
17-Jan-21	90.82	270.56
13-Feb-21	92.45	268.93
11-May-21	91.03	270.35
08-Jun-21	90.64	270.74
15-Jul-21	90.52	270.86
14-Aug-21	92.43	268.95
15-Sep-21	91.91	269.47
12-Oct-21	91.41	269.97
09-Nov-21	91.56	269.82
16-Dec-21	91.60	269.78
14-Jan-22	91.55	269.83
11-Feb-22	91.16	270.22
10-Mar-22	92.89	268.49
9-Apr-22	91.79	269.59
7-May-22	90.81	270.57
7-Jun-22	90.82	270.56
3-Jul-22	90.88	270.50
25-Aug-22	90.85	270.53
25-Sep-22	90.89	270.49
23-Oct-22	90.69	270.69
20-Nov-22	93.04	268.34
29-Dec-22	93.06	268.32
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	93.08	268.30
18-May-23	91.40	269.98
17-Jun-23	90.00	271.38
13-Jul-23	93.33	268.05
13-Aug-23	93.32	268.06
15-Sep-23	93.35	268.03
15-Oct-23		
17-Nov-23	93.51	267.87
29-Dec-23	93.35	268.03
30-Jan-24		
25-Feb-24	93.60	267.78
23-Mar-24	92.73	268.65
15-Apr-24	93.72	267.66
20-May-24	93.78	267.60
15-Jun-24	93.78	267.60
16-Jul-24	93.71	267.67
15-Aug-24	93.66	267.72
29-Sep-24	93.68	267.70
16-Oct-24	93.68	267.70
15-Nov-24	93.71	267.67
13-Dec-24	93.72	267.66
18-Jan-25	94.16	267.22
20-Feb-25	94.20	267.18
14-Mar-25	94.20	267.18

Appendix F - Monitoring Bore Water Level Data

Gossan Hill Area

GHDEC36R		
Date	Datum =	361.47
	Dip =	90.00
	(m bgl)	(m AHD)
9-Oct-94	27.93	333.54
11-Oct-94	29.18	332.29
13-Oct-94	28.12	333.35
18-Oct-94	27.81	333.66
1-Dec-94	27.60	333.87
30-Dec-94	46.00	315.47
3-Jan-95	45.60	315.87
10-Jan-95	47.90	313.57
25-Jan-95	47.30	314.17
31-Jan-95	45.15	316.32
10-Feb-95	44.00	317.47
14-Feb-95	44.30	317.17
22-Feb-95	41.63	319.84
23-Feb-95	41.72	319.75
26-Mar-95	43.30	318.17
29-Mar-95	43.16	318.31
2-Apr-95	58.89	302.58
3-Apr-95	60.00	301.47
4-Apr-95	58.50	302.97
6-Apr-95	57.75	303.72
9-Apr-95	58.16	303.31
13-Apr-95	59.22	302.25
17-Apr-95	59.66	301.81
22-Apr-95	60.40	301.07
26-Apr-95	60.70	300.77
1-May-95	61.35	300.12
4-May-95	57.22	304.25
5-May-95	56.55	304.92
7-May-95	46.00	315.47
8-May-95	62.00	299.47
9-May-95	62.50	298.97
10-May-95	64.00	297.47
11-May-95	63.50	297.97
12-May-95	63.50	297.97
13-May-95	63.50	297.97
14-May-95	63.50	297.97
15-May-95	63.50	297.97
16-May-95	63.62	297.85
17-May-95	63.63	297.84
18-May-95	62.70	298.77
20-May-95	63.80	297.67
21-May-95	63.92	297.55
24-May-95	64.55	296.92
26-May-95	64.94	296.53
29-May-95	63.97	297.50
3-Jun-95	64.50	296.97
5-Jun-95	64.30	297.17
8-Jun-95	64.81	296.66
11-Jun-95	64.58	296.89
12-Jun-95	64.53	296.94
20-Jun-95	64.49	296.98
24-Jun-95	64.80	296.67
26-Jun-95	64.98	296.49
29-Jun-95	65.18	296.29
3-Jul-95	65.31	296.16
6-Jul-95	65.62	295.85
12-Jul-95	65.36	296.11
15-Jul-95	66.08	295.39
16-Jul-95	66.08	295.39
18-Dec-95	71.45	290.02
26-Oct-96	70.58	290.89
31-Jan-97	74.77	286.70
31-Mar-97	74.34	287.13
30-Apr-97	74.89	286.58
31-Oct-97	72.70	288.77
30-Nov-97	72.24	289.23
31-Dec-97	72.82	288.65
28-Feb-98	73.97	287.50
30-Apr-98	74.55	286.92
31-May-98	71.96	289.51
31-Jul-98	74.36	287.11
31-Aug-98	75.49	285.98
30-Sep-98	75.57	285.90
31-Oct-98	76.24	285.23
30-Nov-98	74.25	287.22
31-Dec-98	69.34	292.13
31-Jan-99	75.21	286.26
28-Feb-99	75.66	285.81
31-Mar-99	69.00	292.47
8-May-99	69.14	292.33
30-May-99	69.17	292.30
30-Jun-99	69.20	292.27
1-Aug-99	69.21	292.26
2-Sep-99	69.34	292.13
4-Oct-99	69.43	292.04
5-Nov-99	76.02	285.45
9-Jan-00	78.20	283.27
4-Feb-00	70.33	291.14
19-Feb-00	78.61	282.86
25-Feb-00	78.26	283.21
2-Apr-00	71.80	289.67
28-Apr-00	76.98	284.49
6-Jun-00	75.67	285.80
12-Jul-00	74.40	287.07
12-Aug-00	78.80	282.67
26-Aug-00	79.47	282.00
7-Oct-00	73.89	287.58
28-Oct-00	78.72	282.75
22-Nov-00	80.05	281.42
30-Dec-00	79.77	281.70
5-Feb-01	79.69	281.78
5-Mar-01	79.24	282.23
29-Mar-01	79.50	281.97
30-Apr-01	73.90	287.57
29-May-01	79.31	282.16
7-Jul-01	79.94	281.53
27-Jul-01	78.27	283.20
25-Aug-01	80.26	281.21
1-Oct-01	79.76	281.71
9-Nov-01	80.44	281.03
2-Dec-01	80.18	281.29
24-Dec-01	80.69	280.78
3-Feb-02	80.47	281.00
4-Mar-02	80.75	280.72
9-Apr-02	80.85	280.62
30-Apr-02	80.93	280.54
28-May-02	73.46	288.01
25-Jun-02	73.03	288.44
6-Aug-02	72.90	288.57
30-Aug-02	73.13	288.34
17-Oct-02	79.57	281.90
2-Nov-02	76.55	284.92
1-Dec-02	80.51	280.96
20-Dec-02	80.43	281.04
27-Jan-03	80.44	281.03
3-Apr-03	79.67	281.80
30-Apr-03	80.80	280.67
4-Jun-03	80.81	280.66
27-Jun-03	80.73	280.74
31-Jul-03	80.75	280.72
30-Aug-03	80.83	280.64
29-Sep-03	80.32	281.15
31-Oct-03	80.60	280.87
29-Nov-03	80.68	280.79
31-Dec-03	80.73	280.74
31-Mar-04	80.65	280.82
30-May-04	80.46	281.01
2-Aug-04	80.55	280.92
2-Sep-04	80.53	280.94
1-Oct-04	80.33	281.14
2-Nov-04	80.46	281.01
3-Jan-05	80.51	280.96
3-Feb-05	80.56	280.91
7-Mar-05	80.52	280.95
1-Apr-05	80.51	280.96
30-Apr-05	80.42	281.05
31-May-05	80.33	281.14
2-Jul-05	79.40	282.07
3-Aug-05	78.26	283.21
2-Sep-05	80.35	281.12
4-Oct-05	80.31	281.16
25-Oct-05	80.07	281.40
4-Dec-05	80.17	281.30
4-Jan-06	80.15	281.32
30-Jan-06	80.13	281.34
11-Mar-06	80.17	281.30
4-Apr-06	80.36	281.11

GHDEC37R		
Date	Datum =	361.61
	Dip =	90.00
	(m bgl)	(m AHD)
28-Feb-97	68.10	293.51
31-Mar-97	67.60	294.01
30-Apr-97	67.57	294.04
31-Jul-97	64.33	297.28
31-Oct-97	67.25	294.36
30-Nov-97	66.87	294.74
31-Dec-97	67.45	294.16
28-Feb-98	68.41	293.20
30-Apr-98	68.84	292.77
31-May-98	67.54	294.07
31-Jul-98	69.28	292.33
31-Aug-98	69.66	291.95
30-Sep-98	69.71	291.90
31-Oct-98	70.12	291.49
30-Nov-98	70.29	291.32
31-Dec-98	66.71	294.90
31-Jan-99	69.79	291.82
28-Feb-99	70.08	291.53
31-Mar-99	66.32	295.29
8-May-99	66.44	295.17
30-May-99	66.44	295.17
30-Jun-99	66.49	295.12
1-Aug-99	66.49	295.12
2-Sep-99	66.63	294.98
4-Oct-99	66.72	294.89
5-Nov-99	71.01	290.60
6-Dec-99	71.60	290.01
9-Jan-00	70.79	290.82
4-Feb-00	67.77	293.84
25-Feb-00	71.89	289.72
2-Apr-00	69.24	292.37
28-Apr-00	71.54	290.07
6-Jun-00	71.05	290.56
12-Jul-00	70.74	290.87
12-Aug-00	72.01	289.60
26-Aug-00	72.49	289.12
7-Oct-00	70.02	291.59
28-Oct-00	72.31	289.30
22-Nov-00	73.42	288.19
30-Dec-00	73.30	288.31
5-Feb-01	73.35	288.26
5-Mar-01	73.10	288.51
29-Mar-01	73.41	288.20
30-Apr-01	71.45	290.16
29-May-01	73.30	288.31
7-Jul-01	73.57	288.04
27-Jul-01	72.97	288.64
25-Aug-01	73.93	287.68
1-Oct-01	73.76	287.85
9-Nov-01	74.44	287.17
2-Dec-01	73.92	287.69
24-Dec-01	74.59	287.02
3-Feb-02	74.47	287.14
4-Mar-02	74.87	286.74
9-Apr-02	75.09	286.52
30-Apr-02	75.17	286.44
28-May-02	71.12	290.49
25-Jun-02	70.66	290.95
6-Aug-02	70.51	291.10
30-Aug-02	70.64	290.97
17-Oct-02	73.99	287.62
2-Nov-02	73.18	288.43
1-Dec-02	75.04	286.57
20-Dec-02	75.14	286.47
27-Jan-03	75.18	286.43
3-Apr-03	75.26	286.35
30-Apr-03	75.62	285.99
4-Jun-03	75.71	285.90
27-Jun-03	75.64	285.97
31-Jul-03	75.76	285.85
30-Aug-03	75.87	285.74
29-Sep-03	75.24	286.37
31-Oct-03	75.66	285.95
29-Nov-03	75.81	285.80
31-Dec-03	75.90	285.71
31-Mar-04	75.97	285.64
30-May-04	75.82	285.79
2-Aug-04	76.00	285.61
2-Sep-04	75.98	285.63
1-Oct-04	75.93	285.68
2-Nov-04	76.02	285.59
3-Jan-05	75.99	285.62
3-Feb-05	76.16	285.45
7-Mar-05	76.13	285.48
1-Apr-05	76.15	285.46
30-Apr-05	76.08	285.53
31-May-05	76.19	285.42
2-Jul-05	75.65	285.96
3-Aug-05	75.10	286.51
2-Sep-05	76.16	285.45
4-Oct-05	76.20	285.41
25-Oct-05	76.05	285.56
4-Jan-06	76.16	285.45
30-Jan-06	76.21	285.40
11-Mar-06	76.26	285.35
4-Apr-06	76.41	285.20
6-May-06	75.75	285.86
1-Jun-06	74.91	286.70
11-Jul-06	76.14	285.47
4-Sep-06	73.76	287.85
3-Oct-06	74.68	286.93
30-Oct-06	76.63	284.98
9-Dec-06	77.05	284.56
8-Jan-07	77.02	284.59
6-Feb-07	77.08	284.53
10-Mar-07	74.87	286.74
16-Apr-07	76.31	285.30
1-May-07	76.97	284.64
3-Jun-07	77.10	284.51
30-Jun-07	77.09	284.52
29-Jul-07	77.23	284.38
4-Sep-07	77.20	284.41
2-Nov-07	77.40	284.21
10-Jan-08	76.17	285.44
08-Mar-08	76.80	284.81
04-Apr-08	74.28	287.33
16-May-08	74.04	287.57
02-Sep-08	73.93	287.68
05-Oct-08	73.94	287.67
29-Oct-08	73.85	287.76
24-Dec-08	73.88	287.73
02-Jan-09	73.88	287.73
08-Feb-09	73.93	287.68
21-Mar-09	73.96	287.65
01-Apr-09	74.08	287.53
15-May-09	74.07	287.54
14-Jun-09	73.89	287.72
11-Jul-09	73.98	287.63
06-Aug-09	73.83	287.78
15-Sep-09	73.76	287.85
13-Oct-09	73.64	287.97
11-Nov-09	73.55	288.06
22-Dec-09	73.49	288.12
19-Jan-10	73.81	287.80
16-Feb-10	73.63	287.98
19-Mar-10	73.69	287.92
04-Apr-10	73.75	287.86
02-May-10	73.77	287.84
09-Jun-10	73.73	287.88
26-Jul-10	73.50	288.11
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	73.21	288.40
12-Nov-10	73.32	288.29
24-Dec-10	73.53	288.08
19-Jan-11	73.56	288.05
06-Mar-11	76.10	285.51
13-Apr-11	76.13	285.48
21-Jun-11	76.39	285.22
24-Jul-11	76.38	285.23
08-Aug-11	76.40	285.21
02-Sep-11	76.60	285.01
29-Oct-11	76.70	284.91
10-Nov-11	76.72	284.89
11-Dec-11	75.54	286.07
19-Jan-12	76.66	284.95
15-Feb-12	76.75	284.86

GHDEC38R		
Date	Datum =	362.42
	Dip =	90.00
	(m bgl)	(m AHD)
8-May-99	64.94	297.48
30-May-99	64.97	297.45
30-Jun-99	64.99	297.43
1-Aug-99	64.99	297.43
2-Sep-99	65.13	297.29
4-Oct-99	65.22	297.20
5-Nov-99	68.94	293.48
6-Dec-99	69.53	292.89
9-Jan-00	69.11	293.31
4-Feb-00	66.35	296.07
25-Feb-00	69.85	292.57
2-Apr-00	67.88	294.54
28-Apr-00	69.65	292.77
6-Jun-00	69.30	293.12
12-Jul-00	69.07	293.35
12-Aug-00	69.96	292.46
26-Aug-00	70.43	291.99
7-Oct-00	68.73	293.69
28-Oct-00	70.44	291.98
22-Nov-00	71.44	290.98
30-Dec-00	71.37	291.05
5-Feb-01	71.45	290.97
5-Mar-01	71.69	290.73
29-Mar-01	71.58	290.84
30-Apr-01	70.21	292.21
29-May-01	71.49	290.93
7-Jul-01	71.68	290.74
27-Jul-01	71.17	291.25
25-Aug-01	72.06	290.36
1-Oct-01	71.91	290.51
9-Nov-01	72.62	289.80
2-Dec-01	72.09	290.33
24-Dec-01	72.76	289.66
3-Feb-02	72.72	289.70
4-Mar-02	73.10	289.32
9-Apr-02	73.34	289.08
30-Apr-02	73.42	289.00
28-May-02	69.93	292.49
25-Jun-02	63.48	298.94
6-Aug-02	69.28	293.14
30-Aug-02	69.45	292.97
17-Oct-02	72.32	290.10
2-Nov-02	71.86	290.56
1-Dec-02	73.32	289.10
20-Dec-02	73.48	288.94
27-Jan-03	73.54	288.88
3-Apr-03	73.74	288.68
30-Apr-03	74.01	288.41
4-Jun-03	74.11	288.31
27-Jun-03	74.05	288.37
31-Jul-03	74.19	288.23
30-Aug-03	74.32	288.10
29-Sep-03	73.69	288.73
31-Oct-03	74.11	288.31
29-Nov-03	74.29	288.13
31-Dec-03	74.33	288.09
31-Mar-04	74.49	287.93
30-May-04	75.34	287.08
2-Aug-04	74.55	287.87
2-Sep-04	74.54	287.88
1-Oct-04	74.53	287.89
2-Nov-04	74.61	287.81
3-Jan-05	74.62	287.80
3-Feb-05	74.76	287.66
7-Mar-05	74.75	287.67
1-Apr-05	74.78	287.64
30-Apr-05	74.70	287.72
31-May-05	74.82	287.60
2-Jul-05	74.37	288.05
3-Aug-05	73.90	288.52
2-Sep-05	72.84	289.58
4-Oct-05	74.86	287.56
25-Oct-05	74.75	287.67
4-Jan-06	74.85	287.57
30-Jan-06	74.92	287.50
11-Mar-06	74.95	287.47
4-Apr-06	75.10	287.32
6-May-06	74.45	287.97
1-Jun-06	73.93	288.49
11-Jul-06	74.76	287.66
4-Sep-06	72.76	289.66
3-Oct-06	73.20	289.22
30-Oct-06	75.24	287.18
9-Dec-06	75.68	286.74
8-Jan-07	75.65	286.77
6-Feb-07	75.72	286.70
10-Mar-07	77.87	284.55
16-Apr-07	74.92	287.50
1-May-07	75.61	286.81
3-Jun-07	75.76	286.66
30-Jun-07	75.74	286.68
29-Jul-07	75.90	286.52
4-Sep-07	75.88	286.54
2-Nov-07	76.08	286.34
10-Jan-08	74.89	287.53
8-Mar-08	75.54	286.88
4-Apr-08	73.32	289.10
16-May-08	73.06	289.36
02-Sep-08	73.05	289.37
05-Oct-08	73.05	289.37
29-Oct-08	72.95	289.47
24-Dec-08	72.97	289.45
02-Jan-09	72.97	289.45
08-Feb-09	73.81	288.61
21-Mar-09	73.04	289.38
01-Apr-09	73.03	289.39
15-May-09	73.06	289.36
14-Jun-09	72.96	289.46
11-Jul-09	73.06	289.36
06-Aug-09	72.88	289.54
15-Sep-09	72.78	289.64
13-Oct-09	72.68	289.74
11-Nov-09	72.57	289.85
22-Dec-09	72.53	289.89
19-Jan-10	72.60	289.82
16-Feb-10	72.65	289.77
19-Mar-10	72.66	289.76
04-Apr-10	72.70	289.72
02-May-10	72.71	289.71
09-Jun-10	72.64	289.78
26-Jul-10	72.49	289.93
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	72.34	290.08
12-Nov-10	72.36	290.06
24-Dec-10	72.70	289.72
19-Jan-11	72.57	289.85
06-Mar-11	75.00	287.42
13-Apr-11	75.03	287.39
21-Jun-11	79.51	282.91
24-Jul-11	79.51	282.91
08-Aug-11	79.51	282.91
02-Sep-11	75.43	286.99
29-Oct-11	75.61	286.81
10-Nov-11	75.61	286.81
11-Dec-11	75.54	286.88
19-Jan-12	75.66	286.76
15-Feb-12	75.64	286.78
04-Mar-12	75.66	286.76
14-Apr-12	75.65	286.77
16-May-12	75.67	286.75
15-Jul-12	75.67	286.75
15-Aug-12	75.64	286.78
15-Sep-12	75.85	286.57
15-Oct-12	75.85	286.57
09-Nov-12	76.52	285.90
13-Jan-13	75.50	286.92
14-Jan-13	75.50	286.92
10-Feb-13	75.96	286.46
15-Feb-13	75.96	286.46
12-Mar-13	75.90	286.52
15-Mar-13	75.90	286.52
14-Apr-13	75.97	286.45
15-Apr-13	75.97	286.45
12-May-13	75.97	286.45
15-May-13	75.97	286.45
15-Jun-13	75.91	286.51

GGW65P		
Date	Datum =	361.40
	Dip =	90.00
	(m bgl)	(m AHD)
26-Aug-00	85.72	275.68
7-Oct-00	85.83	275.57
28-Oct-00	85.83	275.57
22-Nov-00	85.87	275.53
30-Dec-00	85.71	275.69
5-Feb-01	85.74	275.66
5-Mar-01	85.78	275.62
29-Mar-01	85.81	275.59
30-Apr-01	85.85	275.55
29-May-01	85.88	275.52
7-Jul-01	86.21	275.19
27-Jul-01	86.26	275.14
25-Aug-01	86.38	275.02
1-Oct-01	86.46	274.94
9-Nov-01	86.53	274.87
2-Dec-01	86.54	274.86
24-Dec-01	86.56	274.84
3-Feb-02	86.61	274.79
4-Mar-02	86.64	274.76
9-Apr-02	86.69	274.71
30-Apr-02	86.71	274.69
28-May-02	87.74	273.66
25-Jun-02	86.73	274.67
6-Aug-02	86.78	274.62
30-Aug-02	86.82	274.58
17-Oct-02	86.91	274.49
2-Nov-02	86.95	274.45
1-Dec-02	86.97	274.43
20-Dec-02	86.99	274.41
3-Apr-03	87.09	274.31
30-Apr-03	87.15	274.25
4-Jun-03	87.17	274.23
27-Jun-03	87.20	274.20
31-Jul-03	87.25	274.15
30-Aug-03	87.29	274.11
29-Sep-03	87.29	274.11
31-Oct-03	87.30	274.10
29-Nov-03	87.32	274.08
31-Dec-03	87.24	274.16
31-Mar-04	87.37	274.03
30-May-04	87.42	273.98
2-Aug-04	87.54	273.86
2-Sep-04	87.60	273.80
1-Oct-04	87.64	273.76
2-Nov-04	87.85	273.55
3-Jan-05	87.73	273.67
3-Feb-05	87.76	273.64
7-Mar-05	87.77	273.63
1-Apr-05	87.81	273.59
30-Apr-05	87.86	273.54
31-May-05	87.93	273.47
2-Jul-05	87.96	273.44
3-Aug-05	88.02	273.38
2-Sep-05	88.04	273.36
4-Oct-05	88.06	273.34
25-Oct-05	88.06	273.34
4-Jan-06	88.08	273.32
30-Jan-06	88.09	273.31
11-Mar-06	88.10	273.30
4-Apr-06	88.14	273.26
6-May-06	88.17	273.23
1-Jun-06	88.20	273.20
11-Jul-06	88.26	273.14
30-Jul-06	88.27	273.13
4-Sep-06	88.21	273.19
3-Oct-06	88.30	273.10
30-Oct-06	88.31	273.09
9-Dec-06	88.32	273.08
8-Jan-07	88.31	273.09
6-Feb-07	88.33	273.07
10-Mar-07	88.24	273.16
16-Apr-07	88.21	273.19
1-May-07	88.28	273.12
3-Jun-07	88.37	273.03
30-Jun-07	88.36	273.04
29-Jul-07	88.42	272.98
4-Sep-07	88.45	272.95
2-Nov-07	88.50	272.90
10-Jan-08	88.49	272.91
8-Mar-08	88.50	272.90
16-May-08	88.53	272.87
2-Sep-08	88.64	272.76
05-Oct-08	88.68	272.72
29-Oct-08	Not measured	
24-Dec-08	88.70	272.70
02-Jan-09	87.71	273.69
08-Feb-09	88.70	272.70
21-Mar-09	88.74	272.66
01-Apr-09	88.72	272.68
15-May-09	88.80	272.60
14-Jun-09	88.83	272.57
11-Jul-09	89.90	271.50
06-Aug-09	88.93	272.47
15-Sep-09	89.03	272.37
13-Oct-09	89.06	272.34
11-Nov-09	89.08	272.32
22-Dec-09	89.00	272.40
19-Jan-10	88.98	272.42
16-Feb-10	89.17	272.23
19-Mar-10	89.09	272.31
04-Apr-10	89.00	272.40
02-May-10	89.04	272.36
09-Jun-10	89.07	272.33
26-Jul-10	89.06	272.34
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	88.85	272.55
12-Nov-10	Dry	
24-Dec-10	89.16	272.24
19-Jan-11	89.79	271.61
06-Mar-11	89.14	272.26
13-Apr-11	89.10	272.30
21-Jun-11	89.11	272.29
24-Jul-11	89.10	272.30
08-Aug-11	89.09	272.31
02-Sep-11	89.18	272.22
29-Oct-11	89.15	272.25
10-Nov-11	89.18	272.22
11-Dec-11	89.07	272.33
19-Jan-12	89.15	272.25
15-Feb-12	89.13	272.27
04-Mar-12	89.14	272.26
14-Apr-12	89.12	272.28
16-May-12	89.13	272.27
15-Jul-12	89.12	272.28
15-Aug-12	89.10	272.30
15-Sep-12	89.73	271.67
15-Oct-12	89.73	271.67
09-Nov-12	89.56	271.84
13-Jan-13	89.11	272.29
14-Jan-13	89.11	272.29
10-Feb-13	89.55	271.85
15-Feb-13	89.55	271.85
12-Mar-13	89.11	272.29
15-Mar-13	89.11	272.29
14-Apr-13	89.14	272.26
15-Apr-13	89.14	272.26
12-May-13	89.17	272.23
15-May-13	89.17	272.23
15-Jun-13	89.16	272.24
17-Jun-13	89.16	272.24
10-Jul-13	89.11	272.29
15-Jul-13	89.11	272.29
15-Aug-13	89.13	272.27
18-Aug-13	89.13	272.27
12-Sep-13	89.12	272.28
15-Sep-13	89.12	272.28
19-Dec-13	89.10	272.30
15-Mar-14	89.10	272.30
08-Apr-14	89.08	272.32
15-May-14	89.09	272.31
15-Jun-14	89.14	272.26
17-Jul-14	89.10	272.30
26-Aug-14	89.09	272.31
23-Sep-14	89.11	272.29
07-Oct-14	89.18	272.22
27-Apr-15	89.10	272.30

GGW75A		
Date	Datum =	366.00
	Dip =	90.00
	(m bgl)	(m AHD)
30-Apr-01	39.27	326.73
29-May-01	39.45	326.55
25-Aug-01	39.88	326.12
1-Oct-01	40.06	325.94
9-Nov-01	40.22	325.78
2-Dec-01	40.29	325.71
24-Dec-01	40.37	325.63
3-Feb-02	40.53	325.47
4-Mar-02	40.67	325.33
9-Apr-02	40.86	325.14
28-May-02	41.08	324.92
25-Jun-02	41.14	324.86
6-Aug-02	41.36	324.64
30-Aug-02	41.42	324.58
17-Oct-02	41.54	324.46
2-Nov-02	41.73	324.27
1-Dec-02	41.76	324.24
20-Dec-02	41.80	324.20
27-Jan-03	41.94	324.06
3-Apr-03	42.21	323.79
30-Apr-03	42.34	323.66
4-Jun-03	42.47	323.53
27-Jun-03	42.39	323.61
30-Aug-03	42.80	323.20
29-Sep-03	42.78	323.22
31-Oct-03	42.95	323.05
29-Nov-03	43.04	322.96
31-Dec-03	43.25	322.75
30-Jan-04	43.25	322.75
31-Mar-04	43.50	322.50
2-Aug-04	43.91	322.09
2-Sep-04	43.96	322.04
1-Oct-04	44.06	321.94
2-Nov-04	44.12	321.88
3-Jan-05	44.38	321.62
3-Feb-05	44.46	321.54
7-Mar-05	44.49	321.51
30-Apr-05	44.64	321.36
31-May-05	44.84	321.16
2-Jul-05	44.92	321.08
3-Aug-05	45.01	320.99
2-Sep-05	45.09	320.91
4-Oct-05	45.10	320.90
25-Oct-05	45.20	320.80
4-Jan-06	45.39	320.61
30-Jan-06	45.53	320.47
11-Mar-06	45.52	320.48
4-Apr-06	45.73	320.27
6-May-06	45.73	320.27
1-Jun-06	45.83	320.17
11-Jul-06	45.90	320.10
30-Jul-06	45.99	320.01
4-Sep-06	46.00	320.00
3-Oct-06	46.12	319.88
8-Jan-07	Dry	<319.88
6-Feb-07	Dry	<319.89
10-Mar-07	Dry	<319.90
16-Apr-07	46.75	319.25
1-May-07	46.75	319.25
3-Jun-07	46.89	319.11
30-Jun-07	46.82	319.18
29-Jul-07	47.05	318.95
4-Sep-07	47.05	318.95
2-Nov-07	47.24	318.76
10-Jan-08	47.44	318.56
8-Mar-08	47.58	318.42
4-Apr-08	47.64	318.36
16-May-08	47.84	318.16
11-Jun-08	47.85	318.15
2-Sep-08	48.04	317.96
15-Sep-08	48.04	317.96
5-Oct-08	48.24	317.76
29-Oct-08	48.16	317.84
24-Dec-08	48.33	317.67
02-Jan-09	48.32	317.68
08-Feb-09	48.47	317.53
03-Mar-09	48.58	317.42
21-Mar-09	48.55	317.45
01-Apr-09	48.59	317.41
15-May-09	48.72	317.28
09-Jun-09	48.88	317.12
14-Jun-09	48.67	317.33
11-Jul-09	48.89	317.11
06-Aug-09	48.85	317.15
01-Sep-09	48.95	317.05
15-Sep-09	49.02	316.98
13-Oct-09	49.08	316.92
11-Nov-09	49.11	316.89
22-Dec-09	49.10	316.90
19-Jan-10	49.33	316.67
16-Feb-10	49.49	316.51
17-Mar-10	49.59	316.41
01-Apr-09	49.53	316.47
15-May-09	49.54	316.46
14-Jun-09	49.76	316.24
24-Jul-10	49.76	316.24
1-Aug-10	Not Measured	
15-Sep-10	49.87	316.13
16-Oct-10	49.95	316.05
12-Nov-10	49.95	316.05
07-Dec-10	50.30	315.70
19-Jan-11	50.10	315.90
06-Mar-11	50.27	315.73
16-Mar-11	50.27	315.73
13-Apr-11	50.25	315.75
07-Jun-11	50.52	315.48
21-Jun-11	50.52	315.48
24-Jul-11	50.51	315.49
08-Aug-11	Not Measured	
02-Sep-11	50.61	315.39
13-Sep-11	51.61	314.39
29-Oct-11	50.83	315.17
10-Nov-11	50.85	315.15
11-Dec-11	50.93	315.07
5-Jan-12	50.90	315.10
19-Jan-12	50.97	315.03
15-Feb-12	50.98	315.02
4-Mar-12	51.14	314.86
14-Mar-12	51.05	314.95
14-Apr-12	51.14	314.86
16-May-12	51.12	314.88
19-Jun-12	51.28	314.72
15-Jul-12	51.14	314.86
15-Aug-12	51.13	314.87
15-Sep-12	51.37	314.63
15-Oct-12	51.37	314.63
9-Nov-12	51.97	314.03
15-Dec-12	51.77	314.23
13-Jan-13	50.92	315.08
14-Jan-13	50.92	315.08
10-Feb-13	52.04	313.96
15-Feb-13	52.04	313.96
12-Mar-13	51.92	314.08
15-Mar-13	51.92	314.08
21-Mar-13	51.92	314.08
14-Apr-13	51.90	314.10
15-Apr-13	51.90	314.10
12-May-13	51.98	314.02
15-May-13	51.98	314.02
15-Jun-13	52.07	313.93
17-Jun-13	52.07	313.93
10-Jul-13	52.02	313.98
15-Jul-13	52.02	313.98
15-Aug-13	52.16	313.84
18-Aug-13	52.16	313.84
12-Sep-13	52.10	313.90
15-Sep-13	52.10	313.90
19-Dec-13	52.30	313.70
15-Mar-14	52.55	313.45
26-Mar-14	52.54	313.46
8-Apr-14	52.54	313.46
15-Jun-14	52.64	313.36
17-Jun-14	52.64	313.36
17-Jul-14	52.82	313.18
26-Aug-14	52.82	313.18
8-Sep-14	52.85	313.15
23-Sep-14	52.81	313.19

GGW75B		
Date	Datum =	366.00
	Dip =	90.00
	(m bgl)	(m AHD)
16-Apr-07	46.69	319.31
1-May-07	46.68	319.32
3-Jun-07	46.82	319.18
30-Jun-07	46.74	319.26
29-Jul-07	47.00	319.00
5-Sep-07	46.97	319.03
2-Nov-07	47.13	318.87
10-Jan-08	47.37	318.63
8-Mar-08	47.50	318.50
4-Apr-08	47.54	318.46
16-May-08	47.78	318.22
2-Sep-08	47.97	318.03
05-Oct-08	48.12	317.88
29-Oct-08	48.08	317.92
24-Dec-08	48.26	317.74
02-Jan-09	48.27	317.73
08-Feb-09	48.42	317.58
21-Mar-09	48.47	317.53
01-Apr-09	48.49	317.51
15-May-09	48.59	317.41
14-Jun-09	48.53	317.47
11-Jul-09	48.81	317.19
06-Aug-09	48.69	317.31
15-Sep-09	48.96	317.04
13-Oct-09	49.00	317.00
11-Nov-09	49.04	316.96
22-Dec-09	49.05	316.95
19-Jan-10	49.27	316.73
16-Feb-10	49.37	316.63
19-Mar-10	49.32	316.68
04-Apr-10	49.48	316.52
02-May-10	49.47	316.53
09-Jun-10	48.60	317.40
26-Jul-10	49.41	316.59
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	49.84	316.16
12-Nov-10	49.87	316.13
24-Dec-10	49.98	316.02
19-Jan-11	50.02	315.98
06-Mar-11	50.27	315.73
13-Apr-11	50.21	315.79
21-Jun-11	50.39	315.61
24-Jul-11	50.40	315.60
08-Aug-11	Not Measured	
02-Sep-11	50.56	315.44
29-Oct-11	50.75	315.25
10-Nov-11	50.73	315.27
11-Dec-11	49.74	316.26
19-Jan-12	50.91	315.09
15-Feb-12	50.91	315.09
04-Mar-12	51.01	314.99
14-Apr-12	51.04	314.96
16-May-12	51.05	314.95
15-Jul-12	51.04	314.96
15-Aug-12	51.06	314.94
15-Sep-12	51.28	314.72
15-Oct-12	51.28	314.72
09-Nov-12	51.85	314.15
15-Dec-12	51.64	314.36
13-Jan-13	50.77	315.23
14-Jan-13	50.77	315.23
10-Feb-13	51.93	314.07
15-Feb-13	51.93	314.07
12-Mar-13	51.79	314.21
15-Mar-13	51.79	314.21
14-Apr-13	51.84	314.16
15-Apr-13	51.84	314.16
12-May-13	51.89	314.11
15-May-13	51.89	314.11
15-Jun-13	51.88	314.12
17-Jun-13	51.88	314.12
10-Jul-13	51.97	314.03
15-Jul-13	51.97	314.03
15-Aug-13	52.08	313.92
18-Aug-13	52.08	313.92
12-Sep-13	52.01	313.99
15-Sep-13	52.01	313.99
19-Dec-13	52.20	313.80
15-Mar-14	52.48	313.52
08-Apr-14	52.47	313.53
15-Jun-14	52.53	313.47
17-Jul-14	52.72	313.28
26-Aug-14	52.71	313.29
23-Sep-14	52.70	313.30
07-Oct-14	52.90	313.10
21-Nov-14	52.98	313.02
15-Dec-14	53.07	312.93
26-Jan-15	53.09	312.91
19-Feb-15	53.13	312.87
12-Mar-15	53.15	312.85
27-Apr-15	53.27	312.73
08-May-15	53.30	312.70
07-Jun-15	53.33	312.67
16-Jul-15	53.37	312.63
14-Aug-15	53.45	312.55
23-Sep-15	53.44	312.56
21-Oct-15	53.54	312.46
04-Nov-15	53.56	312.44
01-Dec-15	53.56	312.44
10-Feb-16	53.64	312.36
07-Mar-16	53.85	312.15
14-Apr-16	53.88	312.12
26-Jun-16	53.89	312.11
28-Jul-16	54.12	311.88
20-Aug-16	54.10	311.90
28-Sep-16	54.26	311.74
29-Oct-16	54.33	311.67
29-Dec-16	54.33	311.67
22-Jan-17	54.44	311.56
11-Feb-17	54.45	311.55
15-Mar-17	54.60	311.40
14-Apr-17	54.60	311.40
28-May-17	54.68	311.32
17-Jun-17	54.73	311.27
27-Jul-17	54.74	311.26
18-Aug-17	54.79	311.21
23-Sep-17	53.39	312.61
20-Oct-17	54.85	311.15
26-Nov-17	54.78	311.22
22-Dec-17	54.87	311.13
22-Feb-18	55.01	310.99
15-Mar-18	No access	
15-May-18	Not sampled	
25-Jun-18	Pit exlusion zone	
13-Jul-18	No access	

GGW80		
Date	Datum =	354.33
	Dip =	90.00
	(m bgl)	(m AHD)
31-Oct-03	30.34	323.99
31-Mar-04	30.77	323.56
30-May-04	30.89	323.44
2-Sep-04	31.16	323.17
2-Nov-04	31.31	323.02
3-Jan-05	31.48	322.85
3-Feb-05	31.56	322.77
31-May-05	31.84	322.49
2-Jul-05	31.89	322.44
3-Aug-05	32.00	322.33
2-Sep-05	32.07	322.26
27-Sep-05	32.12	322.21
4-Oct-05	32.12	322.21
25-Oct-05	32.16	322.17
4-Jan-06	32.30	322.03
10-Jan-06	32.37	321.96
30-Jan-06	32.39	321.94
11-Mar-06	32.56	321.77
22-Mar-06	32.47	321.86
4-Apr-06	32.50	321.83
6-May-06	32.57	321.76
1-Jun-06	32.62	321.71
26-Jun-06	32.68	321.65
11-Jul-06	32.75	321.58
4-Sep-06	32.79	321.54
18-Sep-06	32.85	321.48
3-Oct-06	32.87	321.46
9-Dec-06	32.80	321.53
8-Jan-07	33.06	321.27
6-Feb-07	33.08	321.25
10-Mar-07	33.16	321.17
3-Apr-07	33.24	321.09
16-Apr-07	33.24	321.09
1-May-07	33.30	321.03
3-Jun-07	33.38	320.95
11-Jun-07	33.38	320.95
30-Jun-07	33.40	320.93
29-Jul-07	33.52	320.81
4-Sep-07	35.55	318.78
2-Nov-07	33.64	320.69
10-Jan-08	33.78	320.55
8-Mar-08	33.92	320.41
4-Apr-08	33.98	320.35
16-May-08	34.14	320.19
10-Jun-08	34.16	320.17
2-Sep-08	34.30	320.03
15-Sep-08	34.37	319.96
5-Oct-08	34.45	319.88
29-Oct-08	34.50	319.83
24-Dec-08	34.55	319.78
2-Jan-09	34.58	319.75
08-Feb-09	34.68	319.65
03-Mar-09	34.75	319.58
21-Mar-09	34.74	319.59
01-Apr-09	34.73	319.60
15-May-09	34.85	319.48
09-Jun-09	34.90	319.43
14-Jun-09	34.88	319.45
11-Jul-09	34.98	319.35
06-Aug-09	35.00	319.33
01-Sep-09	35.05	319.28
15-Sep-09	35.05	319.28
13-Oct-09	35.16	319.17
11-Nov-09	35.20	319.13
22-Dec-09	35.24	319.09
19-Jan-10	35.36	318.97
16-Feb-10	35.42	318.91
17-Mar-10	35.42	318.91
19-Mar-10	35.42	318.91
04-Apr-10	35.59	318.74
02-May-10	35.56	318.77
09-Jun-10	35.60	318.73
24-Jun-10	35.70	318.63
26-Jul-10	35.72	318.61
1-Aug-10	Not Measured	
15-Sep-10	35.77	318.56
16-Oct-10	35.82	318.51
12-Nov-10	35.85	318.48
07-Dec-10	35.93	318.40
24-Dec-10	35.90	318.43
19-Jan-11	35.96	318.37
6-Mar-11	36.07	318.26
15-Mar-11	36.07	318.26
13-Apr-11	36.09	318.24
7-Jun-11	36.29	318.04
21-Jun-11	36.27	318.06
24-Jul-11	36.32	318.01
8-Aug-11	36.33	318.00
2-Sep-11	36.37	317.96
19-Sep-11	36.42	317.91
29-Oct-11	36.51	317.82
10-Nov-11	36.50	317.83
6-Dec-11	36.53	317.80
11-Dec-11	36.53	317.80
19-Jan-12	36.60	317.73
15-Feb-12	36.56	317.77
4-Mar-12	36.63	317.70
14-Mar-12	36.78	317.55
14-Apr-12	36.64	317.69
16-May-12	36.64	317.69
9-Jun-12	37.05	317.28
19-Jun-12	37.05	317.28
15-Jul-12	36.66	317.67
15-Aug-12	36.65	317.68
15-Sep-12	37.33	317.00
15-Oct-12	37.33	317.00
9-Nov-12	37.38	316.95
15-Dec-12	37.42	316.91
13-Jan-13	36.57	317.76
14-Jan-13	36.57	317.76
10-Feb-13	37.59	316.74
15-Feb-13	37.59	316.74
12-Mar-13	37.59	316.74
15-Mar-13	37.59	316.74
21-Mar-13	37.59	316.74
14-Apr-13	37.84	316.49
15-Apr-13	37.84	316.49
12-May-13	37.73	316.60
15-May-13	37.73	316.60
3-Jun-13	37.76	316.57
15-Jun-13	37.76	316.57
17-Jun-13	37.76	316.57
10-Jul-13	37.84	316.49
15-Jul-13	37.84	316.49
15-Aug-13	37.90	316.43
18-Aug-13	37.90	316.43
12-Sep-13	37.96	316.37
15-Sep-13	37.96	316.37
19-Dec-13	38.08	316.25
15-Mar-14	38.20	316.13
26-Mar-14	38.24	316.09
8-Apr-14	38.24	316.09
15-May-14	38.34	315.99
15-Jun-14	38.35	315.98
17-Jun-14	38.35	315.98
17-Jul-14	38.42	315.91
26-Aug-14	38.50	315.83
8-Sep-14	38.53	315.80
23-Sep-14	35.53	318.80
7-Oct-14	38.58	315.75
21-Nov-14	38.63	315.70
5-Dec-14	38.66	315.67
15-Dec-14	38.66	315.67
26-Jan-15	38.67	315.66
19-Feb-15	38.82	315.51
12-Mar-15	38.65	315.68
24-Mar-15	38.82	315.51
27-Apr-15	38.87	315.46
8-May-15	38.87	315.46
7-Jun-15	38.98	315.35
3-Jul-15	38.98	315.35
16-Jul-15	38.98	315.35
14-Aug-15	39.06	315.27
23-Sep-15	39.05	315.28
5-Oct-15	39.11	315.22
21-Oct-15	39.11	315.22
4-Nov-15	39.14	315.19

Appendix F - Monitoring Bore Water Level Data

Gossan Hill Area

GHDEC36R (Datum = 361.47; Dip = 90.00)

Date	(m bgl)	(m AHD)
6-May-06	79.64	281.83
3-Jun-06	79.53	281.94
30-Jul-06	78.26	283.21
4-Sep-06	75.82	285.65
3-Oct-06	79.45	282.02
30-Oct-06	80.92	280.55
9-Dec-06	81.17	280.30
8-Jan-07	81.13	280.34
6-Feb-07	81.21	280.26
10-Mar-07	77.17	284.30
16-Apr-07	81.62	279.85
1-May-07	81.09	280.38
3-Jun-07	81.09	280.38
30-Jun-07	81.14	280.33
29-Jul-07	81.14	280.33
4-Sep-07	81.11	280.36
31-Oct-07	81.31	280.16
2-Dec-07	76.69	284.78
8-Jan-08	79.74	281.73
8-Mar-08	80.26	281.21
04-Apr-08	76.24	285.23
16-May-08	76.07	285.40
05-Oct-08	75.87	285.60
29-Oct-08	75.79	285.68
24-Dec-08	75.88	285.59
02-Jan-09	75.80	285.67
08-Feb-09	75.80	285.67
21-Mar-09	75.86	285.61
01-Apr-09	75.88	285.59
15-May-09	75.93	285.54
14-Jun-09	75.81	285.66
11-Jul-09	75.91	285.56
06-Aug-09	75.80	285.67
15-Sep-09	75.69	285.78
13-Oct-09	75.58	285.89
11-Nov-09	75.50	285.97
22-Dec-09	75.47	286.00
19-Jan-10	75.55	285.92
16-Feb-10	75.63	285.84
19-Mar-10	75.59	285.88
04-Apr-10	75.62	285.85
02-May-10	75.61	285.86
09-Jun-10	75.56	285.91
26-Jul-10	71.50	289.97
1-Sep-10	Not Measured	
16-Oct-10	75.17	286.30
12-Nov-10	75.29	286.18
24-Dec-10	75.48	285.99
19-Jan-11	75.52	285.95
06-Mar-11	79.08	282.39
13-Apr-11	79.11	282.36
21-Jun-11	75.21	286.26
24-Jul-11	75.23	286.24
08-Aug-11	75.22	286.25
02-Sep-11	79.49	281.98
29-Oct-11	79.51	281.96
10-Nov-11	79.50	281.97
11-Dec-11	79.54	281.93
19-Jan-12	79.58	281.89
15-Feb-12	79.62	281.85
04-Mar-12	79.65	281.82
14-Apr-12	79.66	281.81
16-May-12	79.67	281.80
15-Jul-12	79.66	281.81
15-Aug-12	79.67	281.80
15-Sep-12	80.05	281.42
15-Oct-12	80.05	281.42
09-Nov-12	80.34	281.13
13-Jan-13	79.58	281.89
14-Jan-13	79.58	281.89
10-Feb-13	80.38	281.09
15-Feb-13	80.38	281.09
12-Mar-13	89.88	271.59
15-Mar-13	89.88	271.59
14-Apr-13	79.82	281.65
15-Apr-13	79.82	281.65
12-May-13	79.92	281.55
15-May-13	79.92	281.55
15-Jun-13	79.88	281.59
17-Jun-13	79.88	281.59
10-Jul-13	79.96	281.51
15-Jul-13	79.96	281.51
15-Aug-13	80.00	281.47
18-Aug-13	80.00	281.47
12-Sep-13	80.04	281.43
15-Sep-13	80.04	281.43
19-Dec-13	79.96	281.51
12-Mar-14	80.01	281.46
09-Apr-14	80.00	281.47
13-May-14	80.06	281.41
21-Jun-14	79.95	281.52
19-Jul-14	80.10	281.37
16-Aug-14	80.11	281.36
24-Sep-14	80.09	281.38
08-Oct-14	80.15	281.32
05-Nov-14	80.13	281.34
13-Dec-14	80.14	281.33
03-Jan-15	80.06	281.41
15-Feb-15	80.11	281.36
12-Mar-15	80.12	281.35
26-Apr-15	80.19	281.28
09-May-15	80.20	281.27
07-Jun-15	77.60	283.87
20-Jul-15	77.56	283.91
12-Aug-15	77.23	284.24
27-Sep-15	77.25	284.22
26-Oct-15	77.26	284.21
08-Nov-15	77.13	284.34
06-Dec-15	77.10	284.37
28-Jan-16	77.12	284.35
10-Feb-16	80.38	281.09
07-Mar-16	78.72	282.75
14-Apr-16	79.72	281.75
26-Jun-16	78.75	282.72
28-Jul-16	80.00	281.47
20-Aug-16	80.00	281.47
28-Sep-16	80.02	281.45
29-Oct-16	78.88	282.59
29-Dec-16	78.92	282.55
22-Jan-17	77.61	283.86
11-Feb-17	77.61	283.86
15-Mar-17	77.68	283.79
14-Apr-17	79.80	281.67
28-May-17	77.59	283.88
17-Jun-17	80.66	280.81
27-Jul-17	77.56	283.91
18-Aug-17	80.80	280.67
23-Sep-17	80.63	280.84
20-Oct-17	77.42	284.05
26-Nov-17	80.04	281.43
22-Dec-17	80.43	281.04
22-Feb-18	80.49	280.98
15-Mar-18	80.65	280.82
07-Apr-18	78.19	283.28
15-May-18	77.65	283.82
25-Jun-18	77.50	283.97
13-Jul-18	77.53	283.94
22-Aug-18	77.52	283.95
15-Oct-18	77.57	283.90
23-Nov-18	77.50	283.97
30-Dec-18	77.46	284.01
22-Jan-19	77.49	283.98
16-Feb-19	77.48	283.99
20-Mar-19	77.47	284.00
19-Apr-19	77.52	283.95
12-Jul-19	77.59	283.88
19-Aug-19	77.51	283.96
12-Sep-19	77.53	283.94
03-Oct-19	77.50	283.97

GHDEC37R (Datum = 361.61; Dip = 90.00)

Date	(m bgl)	(m AHD)
04-Mar-12	76.80	284.81
14-Apr-12	76.81	284.80
16-May-12	76.78	284.83
15-Jul-12	76.79	284.82
15-Aug-12	76.79	284.82
15-Sep-12	76.95	284.66
15-Oct-12	76.95	284.66
09-Nov-12	77.34	284.27
13-Jan-13	76.64	284.97
14-Jan-13	76.64	284.97
10-Feb-13	77.67	283.94
15-Feb-13	77.67	283.94
12-Mar-13	77.05	284.56
15-Mar-13	77.05	284.56
14-Apr-13	77.10	284.51
15-Apr-13	77.10	284.51
12-May-13	77.19	284.42
15-May-13	77.19	284.42
15-Jun-13	77.16	284.45
17-Jun-13	77.16	284.45
10-Jul-13	77.23	284.38
15-Jul-13	77.23	284.38
15-Aug-13	77.23	284.38
18-Aug-13	77.23	284.38
12-Sep-13	73.25	288.36
15-Sep-13	73.25	288.36
19-Dec-13	77.27	284.34
15-Mar-14	77.31	284.30
08-Apr-14	77.31	284.30
15-May-14	77.35	284.26
15-Jun-14	77.28	284.33
17-Jul-14	77.43	284.18
26-Aug-14	77.41	284.20
23-Sep-14	77.44	284.17
07-Oct-14	77.47	284.14
21-Nov-14	77.43	284.18
15-Dec-14	77.44	284.17
26-Jan-15	77.43	284.18
19-Feb-15	77.45	284.16
12-Mar-15	77.42	284.19
27-Apr-15	77.44	284.17
08-May-15	77.41	284.20
07-Jun-15	77.45	284.16
16-Jul-15	77.46	284.15
14-Aug-15	75.43	286.18
23-Sep-15	75.42	286.19
21-Oct-15	75.47	286.14
04-Nov-15	75.32	286.29
01-Dec-15	75.33	286.28
10-Feb-16	75.30	286.31
07-Mar-16	76.47	285.14
14-Apr-16	76.46	285.15
26-Jun-16	76.48	285.13
28-Jul-16	76.88	284.73
20-Aug-16	76.90	284.71
28-Sep-16	76.86	284.75
29-Oct-16	77.87	283.74
29-Dec-16	77.86	283.75
22-Jan-17	75.86	285.75
11-Feb-17	75.85	285.76
15-Mar-17	75.85	285.76
14-Apr-17	76.39	285.22
28-May-17	75.86	285.75
17-Jun-17	78.54	283.07
27-Jul-17	75.87	285.74
18-Aug-17	77.88	283.73
23-Sep-17	78.50	283.11
20-Oct-17	75.61	286.00
26-Nov-17	77.13	284.48
22-Dec-17	77.43	284.18
22-Feb-18	77.75	283.86
15-Mar-18	77.77	283.84
07-Apr-18	76.58	285.03
15-May-18	75.92	285.69
25-Jun-18	75.72	285.89
13-Jul-18	75.70	285.91
22-Aug-18	75.73	285.88
15-Oct-18	75.75	285.86
23-Nov-18	75.72	285.89
30-Dec-18	75.66	285.95
22-Jan-19	75.71	285.90
16-Feb-19	75.68	285.93
20-Mar-19	75.66	285.95
19-Apr-19	75.70	285.91
12-Jul-19	75.80	285.81
19-Aug-19	75.70	285.91
12-Sep-19	75.72	285.89
03-Oct-19	75.57	286.04
14-Nov-19	75.67	285.94
10-Dec-19	75.68	285.93
25-Jan-20	75.69	285.92
08-Feb-20	75.68	285.93
19-Mar-20	75.66	285.95
17-Apr-20	75.70	285.91
20-May-20	77.85	283.76
05-Jul-20	78.05	283.56
27-Aug-20	78.09	283.52
11-Sep-20	78.13	283.48
22-Oct-20	78.15	283.46
07-Nov-20	78.12	283.49
17-Jan-21	78.18	283.43
13-Feb-21	78.22	283.39
11-May-21	78.12	283.49
08-Jun-21	77.92	283.69
15-Jul-21	77.60	284.01
14-Aug-21	76.47	285.14
15-Sep-21	76.33	285.28
12-Oct-21	76.36	285.25
09-Nov-21	76.41	285.20
16-Dec-21	76.49	285.12
14-Jan-22	76.42	285.19
11-Feb-22	76.31	285.30
10-Mar-22	76.30	285.31
9-Apr-22	76.29	285.32
7-May-22	76.31	285.30
7-Jun-22		
3-Jul-22		
25-Aug-22		
25-Sep-22		
23-Oct-22		
20-Nov-22		
29-Dec-22		
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23		
18-May-23		
17-Jun-23		
13-Jul-23		
13-Aug-23		
15-Sep-23		
15-Oct-23		
17-Nov-23		
29-Dec-23		
30-Jan-24		
25-Feb-24		
23-Mar-24		
15-Apr-24		
20-May-24		
15-Jun-24		
16-Jul-24		
15-Aug-24		
29-Sep-24		
16-Oct-24		
15-Nov-24		
13-Dec-24		
18-Jan-25		
20-Feb-25		
14-Mar-25		

GHDEC38R (Datum = 362.42; Dip = 90.00)

Date	(m bgl)	(m AHD)
17-Jun-13	75.91	286.51
10-Jul-13	76.06	286.36
15-Jul-13	76.06	286.36
15-Aug-13	76.10	286.32
18-Aug-13	76.10	286.32
12-Sep-13	76.10	286.32
15-Sep-13	76.10	286.32
19-Dec-13	76.12	286.30
15-Mar-14	76.21	286.21
08-Apr-14	76.19	286.23
15-May-14	76.32	286.10
15-Jun-14	76.16	286.26
17-Jul-14	76.36	286.06
26-Aug-14	76.37	286.05
23-Sep-14	76.36	286.06
07-Oct-14	76.40	286.02
21-Nov-14	76.36	286.06
15-Dec-14	76.34	286.08
26-Jan-15	76.37	286.05
19-Feb-15	76.34	286.08
12-Mar-15	76.34	286.08
27-Apr-15	76.31	286.11
08-May-15	76.31	286.11
07-Jun-15	76.27	286.15
16-Jul-15	76.28	286.14
14-Aug-15	74.49	287.93
23-Sep-15	74.50	287.92
21-Oct-15	74.52	287.90
04-Nov-15	74.38	288.04
01-Dec-15	74.38	288.04
10-Feb-16	74.38	288.04
07-Mar-16	75.36	287.06
14-Apr-16	75.34	287.08
26-Jun-16	78.72	283.70
28-Jul-16	75.62	286.80
20-Aug-16	75.65	286.77
28-Sep-16	75.65	286.77
29-Oct-16	75.87	286.55
29-Dec-16	75.89	286.53
22-Jan-17	74.97	287.45
11-Feb-17	74.95	287.47
15-Mar-17	74.97	287.45
14-Apr-17	75.32	287.10
28-May-17	74.94	287.48
17-Jun-17	76.48	285.94
27-Jul-17	74.95	287.47
18-Aug-17	76.71	285.71
23-Sep-17	76.50	285.92
20-Oct-17	74.65	287.77
26-Nov-17	75.92	286.50
22-Dec-17	76.22	286.20
22-Feb-18	76.55	285.87
15-Mar-18	76.70	285.72
07-Apr-18	75.62	286.80
15-May-18	74.95	287.47
25-Jun-18	74.74	287.68
13-Jul-18	74.75	287.67
22-Aug-18	74.78	287.64
15-Oct-18	74.78	287.64
23-Nov-18	74.78	287.64
30-Dec-18	74.71	287.71
22-Jan-19	74.75	287.67
16-Feb-19	74.73	287.69
20-Mar-19	74.73	287.69
19-Apr-19	74.62	287.80
12-Jul-19	74.88	287.54
19-Aug-19	74.74	287.68
12-Sep-19	74.76	287.66
03-Oct-19	74.73	287.69
14-Nov-19	74.66	287.76
10-Dec-19	74.73	287.69
25-Jan-20	74.72	287.70
08-Feb-20	74.72	287.70
19-Mar-20	74.76	287.66
17-Apr-20	74.75	287.67
20-May-20	76.72	285.70
05-Jul-20	76.96	285.46
27-Aug-20	77.00	285.42
11-Sep-20	77.05	285.37
22-Oct-20	77.09	285.33
07-Nov-20	77.06	285.36
17-Jan-21	77.15	285.27
13-Feb-21	77.28	285.14
11-May-21	77.88	284.54
08-Jun-21	77.36	285.06
15-Jul-21	75.85	286.57
14-Aug-21	76.60	285.82
15-Sep-21	75.45	286.97
12-Oct-21	75.50	286.92
09-Nov-21	75.56	286.86
16-Dec-21	75.61	286.81
14-Jan-22	75.42	287.00
11-Feb-22	75.44	286.98
10-Mar-22	75.43	286.99
9-Apr-22	75.44	286.98
7-May-22	75.44	286.98
7-Jun-22	75.46	286.96
3-Jul-22	75.50	286.92
25-Aug-22	75.49	286.93
25-Sep-22	75.52	286.90
23-Oct-22	75.55	286.87
20-Nov-22	75.50	286.92
29-Dec-22	81.02	281.40
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	80.90	281.52
18-May-23	77.97	284.45
17-Jun-23	81.38	281.04
13-Jul-23	77.39	285.03
13-Aug-23	77.53	284.89
15-Sep-23	76.29	286.13
15-Oct-23		
17-Nov-23	81.31	281.11
29-Dec-23	76.29	286.13
30-Jan-24		
25-Feb-24	83.04	279.38
23-Mar-24	82.23	280.19
15-Apr-24	82.28	280.14
20-May-24	82.29	280.13
15-Jun-24	82.29	280.13
16-Jul-24	82.50	279.92
15-Aug-24	82.52	279.90
29-Sep-24	82.48	279.94
16-Oct-24	82.48	279.94
15-Nov-24	82.47	279.95
13-Dec-24	82.47	279.95
18-Jan-25	80.29	282.13
20-Feb-25	77.84	284.58
14-Mar-25	77.40	285.02

GGW65P (Datum = 361.40; Dip = 90.00)

Date	(m bgl)	(m AHD)
28-Jan-16	Dry	
10-Feb-16	Dry	
07-Mar-16	Dry	
14-Apr-16	Dry	
26-Jun-16	Dry	
28-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
29-Oct-16	Dry	
29-Dec-16	Dry	
22-Jan-17	Dry	
11-Feb-17	Dry	
15-Mar-17	Dry	
14-Apr-17	Dry	
28-May-17	Dry	
17-Jun-17	Dry	
27-Jul-17	Dry	
18-Aug-17	Dry	
23-Sep-17	Dry	
20-Oct-17	Dry	
26-Nov-17	Dry	
22-Dec-17	Dry	
22-Feb-18	Dry	
15-Mar-18	Dry	
07-Apr-18	Dry	
15-May-18	Dry	
25-Jun-18	Dry	
13-Jul-18	Dry	
22-Aug-18	Dry	
15-Oct-18	Dry	
23-Nov-18	Dry	
30-Dec-18	Dry	
22-Jan-19	Dry	
16-Feb-19	Dry	
20-Mar-19	Dry	
19-Apr-19	Dry	
12-Jul-19	Dry	
19-Aug-19	Dry	
12-Sep-19	Dry	
03-Oct-19	Dry	
15-Nov-19	Dry	
17-Dec-19	89.15	272.25
10-Jan-20	89.14	272.26
08-Feb-20	89.13	272.27
11-Mar-20	83.15	278.25
17-Apr-20	83.20	278.20
20-May-20	Dry	
05-Jul-20	Dry	
27-Aug-20	Dry	
11-Sep-20	Dry	
22-Oct-20	Dry	
07-Nov-20	Dry	
17-Jan-21	Dry	
13-Feb-21	89.08	272.32
11-May-21	Dry	
08-Jun-21	Dry	
15-Jul-21	Dry	
14-Aug-21	Dry	
11-Sep-21	Dry	
12-Oct-21	Dry	
09-Nov-21	Dry	
16-Dec-21	Dry	
14-Jan-22	87.73	273.67
11-Feb-22	87.67	273.73
10-Mar-22	87.75	273.65
9-Apr-22	89.09	272.31
7-May-22	88.99	272.41
7-Jun-22	89.01	272.39
3-Jul-22	89.07	272.33
25-Aug-22	89.10	272.30
25-Sep-22	89.14	272.26
23-Oct-22	88.09	273.31
20-Nov-22		
29-Dec-22		
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23		
18-May-23		
17-Jun-23		
13-Jul-23		
13-Aug-23		
15-Sep-23		
15-Oct-23		
17-Nov-23		
29-Dec-23		
30-Jan-24		
25-Feb-24		
23-Mar-24		
15-Apr-24		
20-May-24		
15-Jun-24		
16-Jul-24		
15-Aug-24		
29-Sep-24		
16-Oct-24		
15-Nov-24		
13-Dec-24		
18-Jan-25		
20-Feb-25		
14-Mar-25		

GGW75A (Datum = 366.00; Dip = 90.00)

Date	(m bgl)	(m AHD)
7-Oct-14	52.97	313.03
21-Nov-14	53.03	312.97
5-Dec-14	53.07	312.93
15-Dec-14	53.07	312.93
26-Jan-15	53.12	312.88
19-Feb-15	53.23	312.77
12-Mar-15	53.22	312.78
24-Mar-15	53.49	312.51
27-Apr-15	53.34	312.66
8-May-15	53.39	312.61
7-Jun-15	53.42	312.58
3-Jul-15	53.46	312.54
16-Jul-15	53.46	312.54
14-Aug-15	53.52	312.48
23-Sep-15	53.50	312.50
5-Oct-15	53.63	312.37
21-Oct-15	53.63	312.37
4-Nov-15	53.62	312.38
1-Dec-15	53.63	312.37
15-Jan-16	53.83	312.17
10-Feb-16	53.80	312.20
7-Mar-16	53.96	312.04
12-Apr-16	54.02	311.98
14-Apr-16	54.02	311.98
15-Jun-16	54.13	311.87
26-Jun-16	54.13	311.87
28-Jul-16	54.16	311.84
20-Aug-16	54.15	311.85
28-Sep-16	54.34	311.66
29-Oct-16	54.36	311.64
29-Dec-16	54.39	311.61
11-Jan-17	54.48	311.52
22-Jan-17	54.48	311.52
11-Feb-17	54.50	311.50
15-Mar-17	54.64	311.36
5-Apr-17	54.64	311.36
14-Apr-17	54.64	311.36
28-May-17	54.71	311.29
17-Jun-17	54.80	311.20
30-Jun-17	54.77	311.23
27-Jul-17	54.77	311.23
18-Aug-17	54.84	311.16
20-Sep-17	53.45	312.55
23-Sep-17	53.45	312.55
20-Oct-17	54.90	311.10
26-Nov-17	54.83	311.17
22-Dec-17	54.92	311.08
29-Jan-18	55.03	310.97
22-Feb-18	55.08	310.92
15-Mar-18	Bore destroyed	
15-May-18	Bore destroyed	
25-Jun-18	Bore destroyed	
13-Jul-18	Bore destroyed	
16-Jul-18	Bore destroyed	

GGW75B (Datum = 366.00; Dip = 90.00)

Date	(m bgl)	(m AHD)

GGW80 (Datum = 354.33; Dip = 90.00)

Date	(m bgl)	(m AHD)
1-Dec-15	39.13	315.20
15-Jan-16	39.29	315.04
10-Feb-16	39.13	315.20
10-Feb-16	39.13	315.20
7-Mar-16	39.33	315.00
12-Apr-16	39.37	314.96
14-Apr-16	39.37	314.96
15-Jun-16	39.51	314.82
26-Jun-16	39.51	314.82
28-Jul-16	39.51	314.82
20-Aug-16	39.55	314.78
28-Sep-16	39.63	314.70
29-Oct-16	39.65	314.68
29-Dec-16	39.63	314.70
11-Jan-17	39.72	314.61
22-Jan-17	39.72	314.61
11-Feb-17	39.70	314.63
15-Mar-17	39.83	314.50
5-Apr-17	39.83	314.50
14-Apr-17	39.83	314.50
28-May-17	39.94	314.39
17-Jun-17	39.94	314.39
30-Jun-17	39.94	314.39
27-Jul-17	39.94	314.39
18-Aug-17	39.98	314.35
20-Sep-17	39.95	314.38
23-Sep-17	39.95	314.38
20-Oct-17	40.10	314.23
26-Nov-17	39.99	314.34
22-Dec-17	40.05	314.28
29-Jan-18	40.14	314.19
22-Feb-18	40.15	314.18
15-Mar-18	40.12	314.21
7-Apr-18	40.18	314.15
17-Apr-18	40.18	314.15
15-May-18	40.23	314.10
25-Jun-18	40.25	314.08
13-Jul-18	40.28	314.05
16-Jul-18	40.28	314.05
22-Aug-18	40.27	314.06
15-Oct-18	40.35	313.98
23-Oct-18	40.35	313.98
23-Nov-18	40.44	313.89
30-Dec-18	40.47	313.86
22-Jan-19	40.52	313.81
11-Feb-19	40.57	313.76
16-Feb-19	40.57	313.76
20-Mar-19	40.62	313.71
19-Apr-19	40.60	313.73
7-May-19	40.66	313.67
12-Jul-19	40.79	313.54
13-Aug-19	40.75	313.58
19-Aug-19	40.75	313.58
12-Sep-19	40.80	313.53
3-Oct-19	40.81	313.52
6-Nov-19	40.91	313.42
14-Nov-19	40.89	313.44
17-Dec-19	41.04	313.29
25-Jan-20	41.02	313.31
29-Jan-20	41.01	313.32
6-Feb-20	41.01	313.32
19-Mar-20	40.94	313.39
22-Apr-20	41.16	313.17
20-May-20	41.14	313.19
5-Jul-20	41.13	313.20
27-Aug-20	41.20	313.13
11-Sep-20	41.24	313.09
25-Sep-20	41.25	313.08
22-Oct-20	41.28	313.05
7-Nov-20	41.39	312.94
18-Nov-20	41.39	312.94
17-Jan-21	41.45	312.88
13-Feb-21	41.50	312.83
11-Mar-21	41.52	312.81
11-May-21	41.38	312.95
23-May-21	41.61	312.72
8-Jun-21	41.25	313.08
15-Jul-21	41.76	312.57
14-Aug-21	41.69	312.64
11-Sep-21	41.75	312.58
12-Oct-21	41.84	312.49
9-Nov-21	41.76	312.57
22-Nov-21	41.76	312.57
16-Dec-21	41.89	312.44
14-Jan-22	41.90	312.43
11-Feb-22	41.96	312.37
10-Mar-22	41.98	312.35
9-Apr-22	42.01	312.32
7-May-22	42.05	312.28
7-Jun-22	42.07	312.26
3-Jul-22	42.11	312.22
25-Aug-22	42.09	312.24
25-Sep-22	42.21	312.12
23-Oct-22	42.20	312.13
20-Nov-22	42.25	312.08
29-Dec-22	42.27	312.06
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	42.04	312.29
18-May-23	42.46	311.87
17-Jun-23	42.49	311.84
13-Jul-23	42.53	311.80
13-Aug-23		
15-Sep-23	42.57	311.76
15-Oct-23		
17-Nov-23	43.56	310.77
29-Dec-23	42.57	311.76
30-Jan-24		
25-Feb-24	46.75	307.58
23-Mar-24	42.81	311.52
15-Apr-24	42.85	311.48
20-May-24	42.82	311.51
15-Jun-24	42.82	311.51
16-Jul-24	42.85	311.48
15-Aug-24	42.91	311.42
29-Sep-24	42.91	311.42
16-Oct-24	42.91	311.42
15-Nov-24	43.00	311.33
13-Dec-24	43.01	311.32
18-Jan-25	43.15	311.18
20-Feb-25		
14-Mar-25	43.16	311.17

Appendix F - Monitoring Bore Water Level Data

GHDEC36R			GHDEC37R			GHDEC38R			GGW65P			GGW75A			GGW75B			GGW80		
Date	Datum =	361.47	Date	Datum =	361.61	Date	Datum =	362.42	Date	Datum =	361.40	Date	Datum =	366.00	Date	Datum =	366.00	Date	Datum =	354.33
	Dip =	90.00		Dip =	90.00		Dip =	90.00		Dip =	90.00		Dip =	90.00		Dip =	90.00		Dip =	90.00
	(m bgl)	(m AHD)		(m bgl)	(m AHD)		(m bgl)	(m AHD)		(m bgl)	(m AHD)		(m bgl)	(m AHD)		(m bgl)	(m AHD)		(m bgl)	(m AHD)
										Gossan Hill Area										
14-Nov-19	77.52	283.95																		
10-Dec-19	77.53	283.94																		
10-Jan-20	77.52	283.95																		
08-Feb-20	77.50	283.97																		
11-Mar-20	80.21	281.26																		
20-Apr-20	80.19	281.28																		
20-May-20	80.60	280.87																		
05-Jul-20	80.74	280.73																		
27-Aug-20	80.74	280.73																		
11-Sep-20	80.75	280.72																		
22-Oct-20	80.74	280.73																		
07-Nov-20	80.71	280.76																		
17-Jan-21	80.71	280.76																		
13-Feb-21	80.75	280.72																		
11-May-21	80.74	280.73																		
08-Jun-21	79.81	281.66																		
15-Jul-21	78.30	283.17																		
14-Aug-21	77.18	284.29																		
15-Sep-21	78.05	283.42																		
12-Oct-21	78.10	283.37																		
09-Nov-21	78.13	283.34																		
16-Dec-21	78.18	283.29																		
14-Jan-22	78.01	283.46																		
11-Feb-22	78.04	283.43																		
10-Mar-22	78.03	283.44																		
9-Apr-22	78.04	283.43																		
7-May-22	78.05	283.42																		
7-Jun-22	78.04	283.43																		
3-Jul-22	78.10	283.37																		
25-Aug-22	78.08	283.39																		
25-Sep-22	78.13	283.34																		
23-Oct-22	78.15	283.32																		
20-Nov-22	78.13	283.34																		
29-Dec-22	79.07	282.40																		
2-Jan-23																				
2-Feb-23																				
2-Mar-23																				
20-Apr-23	82.16	279.31																		
24-Apr-23	No sampling tap																			
18-May-23	79.72	281.75																		
13-Jul-23																				
13-Aug-23																				
15-Sep-23																				
15-Oct-23																				
17-Nov-23																				
29-Dec-23																				
30-Jan-24																				
25-Feb-24																				
23-Mar-24																				
15-Apr-24																				
20-May-24																				
15-Jun-24																				
16-Jul-24																				
15-Aug-24																				
29-Sep-24																				
16-Oct-24																				
15-Nov-24																				
13-Dec-24																				
18-Jan-25																				
20-Feb-25																				
14-Mar-25																				

Appendix F - Monitoring Bore Water Level Data

Gossan Hill Area

GGW81 — Datum = 348.94; Dip = 90.00

Date	(m bgl)	(m AHD)
31-Oct-03	47.80	301.14
31-Mar-04	48.64	300.30
30-May-04	48.84	300.10
2-Sep-04	49.62	299.32
2-Nov-04	50.05	298.89
3-Feb-05	50.65	298.29
31-May-05	51.27	297.67
2-Jul-05	51.39	297.55
3-Aug-05	51.62	297.32
2-Sep-05	51.74	297.20
27-Sep-05	51.88	297.06
4-Oct-05	57.38	291.56
25-Oct-05	51.96	296.98
4-Jan-06	52.27	296.67
10-Jan-06	52.36	296.58
30-Jan-06	52.44	296.50
11-Mar-06	52.58	296.36
22-Mar-06	52.61	296.33
6-May-06	52.85	296.09
1-Jun-06	52.97	295.97
26-Jun-06	53.10	295.84
11-Jul-06	53.22	295.72
30-Jul-06	57.37	291.57
4-Sep-06	53.41	295.53
18-Sep-06	53.50	295.44
3-Oct-06	53.55	295.39
30-Oct-06	53.63	295.31
9-Dec-06	52.90	296.04
8-Jan-07	53.95	294.99
6-Feb-07	54.07	294.87
10-Mar-07	54.17	294.77
3-Apr-07	54.28	294.66
16-Apr-07	54.28	294.66
1-May-07	54.42	294.52
3-Jun-07	54.58	294.36
11-Jun-07	54.60	294.34
30-Jun-07	54.64	294.30
29-Jul-07	54.84	294.10
4-Sep-07	54.94	294.00
2-Nov-07	55.20	293.74
10-Jan-08	55.54	293.40
8-Mar-08	55.88	293.06
4-Apr-08	56.00	292.94
16-May-08	56.31	292.63
11-Jun-08	56.42	292.52
2-Sep-08	56.82	292.12
15-Sep-08	56.93	292.01
5-Oct-08	57.15	291.79
29-Oct-08	57.17	291.77
24-Dec-08	57.40	291.54
02-Jan-09	57.53	291.41
08-Feb-09	57.74	291.20
03-Mar-09	57.91	291.03
21-Mar-09	57.93	291.01
01-Apr-09	57.95	290.99
15-May-09	58.16	290.78
09-Jun-09	58.26	290.68
14-Jun-09	28.28	320.66
11-Jul-09	58.41	290.53
06-Aug-09	58.55	290.39
01-Sep-09	58.66	290.28
15-Sep-09	58.68	290.26
13-Oct-09	58.94	290.00
11-Nov-09	58.99	289.95
22-Dec-09	59.27	289.67
19-Jan-10	59.58	289.36
16-Feb-10	59.27	289.67
17-Mar-10	59.57	289.37
19-Mar-10	59.57	289.37
04-Apr-10	59.64	289.30
02-May-10	59.71	289.23
09-Jun-10	59.89	289.05
24-Jun-10	59.98	288.96
26-Jul-10	60.10	288.84
1-Aug-10	Not Measured	
15-Sep-10	60.19	288.75
16-Oct-10	60.33	288.61
12-Nov-10	60.36	288.58
07-Dec-10	60.46	288.48
24-Dec-10	60.47	288.47
19-Jan-11	60.55	288.39
6-Mar-11	60.84	288.10
16-Mar-11	60.84	288.10
13-Apr-11	60.86	288.08
7-Jun-11	61.05	287.89
21-Jun-11	61.02	287.92
24-Jul-11	61.18	287.76
8-Aug-11	Not Measured	
2-Sep-11	61.20	287.74
13-Sep-11	61.24	287.70
29-Oct-11	61.40	287.54
10-Nov-11	61.42	287.52
6-Dec-11	61.40	287.54
11-Dec-11	61.40	287.54
19-Jan-12	61.69	287.25
15-Feb-12	61.67	287.27
4-Mar-12	61.80	287.14
14-Mar-12	61.74	287.20
14-Apr-12	61.84	287.10
16-May-12	61.81	287.13
19-Jun-12	61.99	286.95
15-Jul-12	61.84	287.10
15-Aug-12	61.84	287.10
15-Sep-12	62.59	286.35
15-Oct-12	62.59	286.35
9-Nov-12	63.07	285.87
15-Dec-12	63.12	285.82
13-Jan-13	61.64	287.30
14-Jan-13	61.34	287.60
10-Feb-13	62.93	286.01
15-Feb-13	62.93	286.01
12-Mar-13	62.82	286.12
15-Mar-13	62.82	286.12
21-Mar-13	62.82	286.12
14-Apr-13	62.87	286.07
15-Apr-13	62.87	286.07
12-May-13	63.03	285.91
15-May-13	63.03	285.91
3-Jun-13	62.99	285.95
15-Jun-13	62.99	285.95
17-Jun-13	62.99	285.95
10-Jul-13	63.20	285.74
15-Jul-13	63.20	285.74
15-Aug-13	63.36	285.58
18-Aug-13	63.36	285.58
12-Sep-13	63.25	285.69
15-Sep-13	63.25	285.69
19-Dec-13	63.49	285.45
15-Mar-14	63.69	285.25
26-Mar-14	63.74	285.20
8-Apr-14	63.74	285.20
15-May-14	63.85	285.09
15-Jun-14	63.89	285.05
17-Jun-14	63.89	285.05
17-Jul-14	64.02	284.92
26-Aug-14	64.03	284.91
8-Sep-14	64.10	284.84
23-Sep-14	64.10	284.84
7-Oct-14	64.19	284.75
21-Nov-14	64.21	284.73
5-Dec-14	64.22	284.72
15-Dec-14	64.22	284.72
26-Jan-15	64.22	284.72
19-Feb-15	64.20	284.74
12-Mar-15	64.20	284.74
24-Mar-15	64.39	284.55
27-Apr-15	64.55	284.39
8-May-15	64.49	284.45
7-Jun-15	64.56	284.38
3-Jul-15	64.63	284.31
16-Jul-15	64.63	284.31
14-Aug-15	64.67	284.27
23-Sep-15	64.65	284.29
5-Oct-15	64.75	284.19
21-Oct-15	64.75	284.19
4-Nov-15	64.79	284.15
1-Dec-15	64.81	284.13

GGW83 — Datum = 364.28; Dip = 90.00

Date	(m bgl)	(m AHD)
31-Oct-03	119.54	244.74
31-Mar-04	119.66	244.62
30-May-04	119.66	244.62
5-Jul-04	119.70	244.58
2-Aug-04	119.75	244.53
2-Sep-04	120.73	243.55
2-Nov-04	119.77	244.51
3-Jan-05	119.88	244.40
3-Feb-05	119.93	244.35
1-Apr-05	119.96	244.32
31-May-05	120.02	244.26
2-Jul-05	120.01	244.27
3-Aug-05	120.10	244.18
2-Sep-05	120.08	244.20
4-Oct-05	120.06	244.22
25-Oct-05	120.06	244.22
4-Jan-06	120.16	244.12
30-Jan-06	120.29	243.99
11-Mar-06	121.70	242.58
4-Apr-06	121.95	242.33
6-May-06	121.87	242.41
1-Jun-06	121.93	242.35
11-Jul-06	122.08	242.20
30-Jul-06	122.12	242.16
4-Sep-06	122.90	241.38
3-Oct-06	122.20	242.08
30-Oct-06	122.31	241.97
9-Dec-06	123.44	240.84
8-Jan-07	122.40	241.88
10-Mar-07	122.76	241.52
16-Apr-07	122.05	242.23
1-May-07	121.87	242.41
3-Jun-07	121.77	242.51
30-Jun-07	121.73	242.55
29-Jul-07	120.78	243.50
4-Sep-07	121.69	242.59
2-Nov-07	121.77	242.51
10-Jan-08	122.92	241.36
8-Mar-08	122.23	242.05
4-Apr-08	122.34	241.94
16-May-08	122.45	241.83
2-Sep-08	137.70	226.58
05-Oct-08	139.91	224.37
29-Oct-08	140.67	223.61
24-Dec-08	141.60	222.68
02-Jan-09	141.71	222.57
08-Feb-09	142.05	222.23
21-Mar-09	142.59	221.69
01-Apr-09	142.72	221.56
15-May-09	143.07	221.21
14-Jun-09	143.47	220.81
11-Jul-09	143.54	220.74
06-Aug-09	143.61	220.67
15-Sep-09	143.70	220.58
13-Oct-09	143.70	220.58
11-Nov-09	143.70	220.58
22-Dec-09	143.56	220.72
19-Jan-10	143.57	220.71
16-Feb-10	143.59	220.69
19-Mar-10	143.51	220.77
04-Apr-10	143.61	220.67
02-May-10	143.65	220.63
09-Jun-10	143.60	220.68
26-Jul-10	143.57	220.71
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	143.29	220.99
12-Nov-10	143.29	220.99
24-Dec-10	143.21	221.07
19-Jan-11	142.27	222.01
06-Mar-11	143.44	220.84
13-Apr-11	143.41	220.87
21-Jun-11	143.52	220.76
24-Jul-11	143.52	220.76
08-Aug-11	143.50	220.78
02-Sep-11	143.68	220.60
29-Oct-11	143.78	220.50
10-Nov-11	143.79	220.49
11-Dec-11	143.84	220.44
19-Jan-12	143.89	220.39
15-Feb-12	143.97	220.31
04-Mar-12	143.96	220.32
14-Apr-12	143.94	220.34
16-May-12	143.96	220.32
15-Jul-12	143.92	220.36
15-Aug-12	143.91	220.37
15-Sep-12	143.87	220.41
15-Oct-12	143.87	220.41
09-Nov-12	144.13	220.15
13-Jan-13	143.88	220.40
14-Jan-13	143.88	220.40
10-Feb-13	144.19	220.09
15-Feb-13	144.19	220.09
12-Mar-13	144.25	220.03
15-Mar-13	144.26	220.02
14-Apr-13	144.21	220.07
15-Apr-13	114.21	250.07
12-May-13	144.18	220.10
15-May-13	144.18	220.10
15-Jun-13	144.15	220.13
17-Jun-13	144.15	220.13
10-Jul-13	144.18	220.10
15-Jul-13	144.18	220.10
15-Aug-13	144.17	220.11
18-Aug-13	144.17	220.11
12-Sep-13	144.20	220.08
15-Sep-13	144.20	220.08
19-Dec-13	144.12	220.16
15-Mar-14	144.12	220.16
08-Apr-14	144.14	220.14
15-May-14	144.19	220.09
15-Jun-14	144.17	220.11
17-Jul-14	144.23	220.05
26-Aug-14	144.25	220.03
23-Sep-14	144.23	220.05
07-Oct-14	144.23	220.05
21-Nov-14	144.23	220.05
15-Dec-14	144.25	220.03
26-Jan-15	144.26	220.02
19-Feb-15	144.25	220.03
12-Mar-15	144.27	220.01
27-Apr-15	144.05	220.23
08-May-15	144.08	220.20
07-Jun-15	144.05	220.23
16-Jul-15	144.10	220.18
14-Aug-15	144.17	220.11
23-Sep-15	144.18	220.10
21-Oct-15	144.18	220.10
04-Nov-15	144.10	220.18
01-Dec-15	144.13	220.15
10-Feb-16	144.15	220.13
07-Mar-16	144.04	220.24
14-Apr-16	144.02	220.26
26-Jun-16	144.01	220.27
28-Jul-16	144.15	220.13
20-Aug-16	144.12	220.16
28-Sep-16	144.18	220.10
29-Oct-16	144.15	220.13
29-Dec-16	144.17	220.11
22-Jan-17	144.10	220.18
11-Feb-17	144.13	220.15
15-Mar-17	144.14	220.14
14-Apr-17	144.10	220.18
28-May-17	144.12	220.16
17-Jun-17	144.27	220.01
27-Jul-17	144.14	220.14
18-Aug-17	144.54	219.74
23-Sep-17	144.52	219.76
20-Oct-17	144.68	219.60
26-Nov-17	144.64	219.64
22-Dec-17	144.53	219.75
22-Feb-18	144.39	219.89
15-Mar-18	144.50	219.78
07-Apr-18	144.41	219.87
15-May-18	144.34	219.94
25-Jun-18	144.34	219.94
13-Jul-18	144.32	219.96

Scuddles Mine Area

GGW6A — Datum = 368.19; Dip = 90.00

Date	(m bgl)	(m AHD)
10-Apr-89	32.54	335.65
6-May-89	32.57	335.62
3-Jun-89	32.62	335.57
1-Jul-89	32.79	335.40
2-Aug-89	32.66	335.53
2-Sep-89	32.72	335.47
30-Sep-89	32.71	335.48
4-Nov-89	32.78	335.41
9-Dec-89	32.91	335.28
13-Jan-90	32.82	335.37
3-Feb-90	32.87	335.32
3-Mar-90	32.90	335.29
31-Mar-90	32.94	335.25
5-May-90	33.01	335.18
2-Jun-90	33.03	335.16
7-Jul-90	33.05	335.14
9-Aug-90	33.07	335.12
5-Sep-90	33.18	335.01
10-Oct-90	33.20	334.99
27-Nov-90	33.23	334.96
24-Dec-90	33.23	334.96
1-Feb-91	33.31	334.88
5-Feb-91	33.41	334.78
6-Mar-91	33.44	334.75
3-Apr-91	33.35	334.84
4-May-91	33.38	334.81
11-Jun-91	33.59	334.60
10-Jul-91	33.59	334.60
25-Aug-91	33.57	334.62
7-Sep-91	33.52	334.67
13-Sep-91	33.57	334.62
16-Dec-91	33.61	334.58
10-Mar-92	33.90	334.29
4-May-92	33.90	334.29
30-Jun-92	34.80	333.39
7-Jul-92	33.81	334.38
1-Aug-92	31.62	336.57
5-Oct-92	34.12	334.07
8-Nov-92	34.16	334.03
11-Dec-92	34.21	333.98
10-Jan-93	34.20	333.99
12-Feb-93	34.26	333.93
13-Mar-93	34.30	333.89
8-Apr-93	34.30	333.89
7-May-93	34.30	333.89
11-Jun-93	34.40	333.79
3-Jul-93	34.40	333.79
6-Aug-93	34.35	333.84
2-Sep-93	34.36	333.83
1-Oct-93	34.40	333.79
1-Nov-93	34.43	333.76
2-Nov-93	34.40	333.79
4-Jan-94	34.42	333.77
16-Mar-94	34.48	333.71
24-Apr-94	34.50	333.69
6-Oct-94	34.67	333.52
3-Nov-94	34.66	333.53
1-Dec-94	34.68	333.51
5-Jan-95	34.70	333.49
16-Feb-95	34.72	333.47
9-Mar-95	34.72	333.47
30-Mar-95	34.73	333.46
30-Apr-95	34.08	334.11
1-Jun-95	34.86	333.33
3-Jul-95	34.90	333.29
7-Aug-95	35.60	332.59
29-Aug-95	35.65	332.54
28-Sep-95	35.63	332.56
31-Oct-95	35.73	332.46
2-Dec-95	35.84	332.35
18-Dec-95	35.86	332.33
31-Jan-96	36.03	332.16
3-Mar-96	36.08	332.11
6-Apr-96	36.25	331.94
5-May-96	36.40	331.79
26-Oct-96	36.82	331.37
31-Dec-96	37.00	331.19
31-Oct-97	37.76	330.43
30-Nov-97	37.84	330.35
31-Dec-97	37.97	330.22
28-Feb-98	38.12	330.07
30-Apr-98	38.31	329.88
31-May-98	38.21	329.98
31-Jul-98	38.52	329.67
31-Aug-98	38.58	329.61
30-Sep-98	38.68	329.51
31-Oct-98	38.74	329.45
12-Nov-98	38.80	329.39
30-Nov-98	38.86	329.33
31-Dec-98	38.88	329.31
31-Jan-99	38.98	329.21
28-Feb-99	39.02	329.17
31-Mar-99	39.10	329.09
30-May-99	39.16	329.03
30-Jun-99	39.29	328.90
1-Aug-99	39.35	328.84
2-Sep-99	39.40	328.79
4-Oct-99	39.53	328.66
5-Nov-99	39.64	328.55
6-Dec-99	40.81	327.38
9-Jan-00	39.63	328.56
4-Feb-00	39.83	328.36
25-Feb-00	39.87	328.32
2-Apr-00	39.96	328.23
28-Apr-00	40.02	328.17
6-Jun-00	40.13	328.06
17-Jul-00	40.18	328.01
12-Aug-00	40.29	327.90
26-Aug-00	40.31	327.88
7-Oct-00	40.40	327.79
12-Oct-00	40.45	327.74
28-Oct-00	40.41	327.78
22-Nov-00	40.45	327.74
30-Dec-00	40.44	327.75
8-Jan-01	40.55	327.64
5-Feb-01	40.46	327.73
5-Mar-01	40.56	327.63
29-Mar-01	40.73	327.46
30-Apr-01	40.67	327.52
29-May-01	40.83	327.36
27-Jul-01	40.97	327.22
25-Aug-01	41.13	327.06
1-Oct-01	41.19	327.00
9-Nov-01	41.26	326.93
2-Dec-01	41.31	326.88
24-Dec-01	41.34	326.85
3-Feb-02	41.40	326.79
9-Apr-02	41.59	326.60
30-Apr-02	41.65	326.54
28-May-02	42.70	325.49
25-Jun-02	41.72	326.47
6-Aug-02	41.83	326.36
30-Aug-02	41.87	326.32
17-Oct-02	41.92	326.27
2-Nov-02	42.02	326.17
20-Dec-02	42.11	326.08
27-Jan-03	42.14	326.05
3-Apr-03	42.28	325.91
30-Apr-03	42.38	325.81
4-Jun-03	42.44	325.75
27-Jun-03	42.48	325.71
31-Jul-03	42.58	325.61
30-Aug-03	42.63	325.56
29-Sep-03	42.64	325.55
31-Oct-03	42.72	325.47
29-Nov-03	42.80	325.39
31-Dec-03	42.87	325.32
30-Jan-04	42.95	325.24
31-Mar-04	43.03	325.16
30-May-04	43.10	325.09
2-Aug-04	43.29	324.90
2-Sep-04	43.39	324.80
1-Oct-04	43.38	324.81
2-Nov-04	43.44	324.75
3-Jan-05	43.58	324.61
3-Feb-05	43.64	324.55
7-Mar-05	43.69	324.50

GGW49 — Datum = 370.15; Dip = 90.00

Date	(m bgl)	(m AHD)
15-Nov-85	33.90	336.25
10-Apr-89	36.21	333.94
6-May-89	36.90	333.25
3-Jun-89	37.42	332.73
1-Jul-89	38.11	332.04
2-Aug-89	38.20	331.95
2-Sep-89	38.36	331.79
30-Sep-89	38.66	331.49
4-Nov-89	39.32	330.83
9-Dec-89	47.35	322.80
13-Jan-90	47.85	322.30
3-Feb-90	48.08	322.07
3-Mar-90	48.50	321.65
31-Mar-90	49.17	320.98
5-May-90	42.50	327.65
2-Jun-90	43.20	326.95
7-Jul-90	41.55	328.60
9-Aug-90	41.72	328.43
5-Sep-90	41.98	328.17
10-Oct-90	42.11	328.04
27-Nov-90	42.36	327.79
24-Dec-90	42.41	327.74
25-Feb-92	44.62	325.53
10-Mar-92	44.65	325.50
4-May-92	44.60	325.55
30-Jun-92	45.32	324.83
1-Aug-92	44.92	325.23
5-Oct-92	45.42	324.73
8-Nov-92	45.59	324.56
11-Dec-92	45.64	324.51
10-Jan-93	45.67	324.48
12-Feb-93	46.02	324.13
27-Feb-93	46.40	323.75
13-Mar-93	46.07	324.08
8-Apr-93	46.18	323.97
7-May-93	46.18	323.97
11-Jun-93	46.40	323.75
3-Jul-93	46.40	323.75
12-Jul-93	46.85	323.30
6-Aug-93	46.15	324.00
2-Sep-93	46.25	323.90
1-Oct-93	46.08	324.07
1-Nov-93	46.00	324.15
2-Nov-93	45.22	324.93
4-Jan-94	45.87	324.28
16-Mar-94	45.90	324.25
24-Apr-94	46.03	324.12
6-Oct-94	46.27	323.88
3-Nov-94	46.31	323.84
1-Dec-94	46.35	323.80
5-Jan-95	46.37	323.78
16-Feb-95	46.35	323.80
9-Mar-95	46.28	323.87
30-Mar-95	46.28	323.87
30-Apr-95	46.45	323.70
1-Jun-95	46.42	323.73
3-Jul-95	46.53	323.62
7-Aug-95	47.79	322.36
29-Aug-95	48.09	322.06
28-Sep-95	48.18	321.97
31-Oct-95	48.38	321.77
2-Dec-95	48.54	321.61
18-Dec-95	48.71	321.44
31-Jan-96	49.02	321.13
3-Mar-96	49.15	321.00
6-Apr-96	49.60	320.55
5-May-96	49.65	320.50
3-Jul-96	50.15	320.00
2-Oct-96	50.65	319.50
26-Oct-96	50.26	319.89
31-Dec-96	51.25	318.90
31-May-97	51.96	318.19
31-Jul-97	52.16	317.99
31-Oct-97	52.47	317.68
30-Nov-97	52.60	317.55
31-Dec-97	52.76	317.39
28-Feb-98	53.00	317.15
30-Apr-98	53.24	316.91
31-May-98	53.15	317.00
31-Jul-98	53.44	316.71
31-Aug-98	53.49	316.66
30-Sep-98	53.86	316.29
31-Oct-98	54.20	315.95
30-Nov-98	54.33	315.82
31-Dec-98	54.52	315.63
31-Jan-99	54.65	315.50
28-Feb-99	54.71	315.44
31-Mar-99	54.49	315.66
30-May-99	55.20	314.95
30-Jun-99	55.25	314.90
1-Aug-99	55.41	314.74
2-Sep-99	55.56	314.59
4-Oct-99	55.77	314.38
5-Nov-99	55.83	314.32
6-Dec-99	56.77	313.38
9-Jan-00	56.34	313.81
4-Feb-00	56.47	313.68
25-Feb-00	56.55	313.60
2-Apr-00	56.73	313.42
28-Apr-00	56.82	313.33
6-Jun-00	57.02	313.13
12-Jul-00	57.32	312.83
12-Aug-00	57.62	312.53
26-Aug-00	57.68	312.47
7-Oct-00	58.07	312.08
28-Oct-00	58.15	312.00
22-Nov-00	58.25	311.90
30-Dec-00	58.48	311.67
5-Feb-01	58.73	311.42
5-Mar-01	58.93	311.22
29-Mar-01	59.06	311.09
30-Apr-01	59.24	310.91
29-May-01	59.35	310.80
7-Jul-01	59.86	310.29
25-Aug-01	59.69	310.46
1-Oct-01	59.90	310.25
9-Nov-01	60.10	310.05
2-Dec-01	60.21	309.94
24-Dec-01	60.32	309.83
3-Feb-02	60.58	309.57
4-Mar-02	60.74	309.41
9-Apr-02	60.96	309.19
30-Apr-02	61.06	309.09
28-May-02	61.26	308.89
25-Jun-02	61.37	308.78
6-Aug-02	61.69	308.46
30-Aug-02	61.78	308.37
17-Oct-02	61.97	308.18
2-Nov-02	62.21	307.94
1-Dec-02	62.25	307.90
20-Dec-02	62.32	307.83
27-Jan-03	62.58	307.57
3-Apr-03	62.96	307.19
30-Apr-03	63.16	306.99
4-Jun-03	63.35	306.80
27-Jun-03	63.36	306.79
31-Jul-03	63.66	306.49
30-Aug-03	63.84	306.31
29-Sep-03	63.85	306.30
31-Oct-03	64.04	306.11
29-Nov-03	64.17	305.98
31-Dec-03	64.46	305.69
31-Mar-04	64.91	305.24
30-May-04	65.10	305.05
2-Aug-04	65.53	304.62
2-Sep-04	65.65	304.50
1-Oct-04	65.87	304.28
2-Nov-04	66.00	304.15
3-Jan-05	66.35	303.80
3-Feb-05	66.50	303.65
7-Mar-05	66.64	303.51
1-Apr-05	66.71	303.44
30-Apr-05	66.83	303.32
31-May-05	67.04	303.11
2-Jul-05	67.19	302.96
3-Aug-05	67.30	302.85
2-Sep-05	67.39	302.76

GGW50 — Datum = 360.88; Dip = 90.00

Date	(m bgl)	(m AHD)
15-Nov-85	24.07	336.81
10-Apr-89	24.18	336.70
6-May-89	24.20	336.68
3-Jun-89	24.24	336.64
1-Jul-89	24.24	336.64
2-Aug-89	24.26	336.62
2-Sep-89	24.35	336.53
30-Sep-89	24.38	336.50
4-Nov-89	24.44	336.44
9-Dec-89	24.47	336.41
13-Jan-90	24.44	336.44
3-Feb-90	24.49	336.39
3-Mar-90	24.48	336.40
31-Mar-90	24.45	336.43
5-May-90	24.49	336.39
2-Jun-90	24.49	336.39
7-Jul-90	24.49	336.39
9-Aug-90	24.52	336.36
5-Sep-90	24.55	336.33
10-Oct-90	24.66	336.22
27-Nov-90	24.69	336.19
24-Dec-90	24.67	336.21
1-Feb-91	24.72	336.16
5-Feb-91	24.73	336.15
6-Mar-91	24.69	336.19
3-Apr-91	24.73	336.15
4-May-91	24.73	336.15
11-Jun-91	24.80	336.08
10-Jul-91	24.79	336.09
25-Aug-91	24.80	336.08
7-Sep-91	24.80	336.08
13-Sep-91	24.80	336.08
16-Dec-91	24.78	336.10
25-Feb-92	25.40	335.48
10-Mar-92	25.42	335.46
4-May-92	25.32	335.56
30-Jun-92	25.71	335.17
7-Jul-92	25.30	335.58
1-Aug-92	25.43	335.45
5-Oct-92	25.98	334.90
8-Nov-92	26.07	334.81
11-Dec-92	26.19	334.69
10-Jan-93	26.22	334.66
12-Feb-93	26.24	334.64
13-Mar-93	26.30	334.58
8-Apr-93	26.30	334.58
7-May-93	26.35	334.53
11-Jun-93	26.45	334.43
3-Jul-93	26.55	334.33
12-Jul-93	26.69	334.19
6-Aug-93	26.40	334.48
2-Sep-93	26.43	334.45
1-Oct-93	26.73	334.15
1-Nov-93	26.74	334.14
2-Nov-93	26.80	334.08
4-Jan-94	26.30	334.58
16-Mar-94	27.70	333.18
24-Apr-94	28.00	332.88
6-Oct-94	28.09	332.79
3-Nov-94	28.20	332.68
1-Dec-94	28.28	332.60
5-Jan-95	28.58	332.30
16-Feb-95	28.50	332.38
9-Mar-95	28.40	332.48
30-Mar-95	28.48	332.40
30-Apr-95	28.11	332.77
1-Jun-95	28.03	332.85
3-Jul-95	28.50	332.38
7-Aug-95	28.60	332.28
29-Aug-95	28.61	332.27
28-Sep-95	28.45	332.43
31-Oct-95	28.36	332.52
2-Dec-95	28.65	332.23
18-Dec-95	28.57	332.31
31-Jan-96	28.87	332.01
3-Mar-96	28.93	331.95
6-Apr-96	29.25	331.63
5-May-96	29.20	331.68
3-Jul-96	29.30	331.58
2-Oct-96	29.60	331.28
31-Dec-96	29.58	331.30
31-May-97	29.68	331.20
31-Jul-97	29.73	331.15
31-Oct-97	30.16	330.72
30-Nov-97	30.23	330.65
31-Dec-97	30.58	330.30
28-Feb-98	30.69	330.19
30-Apr-98	30.76	330.12
31-May-98	30.68	330.20
31-Jul-98	30.46	330.42
31-Aug-98	30.26	330.62
30-Sep-98	30.12	330.76
31-Oct-98	30.01	330.87
30-Nov-98	30.65	330.23
31-Dec-98	30.96	329.92
31-Jan-99	31.25	329.63
28-Feb-99	31.51	329.37
31-Mar-99	31.80	329.08
30-May-99	32.50	328.38
30-Jun-99	31.11	329.77
1-Aug-99	31.10	329.78
2-Sep-99	31.10	329.78
4-Oct-99	31.29	329.59
5-Nov-99	31.29	329.59
9-Jan-00	31.32	329.56
4-Feb-00	32.48	328.40
25-Feb-00	31.46	329.42
2-Apr-00	31.43	329.45
28-Apr-00	31.23	329.65
12-Aug-00	31.45	329.43
9-Nov-01	31.78	329.10
2-Dec-01	31.89	328.99
24-Dec-01	31.98	328.90
3-Feb-02	32.05	328.83
4-Mar-02	32.13	328.75
9-Apr-02	32.14	328.74
30-Apr-02	32.02	328.86
28-May-02	31.96	328.92
25-Jun-02	31.97	328.91
6-Aug-02	32.00	328.88
30-Aug-02	31.99	328.89
17-Oct-02	32.16	328.72
2-Nov-02	32.36	328.52
1-Dec-02	32.23	328.65
20-Dec-02	32.09	328.79
27-Jan-03	32.19	328.69
3-Apr-03	32.10	328.78
30-Apr-03	32.29	328.59
4-Jun-03	32.09	328.79
27-Jun-03	32.13	328.75
31-Jul-03	32.00	328.88
30-Aug-03	31.86	329.02
29-Sep-03	31.92	328.96
31-Oct-03	31.95	328.93
29-Nov-03	32.01	328.87
31-Dec-03	32.17	328.71
30-Jan-04	32.17	328.71
31-Mar-04	32.11	328.77
30-May-04	32.02	328.86
2-Aug-04	31.89	328.99
2-Sep-04	31.65	329.23
1-Oct-04	31.73	329.15
2-Nov-04	31.78	329.10
3-Jan-05	31.98	328.90
3-Feb-05	32.10	328.78
7-Mar-05	32.17	328.71
1-Apr-05	32.00	328.88
30-Apr-05	31.87	329.01
31-May-05	31.69	329.19
2-Jul-05	31.66	329.22
3-Aug-05	31.52	329.36
2-Sep-05	31.52	329.36
28-Sep-05	31.52	329.36
4-Oct-05	31.52	329.36
25-Oct-05	31.45	329.43
4-Jan-06	31.66	329.22
12-Jan-06	31.66	329.22

GGW62 — Datum = 367.20; Dip = 90.00

Date	(m bgl)	(m AHD)
1-Jul-89	33.70	333.50
25-Feb-92	33.87	333.33
19-Jul-93	42.65	324.55
6-Aug-93	42.35	324.85
2-Sep-93	41.35	325.85
1-Oct-93	40.84	326.36
1-Nov-93	40.70	326.50
2-Nov-93	40.60	326.60
4-Jan-94	40.59	326.61
16-Mar-94	40.57	326.63
24-Apr-94	40.71	326.49
6-Oct-94	40.86	326.34
3-Nov-94	40.85	326.35
1-Dec-94	40.87	326.33
5-Jan-95	40.88	326.32
16-Feb-95	40.91	326.29
9-Mar-95	40.85	326.35
30-Mar-95	40.85	326.35
30-Apr-95	40.95	326.25
1-Jun-95	40.98	326.22
3-Jul-95	41.02	326.18
7-Aug-95	42.07	325.13
29-Aug-95	42.16	325.04
28-Sep-95	42.16	325.04
31-Oct-95	42.30	324.90
2-Dec-95	42.43	324.77
18-Dec-95	42.50	324.70
31-Jan-96	42.75	324.45
3-Mar-96	42.89	324.31
6-Apr-96	43.20	324.00
5-May-96	43.22	323.98
3-Jul-96	43.60	323.60
2-Oct-96	43.97	323.23
26-Oct-96	44.15	323.05
31-Dec-96	44.46	322.74
31-May-97	45.08	322.12
31-Jul-97	45.30	321.90
31-Oct-97	45.56	321.64
30-Nov-97	45.68	321.52
31-Dec-97	45.80	321.40
30-Apr-98	46.13	321.07
31-May-98	46.10	321.10
31-Jul-98	54.21	312.99
31-Aug-98	46.32	320.88
30-Nov-98	46.84	320.36
31-Dec-98	46.93	320.27
31-Jan-99	47.10	320.10
28-Feb-99	47.20	320.00
31-Mar-99	47.31	319.89
30-Jun-99	47.68	319.52
1-Aug-99	47.79	319.41
2-Sep-99	47.90	319.30
5-Nov-99	48.15	319.05
6-Dec-99	48.35	318.85
9-Jan-00	48.56	318.64
4-Feb-00	48.67	318.53
25-Feb-00	48.76	318.44
2-Apr-00	48.92	318.28
28-Apr-00	49.03	318.17
6-Jun-00	49.22	317.98
12-Jul-00	49.38	317.82
12-Aug-00	49.61	317.59
26-Aug-00	49.67	317.53
7-Oct-00	49.91	317.29
28-Oct-00	50.02	317.18
22-Nov-00	50.07	317.13
30-Dec-00	50.14	317.06
5-Feb-01	50.35	316.85
5-Mar-01	50.50	316.70
29-Mar-01	50.65	316.55
30-Apr-01	50.79	316.41
29-May-01	50.94	316.26
7-Jul-01	51.36	315.84
27-Jul-01	51.47	315.73
25-Aug-01	51.73	315.47
1-Oct-01	51.90	315.30
9-Nov-01	52.10	315.10
2-Dec-01	52.20	315.00
24-Dec-01	52.25	314.95
3-Feb-02	52.50	314.70
4-Mar-02	52.68	314.52
9-Apr-02	52.91	314.29
30-Apr-02	53.01	314.19
28-May-02	53.16	314.04
25-Jun-02	53.27	313.93
6-Aug-02	53.50	313.70
30-Aug-02	53.63	313.57
17-Oct-02	53.82	313.38
2-Nov-02	53.99	313.21
1-Dec-02	54.32	312.88
20-Dec-02	53.19	314.01
27-Jan-03	54.36	312.84
3-Apr-03	54.73	312.47
30-Apr-03	54.93	312.27
4-Jun-03	55.14	312.06
27-Jun-03	55.23	311.97
31-Jul-03	55.47	311.73
30-Aug-03	55.62	311.58
29-Sep-03	55.70	311.50
31-Oct-03	55.90	311.30
29-Nov-03	56.06	311.14
31-Dec-03	56.25	310.95
30-Jan-04	56.47	310.73
31-Mar-04	56.79	310.41
30-May-04	57.17	310.03
2-Aug-04	57.71	309.49
2-Sep-04	57.90	309.30
1-Oct-04	58.14	309.06
3-Jan-05	59.05	308.15
3-Feb-05	59.20	308.00
1-Apr-05	59.55	307.65
30-Apr-05	59.71	307.49
31-May-05	59.98	307.22
2-Jul-05	60.20	307.00
3-Aug-05	60.56	306.64
2-Sep-05	60.70	306.50
4-Oct-05	60.94	306.26
25-Oct-05	61.10	306.10
4-Jan-06	61.56	305.64
30-Jan-06	61.80	305.40
11-Mar-06	61.98	305.22
4-Apr-06	62.22	304.98
1-Jun-06	61.53	305.67
11-Jul-06	61.74	305.46
4-Sep-06	61.98	305.22
3-Oct-06	62.12	305.08
30-Oct-06	62.24	304.96
9-Dec-06	62.50	304.70
8-Jan-07	62.55	304.65
6-Feb-07	62.67	304.53
10-Mar-07	62.77	304.43
16-Apr-07	62.94	304.26
1-May-07	63.00	304.20
30-Jun-07	63.16	304.04
29-Jul-07	63.40	303.80
4-Sep-07	63.54	303.66
2-Nov-07	63.72	303.48
10-Jan-08	63.99	303.21
8-Mar-08	64.20	303.00
4-Apr-08	64.30	302.90
16-May-08	64.52	302.68
2-Sep-08	64.90	302.30
05-Oct-08	65.08	302.12
29-Oct-08	Not measured	
24-Dec-08	65.25	301.95
02-Jan-09	65.35	301.85
08-Feb-09	65.45	301.75
21-Mar-09	65.66	301.54
01-Apr-09	65.65	301.55
15-May-09	64.82	302.38
14-Jun-09	65.92	301.28
06-Aug-09	66.09	301.11
15-Sep-09	66.24	300.96
13-Oct-09	66.32	300.88
11-Nov-09	66.36	300.84
22-Dec-09	66.47	300.73
19-Jan-10	66.59	300.61

GGW69 — Datum = 372.44; Dip = 90.00

Date	(m bgl)	(m AHD)
12-Jul-93	42.94	329.50
1-Oct-93	41.24	331.20
1-Nov-93	41.35	331.09
16-Mar-94	54.12	318.32
24-Apr-94	52.52	319.92
1-May-94	52.57	319.87
9-Jun-94	52.49	319.95
6-Oct-94	51.30	321.14
3-Nov-94	51.11	321.33
1-Dec-94	49.97	322.47
5-Jan-95	49.90	322.54
16-Feb-95	49.75	322.69
9-Mar-95	49.53	322.91
30-Mar-95	49.45	322.99
30-Apr-95	49.26	323.18
1-Jun-95	48.96	323.48
4-Jul-95	48.77	323.67
7-Aug-95	50.00	322.44
29-Aug-95	49.84	322.60
29-Sep-95	49.48	322.96
31-Oct-95	49.23	323.21
2-Dec-95	49.01	323.43
18-Dec-95	48.95	323.49
31-Jan-96	45.81	326.63
1-Mar-96	48.87	323.57
6-Apr-96	48.84	323.60
5-May-96	16.75	355.69
10-Jun-96	18.67	353.77
4-Jul-96	19.80	352.64
1-Sep-96	20.63	351.81
3-Oct-96	21.90	350.54
4-Nov-96	22.50	349.94
31-Dec-96	23.28	349.16
31-Jan-97	23.59	348.85
1-Mar-97	23.90	348.54
1-Apr-97	25.20	347.24
1-Jul-97	26.51	345.93
31-Jul-97	27.10	345.34
1-Nov-97	29.34	343.10
1-Dec-97	29.82	342.62
31-Dec-97	30.62	341.82
28-Feb-98	32.47	339.97
31-May-98	34.43	338.01
30-Jul-98	34.50	337.94
30-Aug-98	43.39	329.05
29-Oct-98	43.52	328.92
2-Dec-98	56.36	316.08
11-Feb-99	61.09	311.35
12-Apr-99	61.80	310.64
3-May-99	61.57	310.87
30-May-99	60.70	311.74
1-Jul-99	59.51	312.93
1-Aug-99	57.82	314.62
2-Sep-99	57.64	314.80
5-Oct-99	58.25	314.19
11-Nov-99	58.55	313.89
15-Dec-99	60.14	312.30
15-Jan-00	59.89	312.55
5-Feb-00	59.69	312.75
28-Feb-00	59.67	312.77
2-Apr-00	59.21	313.23
1-May-00	57.81	314.63
7-Jun-00	58.69	313.75
14-Jul-00	59.11	313.33
12-Aug-00	59.27	313.17
28-Aug-00	58.84	313.60
8-Oct-00	59.12	313.32
29-Oct-00	59.35	313.09
7-Dec-00	61.24	311.20
5-Jan-01	62.14	310.30
11-Mar-01	62.94	309.50
30-Mar-01	63.49	308.95
4-May-01	60.57	311.87
27-May-01	59.03	313.41
4-Jul-01	58.30	314.14
31-Jul-01	58.50	313.94
24-Aug-01	58.85	313.59
5-Oct-01	58.82	313.62
12-Nov-01	58.49	313.95
8-Dec-01	59.35	313.09
12-Jan-02	60.55	311.89
4-Feb-02	61.86	310.58
4-Mar-02	62.41	310.03
8-Apr-02	62.60	309.84
6-May-02	62.16	310.28
9-Jun-02	61.12	311.32
25-Jun-02	60.65	311.79
3-Aug-02	60.07	312.37
31-Aug-02	60.06	312.38
16-Oct-02	62.65	309.79
3-Nov-02	63.39	309.05
4-Dec-02	63.16	309.28
20-Dec-02	62.92	309.52
29-Jan-03	62.72	309.72
3-Mar-03	63.04	309.40
4-Apr-03	62.97	309.47
1-May-03	63.02	309.42
4-Jun-03	62.39	310.05
28-Jun-03	62.00	310.44
31-Jul-03	60.58	311.86
30-Aug-03	59.69	312.75
29-Sep-03	59.25	313.19
1-Nov-03	60.09	312.35
29-Nov-03	60.88	311.56
31-Dec-03	62.95	309.49
30-Mar-04	63.29	309.15
28-Apr-04	63.03	309.41
31-May-04	62.47	309.97
1-Nov-04	66.75	305.69
3-Jan-05	62.29	310.15
2-Feb-05	63.33	309.11
8-Mar-05	64.32	308.12
30-May-05	62.84	309.60
3-Jul-05	61.40	311.04
1-Aug-05	60.75	311.69
1-Sep-05	60.24	312.20
26-Oct-05	59.88	312.56
4-Dec-05	60.91	311.53
3-Jan-06	61.61	310.83
31-Jan-06	62.09	310.35
2-Mar-06	62.38	310.06
3-Apr-06	62.41	310.03
2-May-06	61.36	311.08
3-Jun-06	60.81	311.63
1-Jul-06	60.52	311.92
30-Jul-06	60.67	311.77
8-Sep-06	61.69	310.75
4-Oct-06	61.57	310.87
30-Oct-06	61.47	310.97
31-Dec-06	62.11	310.33
30-Jan-07	62.26	310.18
9-Mar-07	62.85	309.59
8-Apr-07	62.55	309.89
7-May-07	62.88	309.56
2-Jun-07	63.02	309.42
30-Jun-07	63.45	308.99
28-Jul-07	63.42	309.02
3-Sep-07	63.37	309.07
3-Nov-07	64.23	308.21
2-Dec-07	65.02	307.42
8-Jan-08	65.65	306.79
7-Mar-08	65.58	306.86
1-Apr-08	65.98	306.46
1-Jun-08	64.94	307.50
4-Sep-08	64.80	307.64
4-Oct-08	64.75	307.69
29-Oct-08	64.86	307.58
30-Nov-08	65.75	306.69
24-Dec-08	65.75	306.69
9-Jan-09	65.90	306.54
3-Feb-09	66.55	305.89
20-Mar-09	65.94	306.50
1-May-09	65.85	306.59
31-May-09	64.55	307.89
29-Jun-09	64.11	308.33
4-Aug-09	63.01	309.43
15-Sep-09	62.40	310.04

Appendix F - Monitoring Bore Water Level Data

Gossan Hill Area

GGW81		
Date	Datum = 348.94	Dip = 90.00
	(m bgl)	(m AHD)
15-Jan-16	64.93	284.01
10-Feb-16	64.82	284.12
7-Mar-16	65.00	283.94
12-Apr-16	65.05	283.89
14-Apr-16	65.05	283.89
15-Jun-16	65.19	283.75
26-Jun-16	65.19	283.75
28-Jul-16	65.25	283.69
20-Aug-16	65.28	283.66
28-Sep-16	65.39	283.55
29-Oct-16	65.37	283.57
29-Dec-16	65.39	283.55
11-Jan-17	65.45	283.49
22-Jan-17	65.45	283.49
11-Feb-17	65.42	283.52
15-Mar-17	65.53	283.41
5-Apr-17	65.53	283.41
14-Apr-17	65.53	283.41
28-May-17	65.70	283.24
17-Jun-17	65.72	283.22
30-Jun-17	65.67	283.27
27-Jul-17	65.67	283.27
18-Aug-17	65.80	283.14
20-Sep-17	65.85	283.09
23-Sep-17	65.85	283.09
20-Oct-17	65.92	283.02
26-Nov-17	65.89	283.05
22-Dec-17	65.99	282.95
29-Jan-18	66.09	282.85
22-Feb-18	66.04	282.90
15-Mar-18	66.07	282.87
7-Apr-18	66.16	282.78
17-Apr-18	66.15	282.79
15-May-18	66.23	282.71
25-Jun-18	66.24	282.70
13-Jul-18	66.30	282.64
16-Jul-18	66.30	282.64
22-Aug-18	66.38	282.56
15-Oct-18	63.33	285.61
23-Oct-18	66.33	282.61
23-Nov-18	66.46	282.48
30-Dec-18	66.49	282.45
22-Jan-19	66.59	282.35
11-Feb-19	66.63	282.31
16-Feb-19	66.63	282.31
20-Mar-19	66.75	282.19
19-Apr-19	66.69	282.25
7-May-19	66.81	282.13
12-Jul-19	66.93	282.01
13-Aug-19	66.90	282.04
19-Aug-19	66.90	282.04
12-Sep-19	66.94	282.00
3-Oct-19	66.98	281.96
6-Nov-19	66.99	281.95
14-Nov-19	67.05	281.89
10-Dec-19	67.06	281.88
25-Jan-20	67.05	281.89
29-Jan-20	67.14	281.80
6-Feb-20	67.14	281.80
19-Mar-20	67.02	281.92
22-Apr-20	68.47	280.47
20-May-20	67.38	281.56
5-Jul-20	67.31	281.63
27-Aug-20	67.34	281.60
11-Sep-20	67.37	281.57
25-Sep-20	67.33	281.61
22-Oct-20	67.38	281.56
7-Nov-20	67.31	281.63
18-Nov-20	67.39	281.55
17-Jan-21	67.46	281.48
13-Feb-21	67.46	281.48
13-Mar-21	67.55	281.39
11-May-21	67.67	281.27
23-May-21	67.49	281.45
8-Jun-21	67.58	281.36
15-Jul-21	67.69	281.25
14-Aug-21	67.61	281.33
12-Sep-21	67.81	281.13
12-Oct-21	67.78	281.16
9-Nov-21	67.87	281.07
22-Nov-21	67.87	281.07
16-Dec-21	67.92	281.02
14-Jan-22	67.91	281.03
11-Feb-22	67.98	280.96
10-Mar-22	67.87	281.07
9-Apr-22	67.83	281.11
7-May-22	67.85	281.09
7-Jun-22	67.89	281.05
3-Jul-22	68.00	280.94
25-Aug-22	68.02	280.92
25-Sep-22	68.13	280.81
23-Oct-22	68.09	280.85
20-Nov-22	68.10	280.84
29-Dec-22	68.15	280.79
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	68.35	280.59
18-May-23	68.32	280.62
17-Jun-23	68.36	280.58
13-Jul-23	68.43	280.51
13-Aug-23	68.92	280.02
15-Sep-23	68.44	280.50
15-Oct-23		
17-Nov-23	68.54	280.40
29-Dec-23	68.44	280.50
30-Jan-24		
25-Feb-24	68.84	280.10
23-Mar-24	68.64	280.30
15-Apr-24	68.71	280.23
20-May-24	68.62	280.32
15-Jun-24	68.62	280.32
16-Jul-24	68.69	280.25
15-Aug-24	68.74	280.20
29-Sep-24	68.72	280.22
16-Oct-24	68.72	280.22
15-Nov-24	68.77	280.17
13-Dec-24	68.78	280.16
18-Jan-25		
20-Feb-25		
14-Mar-25		

GGW83		
Date	Datum = 364.28	Dip = 90.00
	(m bgl)	(m AHD)
15-Oct-18	144.36	219.92
23-Nov-18	144.29	219.99
30-Dec-18	144.30	219.98
22-Jan-19	144.32	219.96
16-Feb-19	144.37	219.91
20-Mar-19	143.79	220.49
19-Apr-19	143.83	220.45
12-Jul-19	143.91	220.37
19-Aug-19	143.75	220.53
12-Sep-19	143.83	220.45
03-Oct-19	Driven Over	
10-Dec-19	Cap Stuck	
25-Jan-20	144.50	219.78
08-Feb-20	144.56	219.72
19-Mar-20	144.47	219.81
17-Apr-20	144.57	219.71
20-May-20	144.58	219.70
05-Jul-20	144.80	219.48
27-Aug-20	144.74	219.54
11-Sep-20	144.75	219.53
22-Oct-20	144.79	219.49
07-Nov-20	144.79	219.49
17-Jan-21	144.89	219.39
13-Feb-21	144.96	219.32
11-May-21	144.81	219.47
08-Jun-21	144.72	219.56
15-Jul-21	144.90	219.38
14-Aug-21	144.84	219.44
12-Sep-21	144.78	219.50
12-Oct-21	144.87	219.41
09-Nov-21	144.89	219.39
16-Dec-21	144.90	219.38
14-Jan-22	144.93	219.35
11-Feb-22	144.67	219.61
10-Mar-22	144.65	219.63
9-Apr-22	145.59	218.69
7-May-22	144.82	219.46
7-Jun-22	144.84	219.44
3-Jul-22	144.92	219.36
25-Aug-22	144.89	219.39
25-Sep-22	144.92	219.36
23-Oct-22	145.19	219.09
20-Nov-22	145.28	219.00
29-Dec-22	145.78	218.50
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	145.76	218.52
18-May-23	145.60	218.68
17-Jun-23	145.63	218.65
13-Jul-23	145.65	218.63
13-Aug-23	145.69	218.59
15-Sep-23	145.73	218.55
15-Oct-23		
17-Nov-23	145.90	218.38
29-Dec-23	145.73	218.55
30-Jan-24		
25-Feb-24	146.47	217.81
23-Mar-24	130.65	233.63
15-Apr-24	134.75	229.53
20-May-24	134.84	229.44
15-Jun-24	134.84	229.44
16-Jul-24	134.89	229.39
15-Aug-24	134.92	229.36
29-Sep-24	134.90	229.38
16-Oct-24	134.90	229.38
15-Nov-24	134.91	229.37
13-Dec-24	134.92	229.36
18-Jan-25	133.24	231.04
20-Feb-25	135.72	228.56
14-Mar-25	137.08	227.20

Scuddles Mine Area

GGW6A		
Date	Datum = 368.19	Dip = 90.00
	(m bgl)	(m AHD)
1-Apr-05	43.72	324.47
30-Apr-05	43.75	324.44
31-May-05	43.85	324.34
2-Jul-05	43.88	324.31
3-Aug-05	43.99	324.20
2-Sep-05	44.02	324.17
4-Oct-05	44.03	324.16
25-Oct-05	44.09	324.10
4-Jan-06	44.20	323.99
11-Jan-06	44.22	323.97
30-Jan-06	44.30	323.89
11-Mar-06	44.33	323.86
4-Apr-06	44.41	323.78
1-Jun-06	44.49	323.70
30-Jul-06	44.57	323.62
4-Sep-06	44.63	323.56
19-Sep-06	44.68	323.51
3-Oct-06	44.69	323.50
30-Oct-06	44.65	323.54
8-Jan-07	44.75	323.44
9-Jan-07	44.63	323.56
6-Feb-07	44.85	323.34
10-Mar-07	44.76	323.43
4-Apr-07	44.94	323.25
16-Apr-07	44.94	323.25
1-May-07	45.00	323.19
3-Jun-07	45.05	323.14
12-Jun-07	45.07	323.12
30-Jun-07	45.03	323.16
29-Jul-07	45.17	323.02
4-Sep-07	45.24	322.95
22-Sep-07	43.20	324.99
2-Nov-07	45.28	322.91
10-Jan-08	45.40	322.79
8-Mar-08	45.48	322.71
21-Mar-08	45.51	322.68
4-Apr-08	45.55	322.64
16-May-08	45.64	322.55
11-Jun-08	45.69	322.50
2-Sep-08	45.78	322.41
16-Sep-08	45.73	322.46
05-Oct-08	45.87	322.32
29-Oct-08	45.87	322.32
24-Dec-08	45.89	322.30
02-Jan-09	45.96	322.23
08-Feb-09	46.05	322.14
07-Mar-09	46.09	322.10
21-Mar-09	46.10	322.09
01-Apr-09	46.10	322.09
15-May-09	46.19	322.00
10-Jun-09	46.18	322.01
14-Jun-09	46.18	322.01
06-Aug-09	46.23	321.96
01-Sep-09	46.36	321.83
15-Sep-09	46.37	321.82
13-Oct-09	43.36	324.83
11-Nov-09	46.42	321.77
22-Dec-09	45.44	322.75
19-Jan-10	46.64	321.55
16-Feb-10	46.73	321.46
17-Mar-10	46.72	321.47
19-Mar-10	46.72	321.47
04-Apr-10	46.64	321.55
02-May-10	46.75	321.44
09-Jun-10	46.80	321.39
24-Jun-10	46.76	321.43
26-Jul-10	46.78	321.41
1-Aug-10	Not Measured	
18-Sep-10	46.90	321.29
16-Oct-10	47.97	320.22
12-Nov-10	46.91	321.28
12-Dec-10	47.03	321.16
24-Dec-10	47.06	321.13
19-Jan-11	47.00	321.19
6-Mar-11	47.15	321.04
17-Mar-11	47.12	321.07
13-Apr-11	47.15	321.04
8-Jun-11	47.26	320.93
21-Jun-11	47.28	320.91
24-Jul-11	Not Measured	
8-Aug-11	Not Measured	
2-Sep-11	47.41	320.78
15-Sep-11	47.43	320.76
29-Oct-11	47.52	320.67
10-Nov-11	47.53	320.66
6-Dec-11	47.50	320.69
11-Dec-11	47.55	320.64
19-Jan-12	46.65	321.54
15-Feb-12	47.52	320.67
4-Mar-12	47.48	320.71
15-Mar-12	47.70	320.49
14-Apr-12	47.50	320.69
16-May-12	47.51	320.68
9-Jun-12	42.80	325.39
19-Jun-12	47.75	320.44
15-Jul-12	47.52	320.67
15-Aug-12	47.54	320.65
15-Sep-12	47.90	320.29
15-Oct-12	47.90	320.29
9-Nov-12	47.98	320.21
15-Dec-12	47.97	320.22
13-Jan-13	47.55	320.64
14-Jan-13	47.55	320.64
10-Feb-13	48.07	320.12
15-Feb-13	48.07	320.12
12-Mar-13	48.17	320.02
15-Mar-13	48.14	320.05
21-Mar-13	48.14	320.05
14-Apr-13	48.22	319.97
15-Apr-13	48.22	319.97
12-May-13	48.20	319.99
15-May-13	48.20	319.99
4-Jun-13	48.26	319.93
15-Jun-13	48.26	319.93
17-Jun-13	48.26	319.93
10-Jul-13	48.29	319.90
15-Jul-13	48.29	319.90
15-Aug-13	48.39	319.80
18-Aug-13	48.39	319.80
12-Sep-13	48.41	319.78
15-Sep-13	48.41	319.78
23-Sep-13	48.41	319.78
19-Dec-13	48.50	319.69
15-Mar-14	48.68	319.51
26-Mar-14	48.67	319.52
8-Apr-14	48.67	319.52
15-May-14	48.72	319.47
15-Jun-14	40.80	327.39
18-Jun-14	40.80	327.39
17-Jul-14	48.85	319.34
26-Aug-14	48.86	319.33
9-Sep-14	48.93	319.26
23-Sep-14	48.87	319.32
7-Oct-14	48.90	319.29
21-Nov-14	48.98	319.21
6-Dec-14	49.04	319.15
15-Dec-14	49.04	319.15
26-Jan-15	49.01	319.18
19-Feb-15	49.13	319.06
12-Mar-15	49.05	319.14
25-Mar-15	49.19	319.00
27-Apr-15	49.20	318.99
8-May-15	49.24	318.95
7-Jun-15	49.28	318.91
4-Jul-15	49.28	318.91
16-Jul-15	49.28	318.91
14-Aug-15	49.33	318.86
23-Sep-15	49.31	318.88
6-Oct-15	49.47	318.72
21-Oct-15	49.47	318.72
4-Nov-15	49.39	318.80
1-Dec-15	49.35	318.84

GGW49		
Date	Datum = 370.15	Dip = 90.00
	(m bgl)	(m AHD)
4-Oct-05	67.50	302.65
25-Oct-05	67.58	302.57
4-Jan-06	67.83	302.32
30-Jan-06	67.98	302.17
11-Mar-06	68.07	302.08
4-Apr-06	68.20	301.95
1-Jun-06	68.32	301.83
11-Jul-06	68.48	301.67
30-Jul-06	68.46	301.69
4-Sep-06	68.55	301.60
3-Oct-06	68.63	301.52
30-Oct-06	68.67	301.48
9-Dec-06	68.85	301.30
8-Jan-07	68.87	301.28
6-Feb-07	68.96	301.19
10-Mar-07	68.98	301.17
16-Apr-07	69.09	301.06
1-May-07	69.11	301.04
3-Jun-07	69.25	300.90
30-Jun-07	69.20	300.95
29-Jul-07	69.40	300.75
4-Sep-07	69.52	300.63
2-Nov-07	69.66	300.49
10-Jan-08	69.90	300.25
8-Mar-08	70.11	300.04
04-Apr-08	70.20	299.95
16-May-08	70.42	299.73
02-Sep-08	70.66	299.49
05-Oct-08	70.85	299.30
29-Oct-08	70.87	299.28
24-Dec-08	70.79	299.36
02-Jan-09	70.98	299.17
08-Feb-09	71.12	299.03
21-Mar-09	71.25	298.90
01-Apr-09	71.28	298.87
15-May-09	71.38	298.77
14-Jun-09	71.43	298.72
11-Jul-09	71.54	298.61
06-Aug-09	71.57	298.58
15-Sep-09	71.81	298.34
13-Oct-09	71.80	298.35
11-Nov-09	71.84	298.31
22-Dec-09	71.92	298.23
19-Jan-10	71.97	298.18
16-Feb-10	72.25	297.90
19-Mar-10	72.20	297.95
04-Apr-10	72.29	297.86
02-May-10	72.29	297.86
09-Jun-10	72.50	297.65
26-Jul-10	72.41	297.74
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	72.75	297.40
12-Nov-10	72.80	297.35
24-Dec-10	72.92	297.23
19-Jan-11	73.00	297.15
06-Mar-11	73.23	296.92
13-Apr-11	73.21	296.94
21-Jun-11	76.35	293.80
24-Jul-11	73.39	296.76
08-Aug-11	73.50	296.65
02-Sep-11	73.55	296.60
29-Oct-11	73.70	296.45
10-Nov-11	73.72	296.43
11-Dec-11	73.75	296.40
19-Jan-12	73.80	296.35
15-Feb-12	73.90	296.25
04-Mar-12	73.94	296.21
14-Apr-12	73.91	296.24
16-May-12	73.89	296.26
09-Jun-12	74.11	296.04
15-Jul-12	73.88	296.27
15-Aug-12	73.85	296.30
15-Sep-12	74.32	295.83
15-Oct-12	74.32	295.83
09-Nov-12	75.35	294.80
13-Jan-13	73.78	296.37
14-Jan-13	73.78	296.37
10-Feb-13	75.00	295.15
15-Feb-13	75.00	295.15
12-Mar-13	74.66	295.49
15-Mar-13	74.66	295.49
14-Apr-13	74.70	295.45
15-Apr-13	74.70	295.45
12-May-13	74.73	295.42
15-May-13	74.73	295.42
15-Jun-13	74.77	295.38
17-Jun-13	74.77	295.38
10-Jul-13	74.83	295.32
15-Jul-13	74.83	295.32
15-Aug-13	74.94	295.21
18-Aug-13	74.94	295.21
12-Sep-13	74.92	295.23
15-Sep-13	74.92	295.23
19-Dec-13	75.10	295.05
15-Mar-14	75.30	294.85
08-Apr-14	75.34	294.81
15-May-14	75.40	294.75
15-Jun-14	75.10	295.05
17-Jul-14	75.54	294.61
26-Aug-14	75.51	294.64
23-Sep-14	75.50	294.65
07-Oct-14	75.67	294.48
21-Nov-14	75.66	294.49
15-Dec-14	75.68	294.47
26-Jan-15	75.70	294.45
19-Feb-15	75.72	294.43
12-Mar-15	74.65	295.50
27-Apr-15	76.00	294.15
08-May-15	76.00	294.15
07-Jun-15	76.06	294.09
14-Aug-15	76.20	293.95
23-Sep-15	76.20	293.95
21-Oct-15	76.20	293.95
04-Nov-15	76.24	293.91
01-Dec-15	76.27	293.88
10-Feb-16	76.23	293.92
07-Mar-16	76.46	293.69
14-Apr-16	76.48	293.67
26-Jun-16	76.44	293.71
28-Jul-16	76.73	293.42
20-Aug-16	76.75	293.40
28-Sep-16	76.74	293.41
29-Oct-16	76.82	293.33
29-Dec-16	76.80	293.35
22-Jan-17	76.93	293.22
11-Feb-17	76.95	293.20
15-Mar-17	76.95	293.20
14-Apr-17	77.05	293.10
28-May-17	77.17	292.98
17-Jun-17	77.18	292.97
27-Jul-17	77.15	293.00
18-Aug-17	77.25	292.90
23-Sep-17	77.20	292.95
20-Oct-17	77.38	292.77
26-Nov-17	77.39	292.76
22-Dec-17	77.42	292.73
22-Feb-18	77.45	292.70
15-Mar-18	77.50	292.65
07-Apr-18	77.60	292.55
15-May-18	77.68	292.47
25-Jun-18	77.64	292.51
13-Jul-18	77.67	292.48
22-Aug-18	76.80	293.35
15-Oct-18	76.83	293.32
23-Nov-18	77.93	292.22
30-Dec-18	77.95	292.20
22-Jan-19	78.00	292.15
16-Feb-19	78.05	292.10
20-Mar-19	78.15	292.00
19-Apr-19	78.20	291.95
12-Jul-19	78.34	291.81

GGW50		
Date	Datum = 360.88	Dip = 90.00
	(m bgl)	(m AHD)
30-Jan-06	31.73	329.15
11-Mar-06	31.56	329.32
23-Mar-06	31.61	329.27
4-Apr-06	31.56	329.32
1-Jun-06	31.37	329.51
27-Jun-06	31.25	329.63
11-Jul-06	31.31	329.57
30-Jul-06	31.49	329.39
4-Sep-06	31.30	329.58
19-Sep-06	31.40	329.48
3-Oct-06	31.28	329.60
9-Dec-06	31.38	329.50
8-Jan-07	31.27	329.61
6-Feb-07	31.35	329.53
10-Mar-07	31.26	329.62
4-Apr-07	31.30	329.58
16-Apr-07	31.30	329.58
1-May-07	31.32	329.56
3-Jun-07	31.33	329.55
12-Jun-07	31.26	329.62
30-Jun-07	31.21	329.67
29-Jul-07	31.20	329.68
4-Sep-07	31.23	329.65
2-Nov-07	31.69	329.19
10-Jan-08	31.88	329.00
21-Mar-08	32.04	328.84
4-Apr-08	31.97	328.91
16-May-08	31.98	328.90
11-Jun-08	31.95	328.93
2-Sep-08	31.86	329.02
17-Sep-08	31.85	329.03
5-Oct-08	31.90	328.98
29-Oct-08	31.82	329.06
24-Dec-08	31.96	328.92
02-Jan-09	32.12	328.76
08-Feb-09	31.99	328.89
06-Mar-09	31.96	328.92
21-Mar-09	31.91	328.97
01-Apr-09	31.93	328.95
15-May-09	31.85	329.03
10-Jun-09	31.83	329.05
14-Jun-09	31.50	329.38
11-Jul-09	31.64	329.24
06-Aug-09	31.47	329.41
01-Sep-09	31.33	329.55
15-Sep-09	31.40	329.48
13-Oct-09	31.48	329.40
11-Nov-09	31.33	329.55
22-Dec-09	31.37	329.51
19-Jan-10	31.23	329.65
16-Feb-10	31.43	329.45
16-Mar-10	31.47	329.41
19-Mar-10	31.47	329.41
04-Apr-10	31.29	329.59
02-May-10	31.28	329.60
09-Jun-10	31.26	329.62
24-Jun-10	31.20	329.68
26-Jul-10	31.33	329.55
1-Aug-10	Not Measured	
15-Sep-10	31.18	329.70
16-Oct-10	31.15	329.73
12-Nov-10	31.15	329.73
12-Dec-10	32.29	328.59
24-Dec-10	31.27	329.61
19-Jan-11	31.16	329.72
6-Mar-11	31.32	329.56
20-Mar-11	31.32	329.56
13-Apr-11	31.29	329.59
9-Jun-11	31.75	329.13
21-Jun-11	31.74	329.14
24-Jul-11	31.76	329.12
8-Aug-11	31.78	329.10
2-Sep-11	31.71	329.17
16-Sep-11	31.67	329.21
29-Oct-11	32.02	328.86
10-Nov-11	32.07	328.81
7-Dec-11	32.16	328.72
11-Dec-11	32.16	328.72
19-Jan-12	32.16	328.72
15-Feb-12	32.23	328.65
4-Mar-12	32.24	328.64
17-Mar-12	32.18	328.70
14-Apr-12	32.24	328.64
16-May-12	32.24	328.64
9-Jun-12	32.32	328.56
24-Jun-12	32.30	328.58
15-Jul-12	32.25	328.63
15-Aug-12	32.26	328.62
15-Sep-12	32.35	328.53
15-Oct-12	32.35	328.53
9-Nov-12	32.59	328.29
15-Dec-12	32.53	328.35
13-Jan-13	32.61	328.27
14-Jan-13	32.61	328.27
10-Feb-13	32.45	328.43
15-Feb-13	32.45	328.43
12-Mar-13	22.40	338.48
15-Mar-13	32.43	328.45
21-Mar-13	32.43	328.45
14-Apr-13	32.49	328.39
15-Apr-13	32.49	328.39
12-May-13	32.69	328.19
15-May-13	32.69	328.19
9-Jun-13	32.49	328.39
15-Jun-13	32.49	328.39
17-Jun-13	32.49	328.39
10-Jul-13	32.66	328.22
15-Jul-13	32.66	328.22
15-Aug-13	32.66	328.22
18-Aug-13	32.66	328.22
12-Sep-13	32.69	328.19
15-Sep-13	32.69	328.19
12-Oct-13	32.66	328.22
15-Oct-13	32.66	328.22
18-Dec-13	32.79	328.09
14-Mar-14	32.97	327.91
27-Mar-14	32.95	327.93
8-Apr-14	32.95	327.93
15-May-14	32.81	328.07
15-Jun-14	32.85	328.03
20-Jun-14	32.85	328.03
17-Jul-14	32.82	328.06
26-Aug-14	32.93	327.95
10-Sep-14	32.87	328.01
23-Sep-14	32.87	328.01
9-Oct-14	32.91	327.97
21-Nov-14	33.15	327.73
9-Dec-14	33.23	327.65
15-Dec-14	33.23	327.65
26-Jan-15	33.25	327.63
17-Feb-15	33.42	327.46
11-Mar-15	33.23	327.65
26-Mar-15	33.41	327.47
25-Apr-15	33.34	327.54
7-May-15	33.31	327.57
6-Jun-15	33.41	327.47
5-Jul-15	33.41	327.47
15-Jul-15	33.40	327.48
15-Aug-15	33.39	327.49
24-Sep-15	33.35	327.53
7-Oct-15	33.58	327.30
20-Oct-15	33.58	327.30
4-Nov-15	33.45	327.43
3-Dec-15	33.46	327.42
13-Jan-16	33.69	327.19
12-Feb-16	33.43	327.45
8-Mar-16	33.73	327.15
4-Apr-16	33.75	327.13
15-Apr-16	33.75	327.13
16-Jun-16	33.75	327.13
25-Jun-16	33.75	327.13
29-Jul-16	33.73	327.15

GGW62		
Date	Datum = 367.20	Dip = 90.00
	(m bgl)	(m AHD)
16-Feb-10	63.84	303.36
19-Mar-10	66.81	300.39
04-Apr-10	66.91	300.29
02-May-10	66.95	300.25
09-Jun-10	67.10	300.10
26-Jul-10	66.71	300.49
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	67.43	299.77
12-Nov-10	67.52	299.68
24-Dec-10	67.63	299.57
19-Jan-11	67.70	299.50
06-Mar-11	67.96	299.24
13-Apr-11	67.97	299.23
21-Jun-11	68.21	298.99
24-Jul-11	68.24	298.96
08-Aug-11	Not Measured	
02-Sep-11	68.42	298.78
29-Oct-11	58.70	308.50
10-Nov-11	58.68	308.52
11-Dec-11	68.68	298.52
19-Jan-12	68.69	298.51
15-Feb-12	68.75	298.45
04-Mar-12	68.73	298.47
14-Apr-12	68.72	298.48
16-May-12	68.74	298.46
15-Jul-12	68.74	298.46
15-Aug-12	68.73	298.47
15-Sep-12	69.40	297.80
15-Oct-12	69.40	297.80
09-Nov-12	69.84	297.36
13-Jan-13	68.69	298.51
14-Jan-13	68.69	298.51
10-Feb-13	69.85	297.35
15-Feb-13	69.85	297.35
12-Mar-13	69.72	297.48
15-Mar-13	69.72	297.48
14-Apr-13	69.77	297.43
15-Apr-13	69.77	297.43
12-May-13	69.74	297.46
15-May-13	69.74	297.46
15-Jun-13	69.76	297.44
17-Jun-13	69.76	297.44
10-Jul-13	70.00	297.20
15-Jul-13	70.00	297.20
15-Aug-13	70.05	297.15
18-Aug-13	70.05	297.15
12-Sep-13	70.07	297.13
15-Sep-13	70.07	297.13
19-Dec-13	70.29	296.91
15-Mar-14	70.38	296.82
08-Apr-14	70.39	296.81
15-May-14	70.65	296.55
15-Jun-14	70.41	296.79
17-Jul-14	70.84	296.36
26-Aug-14	70.82	296.38
23-Sep-14	70.82	296.38
07-Oct-14	71.00	296.20
21-Nov-14	71.10	296.10
15-Dec-14	71.13	296.07
26-Jan-15	71.13	296.07
19-Feb-15	71.15	296.05
12-Mar-15	71.12	296.08
27-Apr-15	71.38	295.82
08-May-15	71.40	295.80
07-Jun-15	71.42	295.78
16-Jul-15	71.36	295.84
14-Aug-15	71.57	295.63
23-Sep-15	71.58	295.62
21-Oct-15	71.55	295.65
04-Nov-15	71.69	295.51
01-Dec-15	71.70	295.50
10-Feb-16	71.66	295.54
07-Mar-16	71.95	295.25
14-Apr-16	71.96	295.24
26-Jun-16	71.97	295.23
28-Jul-16	72.24	294.96
20-Aug-16	72.25	294.95
28-Sep-16	72.26	294.94
29-Oct-16	72.45	294.75
29-Dec-16	72.44	294.76
22-Jan-17	72.56	294.64
11-Feb-17	72.50	294.70
15-Mar-17	72.50	294.70
14-Apr-17	72.71	294.49
28-May-17	73.94	293.26
17-Jun-17	72.90	294.30
27-Jul-17	73.97	293.23
18-Aug-17	73.05	294.15
23-Sep-17	73.00	294.20
20-Oct-17	73.13	294.07
26-Nov-17	73.19	294.01
22-Dec-17	72.20	295.00
22-Feb-18	73.32	293.88
15-Mar-18	73.33	293.87
07-Apr-18	72.43	294.77
15-May-18	74.63	292.57
25-Jun-18	73.51	293.69
13-Jul-18	73.51	293.69
22-Aug-18	73.72	293.48
15-Oct-18	73.73	293.47
23-Nov-18	73.93	293.27
30-Dec-18	73.95	293.25
22-Jan-19	73.99	293.21
16-Feb-19	74.00	293.20
20-Mar-19	74.07	293.13
19-Apr-19	74.27	292.93
12-Jul-19	74.33	292.87
19-Aug-19	74.41	292.79
12-Sep-19	74.47	292.73
03-Oct-19	74.44	292.76
14-Nov-19	74.49	292.71
17-Dec-19	74.60	292.60
25-Jan-20	74.45	292.75
08-Feb-20	74.44	292.76
19-Mar-20	82.55	284.65
22-Apr-20	74.86	292.34
20-May-20	74.87	292.33
05-Jul-20	74.97	292.23
27-Aug-20	74.99	292.21
11-Sep-20	75.04	292.16
07-Nov-20	75.20	292.00
17-Jan-21	75.30	291.90
13-Feb-21	75.32	291.88
11-May-21	75.29	291.91
08-Jun-21	75.02	292.18
15-Jul-21	75.59	291.61
14-Aug-21	75.54	291.66
25-Sep-21	75.85	291.35
12-Oct-21	75.72	291.48
09-Nov-21	75.72	291.48
16-Dec-21	75.75	291.45
14-Jan-22	75.79	291.41
11-Feb-22	76.03	291.17
10-Mar-22	76.03	291.17
9-Apr-22	76.13	291.07
7-May-22	76.18	291.02
7-Jun-22	76.21	290.99
3-Jul-22	76.27	290.93
25-Aug-22	76.28	290.92
25-Sep-22	76.24	290.96
23-Oct-22	76.45	290.75
20-Nov-22	76.60	290.60
29-Dec-22	76.63	290.57
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	76.77	290.43
18-May-23	76.84	290.36
17-Jun-23	76.80	290.40
13-Jul-23	76.89	290.31
13-Aug-23	76.90	290.30

GGW69		
Date	Datum = 372.44	Dip = 90.00
	(m bgl)	(m AHD)
1-Oct-09	61.97	310.47
22-Dec-09	62.04	310.40
19-Jan-10	Not Measured	
16-Feb-10	Not Measured	
19-Mar-10	Not Measured	
04-Apr-10	Not Measured	
02-May-10	Not Measured	
09-Jun-10	Not Measured	
26-Jul-10	Not Measured	
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	Not Measured	
12-Nov-10	Not Measured	
24-Dec-10	Not Measured	
01-Apr-11	63.10	309.34
13-Apr-11	63.15	309.29
21-Jun-11	63.41	309.03
24-Jul-11	63.56	308.88
08-Aug-11	63.54	308.90
02-Sep-11	63.86	308.58
29-Oct-11	63.98	308.46
10-Nov-11	63.96	308.48
11-Dec-11	64.49	307.95
19-Jan-12	Not Measured	
16-Feb-12	63.83	308.61
19-Mar-12	Not Measured	
04-Apr-12	Not Measured	
02-May-12	63.75	308.69
09-Jun-12	Not Measured	
26-Jul-12	Not Measured	
1-Aug-12	63.74	308.70
1-Sep-12	62.85	309.59
16-Oct-12	62.85	309.59
12-Nov-12	63.29	309.15
24-Dec-12	Not Measured	
01-Feb-13	Not Measured	
01-Mar-13	63.93	308.51
03-Mar-13	63.95	308.49
01-May-13	63.92	308.52
01-Jun-13	63.91	308.53
02-Jul-13	63.69	308.75
01-Aug-13	63.65	308.79
17-Dec-13	67.74	304.70
12-Mar-14	64.12	308.32
09-Apr-14	64.10	308.34
13-May-14	63.16	309.28
21-Jun-14	63.54	308.90
19-Jul-14	62.94	309.50
16-Aug-14	63.29	309.15
24-Sep-14	63.30	309.14
08-Oct-14	63.33	309.11
05-Nov-14	123.59	
13-Dec-14	63.70	308.74
03-Jan-15	65.09	307.35
15-Feb-15	66.42	306.02
12-Mar-15	65.61	306.83
26-Apr-15	65.31	307.13
09-May-15	65.32	307.12
07-Jun-15	65.40	307.04
20-Jul-15	65.43	307.01
12-Aug-15	65.21	307.23
27-Sep-15	65.20	307.24
26-Oct-15	65.21	307.23
08-Nov-15	64.91	307.53
06-Dec-15	64.90	307.54
31-Jan-16	64.90	307.54
14-Feb-16	64.87	307.57
06-Mar-16	65.25	307.19
04-Apr-16	65.25	307.19
26-Jun-16	65.28	307.16
14-Jul-16	63.70	308.74
04-Aug-16	63.74	308.70
11-Sep-16	63.68	308.76
20-Oct-16	63.91	308.53
19-Jan-17	65.58	306.86
09-Feb-17	65.55	306.89
26-Mar-17	65.60	306.84
18-May-17	65.88	306.56
12-Jun-17	65.98	306.46
08-Jul-17	65.87	306.57
13-Aug-17	65.70	306.74
03-Sep-17	65.74	306.70
12-Oct-17	65.65	306.79
04-Nov-17	64.68	307.76
16-Dec-17	63.95	308.49
21-Feb-18	64.70	307.74
13-Mar-18	64.97	307.47
10-May-18	65.49	306.95
04-Jun-18	64.69	307.75
12-Jul-18	64.70	307.74
09-Aug-18	65.83	306.61
17-Nov-18	66.38	306.06
08-Dec-18	66.97	305.47
19-Jan-19	67.31	305.13
09-Feb-19	67.30	305.14
25-Mar-19	67.33	305.11
16-Apr-19	68.76	303.68
10-Jul-19	69.60	302.84
21-Aug-19	69.73	302.71
10-Sep-19	69.56	302.88
05-Oct-19	69.41	303.03
14-Nov-19	89.87	282.57
11-Dec-19	69.80	302.64
10-Jan-20	77.52	294.92
10-Feb-20	69.80	302.64
09-Mar-20	69.80	302.64
20-Apr-20	69.78	302.66
06-Jul-20	70.60	301.84
04-Aug-20	70.76	301.68
13-Sep-20	70.74	301.70
25-Oct-20	70.62	301.82
08-Nov-20	70.77	301.67
03-Jan-21	71.12	301.32
27-Feb-21	71.24	301.20
16-Mar-21	72.09	300.35
13-Apr-21	72.47	299.97
17-Aug-21	77.71	294.73
14-Sep-21	71.72	300.72
08-Nov-21	71.70	300.74
07-Dec-21	71.89	300.55
14-Jan-22	71.96	300.48
15-Feb-22	72.73	299.71
10-Mar-22	72.97	299.47
9-Apr-22		
9-May-22	72.95	299.49
7-Jun-22		
3-Jul-22		
25-Aug-22		
25-Sep-22		
23-Oct-22		
20-Nov-22		
15-Dec-22	73.04	299.40
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	74.24	298.20
18-May-23	76.84	295.60
17-Jun-23		
13-Jul-23		
13-Aug-23		
15-Sep-23		
15-Oct-23		
17-Nov-23		
29-Dec-23		
30-Jan-24		
25-Feb-24		
23-Mar-24		
15-Apr-24		
20-May-24		
15-Jun-24		
16-Jul-24		
15-Aug-24		

Appendix F - Monitoring Bore Water Level Data

GGW81		
Date	Datum =	348.94
	Dip =	90.00
	(m bgl)	(m AHD)
Gossan Hill Area		

GGW83		
Date	Datum =	364.28
	Dip =	90.00
	(m bgl)	(m AHD)

GGW6A		
Date	Datum =	368.19
	Dip =	90.00
	(m bgl)	(m AHD)
15-Jan-16	49.54	318.65
10-Feb-16	49.37	318.82
7-Mar-16	49.53	318.66
12-Apr-16	49.62	318.57
14-Apr-16	49.62	318.57
16-Jun-16	49.54	318.65
26-Jun-16	49.54	318.65
28-Jul-16	49.74	318.45
20-Aug-16	49.71	318.48
28-Sep-16	49.89	318.30
29-Sep-16	49.89	318.30
29-Oct-16	49.86	318.33
29-Dec-16	49.87	318.32
11-Jan-17	49.95	318.24
22-Jan-17	49.95	318.24
11-Feb-17	49.94	318.25
15-Mar-17	50.03	318.16
14-Apr-17	50.03	318.16
28-May-17	50.16	318.03
17-Jun-17	50.15	318.04
1-Jul-17	50.14	318.05
27-Jul-17	50.14	318.05
18-Aug-17	50.20	317.99
21-Sep-17	50.08	318.11
23-Sep-17	50.08	318.11
20-Oct-17	50.14	318.05
26-Nov-17	50.18	318.01
22-Dec-17	50.22	317.97
30-Jan-18	50.31	317.88
22-Feb-18	50.34	317.85
15-Mar-18	50.49	317.70
7-Apr-18	50.39	317.80
18-Apr-18	50.39	317.80
15-May-18	50.46	317.73
25-Jun-18	50.46	317.73
13-Jul-18	50.50	317.69
17-Jul-18	50.50	317.69
22-Aug-18	50.52	317.67
15-Oct-18	50.57	317.62
24-Oct-18	50.57	317.62
23-Nov-18	50.67	317.52
30-Dec-18	50.65	317.54
22-Jan-19	50.74	317.45
13-Feb-19	50.77	317.42
16-Feb-19	50.77	317.42
20-Mar-19	50.82	317.37
19-Apr-19	50.82	317.37
8-May-19	50.83	317.36
12-Jul-19	50.90	317.29
14-Aug-19	50.92	317.27
19-Aug-19	50.92	317.27
12-Sep-19	50.98	317.21
3-Oct-19	51.06	317.13
7-Nov-19	51.14	317.05
15-Nov-19	51.11	317.08
17-Dec-19	51.17	317.02
25-Jan-20	51.14	317.05
1-Feb-20	51.27	316.92
6-Feb-20	51.27	316.92
19-Mar-20	51.25	316.94
22-Apr-20	51.36	316.83
20-May-20	51.31	316.88
5-Jul-20	51.24	316.95
27-Aug-20	51.33	316.86
11-Sep-20	51.37	316.82
25-Sep-20	51.38	316.81
22-Oct-20	51.45	316.74
7-Nov-20	51.57	316.62
19-Nov-20	51.54	316.65
17-Jan-21	51.62	316.57
13-Feb-21	51.63	316.56
11-Mar-21	51.65	316.54
11-May-21	51.71	316.48
23-May-21	51.74	316.45
8-Jun-21	51.53	316.66
15-Jul-21	51.84	316.35
14-Aug-21	51.86	316.33
11-Sep-21	51.88	316.31
12-Oct-21	51.94	316.25
9-Nov-21	51.94	316.25
22-Nov-21	51.94	316.25
16-Dec-21	51.98	316.21
14-Jan-22	51.98	316.21
11-Feb-22	52.09	316.10
10-Mar-22	52.08	316.11
9-Apr-22	52.15	316.04
7-May-22	52.14	316.05
7-Jun-22	52.16	316.03
3-Jul-22	51.24	316.95
25-Aug-22	51.25	316.94
25-Sep-22	52.37	315.82
23-Oct-22	52.35	315.84
20-Nov-22	52.40	315.79
29-Dec-22	52.41	315.78
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	52.60	315.59
18-May-23	52.61	315.58
17-Jun-23	52.69	315.50
13-Jul-23	52.64	315.55
13-Aug-23		
15-Sep-23	52.71	315.48
15-Oct-23		
17-Nov-23	52.84	315.35
29-Dec-23	52.71	315.48
30-Jan-24	52.90	315.29
25-Feb-24	52.93	315.26
23-Mar-24	52.88	315.31
15-Apr-24	53.01	315.18
20-May-24	52.87	315.32
15-Jun-24	52.87	315.32
16-Jul-24	53.05	315.14
15-Aug-24	53.15	315.04
29-Sep-24	53.11	315.08
16-Oct-24	53.11	315.08
15-Nov-24	53.19	315.00
13-Dec-24	53.20	314.99
18-Jan-25	53.45	314.74
20-Feb-25		
14-Mar-25		

GGW49		
Date	Datum =	370.15
	Dip =	90.00
	(m bgl)	(m AHD)
19-Aug-19	78.30	291.85
12-Sep-19	78.33	291.82
03-Oct-19	78.38	291.77
14-Nov-19	78.44	291.71
17-Dec-19	78.48	291.67
25-Jan-20	78.45	291.70
08-Feb-20	78.57	291.58
19-Mar-20	54.89	315.26
22-Apr-20	78.74	291.41
20-May-20	78.73	291.42
05-Jul-20	78.87	291.28
27-Aug-20	78.89	291.26
11-Sep-20	78.92	291.23
22-Oct-20	79.00	291.15
07-Nov-20	79.02	291.13
17-Jan-21	79.14	291.01
13-Feb-21	79.17	290.98
11-May-21	79.10	291.05
08-Jun-21	78.91	291.24
15-Jul-21	79.40	290.75
14-Aug-21	79.43	290.72
11-Sep-21	79.35	290.80
12-Oct-21	79.60	290.55
09-Nov-21	79.62	290.53
16-Dec-21	79.70	290.45
14-Jan-22	79.73	290.42
11-Feb-22	79.75	290.40
10-Mar-22	79.78	290.37
9-Apr-22	79.82	290.33
7-May-22	79.86	290.29
7-Jun-22	79.87	290.28
3-Jul-22	79.95	290.20
25-Aug-22	79.92	290.23
25-Sep-22	79.96	290.19
23-Oct-22	79.98	290.17
20-Nov-22	80.00	290.15
29-Dec-22	80.02	290.13
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	80.03	290.12
18-May-23	80.03	290.12
17-Jun-23	80.03	290.12
13-Jul-23	79.90	290.25
13-Aug-23	79.82	290.33
15-Sep-23	79.82	290.33
15-Oct-23		
17-Nov-23	79.70	290.45
29-Dec-23	79.82	290.33
30-Jan-24		
25-Feb-24	79.69	290.46
23-Mar-24	79.81	290.34
15-Apr-24	79.78	290.37
20-May-24	79.84	290.31
15-Jun-24	79.84	290.31
16-Jul-24	79.78	290.37
15-Aug-24	79.76	290.39
29-Sep-24	79.77	290.38
16-Oct-24	79.77	290.38
15-Nov-24	79.78	290.37
13-Dec-24	79.76	290.39
18-Jan-25	80.00	290.15
20-Feb-25	80.05	290.10
14-Mar-25	80.10	290.05

GGW50		
Date	Datum =	360.88
	Dip =	90.00
	(m bgl)	(m AHD)
Scuddles Mine Area		
18-Aug-16	33.71	327.17
13-Sep-16	33.75	327.13
1-Oct-16	33.75	327.13
30-Oct-16	33.89	326.99
29-Dec-16	33.89	326.99
13-Jan-17	34.18	326.70
22-Jan-17	34.18	326.70
12-Feb-17	34.20	326.68
15-Mar-17	34.16	326.72
9-Apr-17	33.71	327.17
13-Apr-17	33.71	327.17
26-May-17	33.63	327.25
16-Jun-17	33.68	327.20
1-Jul-17	33.68	327.20
28-Jul-17	33.68	327.20
17-Aug-17	33.93	326.95
22-Sep-17	33.96	326.92
23-Sep-17	33.96	326.92
18-Oct-17	34.12	326.76
27-Nov-17	33.86	327.02
23-Dec-17	34.06	326.82
1-Feb-18	34.23	326.65
22-Feb-18	34.20	326.68
17-Mar-18	34.28	326.60
7-Apr-18	34.33	326.55
20-Apr-18	34.30	326.58
16-May-18	34.36	326.52
24-Jun-18	34.43	326.45
14-Jul-18	34.38	326.50
18-Jul-18	34.38	326.50
24-Aug-18	34.51	326.37
14-Oct-18	34.55	326.33
25-Oct-18	34.55	326.33
25-Nov-18	34.52	326.36
29-Dec-18	34.75	326.13
24-Jan-19	34.74	326.14
12-Feb-19	34.84	326.04
15-Feb-19	34.84	326.04
18-Mar-19	34.80	326.08
21-Apr-19	34.78	326.10
10-May-19	34.92	325.96
11-Jul-19	34.92	325.96
15-Aug-19	35.00	325.88
17-Aug-19	35.00	325.88
13-Sep-19	34.93	325.95
4-Oct-19	35.00	325.88
10-Nov-19	36.12	324.76
10-Dec-19	35.27	325.61
11-Jan-20	35.32	325.56
5-Feb-20	38.27	322.61
6-Feb-20	38.27	322.61
5-Mar-20	35.25	325.63
16-Apr-20	35.22	325.66
24-May-20	35.30	325.58
4-Jul-20	35.40	325.48
29-Aug-20	35.46	325.42
12-Sep-20	35.43	325.45
25-Sep-20	35.42	325.46
23-Oct-20	35.44	325.44
10-Nov-20	35.70	325.18
20-Nov-20	35.66	325.22
18-Jan-21	35.76	325.12
13-Feb-21	35.75	325.13
12-Mar-21	36.75	324.13
9-May-21	35.72	325.16
22-May-21	35.65	325.23
8-Jun-21	36.08	324.80
15-Jul-21	36.51	324.37
13-Aug-21	35.48	325.40
10-Sep-21	35.38	325.50
12-Oct-21	35.74	325.14
19-Nov-21	35.43	325.45
20-Nov-21	35.43	325.45
17-Dec-21	35.46	325.42
14-Jan-22	35.51	325.37
11-Feb-22	36.10	324.78
10-Mar-22	36.12	324.76
9-Apr-22	36.24	324.64
7-May-22		
7-Jun-22	36.11	324.77
3-Jul-22	36.20	324.68
25-Aug-22	36.18	324.70
25-Sep-22	36.23	324.65
23-Oct-22	36.22	324.66
20-Nov-22	36.41	324.47
29-Dec-22	36.42	324.46
2-Jan-23	36.48	324.40
2-Feb-23	36.48	324.40
2-Mar-23	36.46	324.42
20-Apr-23		
18-May-23		
17-Jun-23	36.21	324.67
13-Jul-23	36.42	324.46
13-Aug-23		
15-Sep-23	36.47	324.41
15-Oct-23	36.60	324.28
17-Nov-23	36.60	324.28
29-Dec-23	36.47	324.41
30-Jan-24	37.09	323.79
25-Feb-24	36.90	323.98
23-Mar-24	36.93	323.95
15-Apr-24	37.00	323.88
20-May-24	36.95	323.93
15-Jun-24	36.95	323.93
16-Jul-24	36.90	323.98
15-Aug-24	36.87	324.01
29-Sep-24	36.88	324.00
16-Oct-24	36.88	324.00
15-Nov-24	36.95	323.93
13-Dec-24	36.96	323.92
18-Jan-25	31.60	329.28
20-Feb-25	37.49	323.39
14-Mar-25		

GGW62		
Date	Datum =	367.20
	Dip =	90.00
	(m bgl)	(m AHD)
15-Sep-23	76.97	290.23
15-Oct-23		
17-Nov-23	77.03	290.17
29-Dec-23	76.97	290.23
30-Jan-24		
25-Feb-24	77.06	290.14
23-Mar-24	77.01	290.19
15-Apr-24	77.05	290.15
20-May-24	77.09	290.11
15-Jun-24	77.09	290.11
16-Jul-24	77.02	290.18
15-Aug-24	77.01	290.19
29-Sep-24	77.06	290.14
16-Oct-24	77.06	290.14
15-Nov-24	77.09	290.11
13-Dec-24	77.10	290.10
18-Jan-25	77.52	289.68
20-Feb-25	77.52	289.68
14-Mar-25	77.63	289.57

GGW69		
Date	Datum =	372.44
	Dip =	90.00
	(m bgl)	(m AHD)
29-Sep-24		
16-Oct-24		
15-Nov-24		
13-Dec-24		
18-Jan-25		
20-Feb-25		
14-Mar-25		

Appendix F - Monitoring Bore Water Level Data

Scuddles Mine Area

GGW70		
	Datum =	360.81
Date	Dip =	90.00
	(m bgl)	(m AHD)
3-Jul-93	30.16	330.65
12-Jul-93	30.02	330.79
1-Jun-95	30.29	330.52
3-Jul-95	30.30	330.51
7-Aug-95	30.93	329.88
29-Aug-95	31.00	329.81
28-Sep-95	30.97	329.84
31-Oct-95	31.08	329.73
7-Nov-95	31.18	329.63
2-Dec-95	31.20	329.61
18-Dec-95	31.25	329.56
31-Jan-96	31.48	329.33
3-Mar-96	31.55	329.26
6-Apr-96	31.80	329.01
5-May-96	31.83	328.98
3-Jul-96	32.10	328.71
2-Oct-96	32.34	328.47
26-Oct-96	32.47	328.34
31-Dec-96	32.68	328.13
31-Jul-97	33.33	327.48
31-Oct-97	33.51	327.30
30-Nov-97	33.64	327.17
31-Dec-97	33.75	327.06
28-Feb-98	34.04	326.77
30-Apr-98	34.32	326.49
31-May-98	34.32	326.49
31-Jul-98	45.67	315.14
31-Aug-98	34.68	326.13
30-Sep-98	34.84	325.97
31-Oct-98	34.89	325.92
30-Nov-98	35.11	325.70
31-Dec-98	35.19	325.62
31-Jan-99	35.35	325.46
28-Feb-99	35.39	325.42
31-Mar-99	35.45	325.36
30-Jun-99	35.91	324.90
1-Aug-99	35.96	324.85
2-Sep-99	36.03	324.78
4-Oct-99	36.21	324.60
5-Nov-99	36.21	324.60
6-Dec-99	36.42	324.39
9-Jan-00	36.42	324.39
4-Feb-00	36.72	324.09
25-Feb-00	36.72	324.09
2-Apr-00	36.85	323.96
28-Apr-00	36.94	323.87
6-Jun-00	37.07	323.74
12-Jul-00	37.21	323.60
12-Aug-00	37.37	323.44
26-Aug-00	37.39	323.42
7-Oct-00	37.60	323.21
28-Oct-00	37.65	323.16
22-Nov-00	37.68	323.13
30-Dec-00	37.82	322.99
5-Feb-01	37.92	322.89
5-Mar-01	38.04	322.77
29-Mar-01	38.11	322.70
30-Apr-01	38.25	322.56
29-May-01	38.45	322.36
7-Jul-01	38.67	322.14
27-Jul-01	38.71	322.10
25-Aug-01	38.92	321.89
1-Oct-01	39.06	321.75
9-Nov-01	39.20	321.61
2-Dec-01	39.27	321.54
24-Dec-01	39.34	321.47
3-Feb-02	39.48	321.33
4-Mar-02	39.61	321.20
9-Apr-02	39.77	321.04
30-Apr-02	39.83	320.98
28-May-02	39.99	320.82
25-Jun-02	40.04	320.77
6-Aug-02	40.27	320.54
30-Aug-02	40.32	320.49
17-Oct-02	40.44	320.37
2-Nov-02	40.62	320.19
1-Dec-02	40.67	320.14
20-Dec-02	40.70	320.11
27-Jan-03	40.85	319.96
3-Apr-03	41.13	319.68
30-Apr-03	41.29	319.52
4-Jun-03	41.42	319.39
27-Jun-03	41.55	319.26
31-Jul-03	41.67	319.14
30-Aug-03	41.79	319.02
29-Sep-03	41.79	319.02
31-Oct-03	41.96	318.85
29-Nov-03	42.06	318.75
31-Dec-03	42.41	318.40
30-Jan-04	42.29	318.52
31-Mar-04	45.58	315.23
30-May-04	42.70	318.11
2-Aug-04	43.05	317.76
2-Sep-04	43.14	317.67
1-Oct-04	43.25	317.56
2-Nov-04	43.55	317.26
3-Jan-05	43.62	317.19
3-Feb-05	43.74	317.07
7-Mar-05	43.87	316.94
1-Apr-05	43.94	316.87
30-Apr-05	44.04	316.77
31-May-05	44.24	316.57
2-Jul-05	44.36	316.45
3-Aug-05	44.51	316.30
2-Sep-05	44.59	316.22
4-Oct-05	44.67	316.14
25-Oct-05	44.78	316.03
4-Jan-06	45.05	315.76
30-Jan-06	45.20	315.61
11-Mar-06	45.26	315.55
4-Apr-06	45.45	315.36
6-May-06	45.51	315.30
1-Jun-06	45.64	315.17
11-Jul-06	45.77	315.04
30-Jul-06	45.74	315.07
4-Sep-06	45.85	314.96
3-Oct-06	45.93	314.88
30-Oct-06	45.99	314.82
9-Dec-06	46.22	314.59
8-Jan-07	46.21	314.60
6-Feb-07	46.31	314.50
3-Jun-07	46.75	314.06
30-Jun-07	46.74	314.07
2-Nov-07	47.21	313.60
10-Jan-08	47.42	313.39
8-Mar-08	47.61	313.20
4-Apr-08	47.68	313.13
16-May-08	47.90	312.91
02-Sep-08	48.17	312.64
05-Oct-08	48.32	312.49
29-Oct-08	48.28	312.53
24-Dec-08	48.49	312.32
02-Jan-09	48.50	312.31
08-Feb-09	48.64	312.17
21-Mar-09	48.85	311.96
01-Apr-09	48.82	311.99
15-May-09	48.95	311.86
14-Jun-09	49.00	311.81
06-Aug-09	49.22	311.59
15-Sep-09	49.39	311.42
13-Oct-09	49.42	311.39
11-Nov-09	49.50	311.31
22-Dec-09	49.60	311.21
19-Jan-10	49.67	311.14
16-Feb-10	49.96	310.85
19-Mar-10	49.89	310.92
04-Apr-10	49.97	310.84
02-May-10	49.98	310.83
09-Jun-10	50.23	310.58
26-Jul-10	49.89	310.92
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	50.14	310.67
12-Nov-10	50.53	310.28
24-Dec-10	50.72	310.09
19-Jan-11	50.78	310.03
06-Mar-11	51.03	309.78

GGW74		
	Datum =	361.64
Date	Dip =	90.00
	(m bgl)	(m AHD)
12-Jul-93	26.94	334.70
6-Oct-94	27.13	334.51
3-Nov-94	26.98	334.66
1-Dec-94	27.01	334.63
5-Jan-95	27.73	333.91
16-Feb-95	28.46	333.18
9-Mar-95	28.69	332.95
30-Mar-95	29.00	332.64
30-Apr-95	29.82	331.82
1-Jun-95	30.90	330.74
3-Jul-95	31.88	329.76
7-Aug-95	33.25	328.39
29-Aug-95	33.91	327.73
28-Sep-95	34.57	327.07
31-Oct-95	35.00	326.64
7-Nov-95	35.26	326.38
1-Dec-95	35.45	326.19
2-Dec-95	35.51	326.13
18-Dec-95	35.69	325.95
31-Jan-96	36.31	325.33
3-Mar-96	36.55	325.09
6-Apr-96	36.20	325.44
5-May-96	37.30	324.34
3-Jul-96	37.10	324.54
2-Oct-96	39.91	321.73
26-Oct-96	39.05	322.59
31-Dec-96	39.77	321.87
31-May-97	41.00	320.64
31-Jul-97	41.32	320.32
31-Oct-97	41.83	319.81
30-Nov-97	42.02	319.62
31-Dec-97	42.22	319.42
28-Feb-98	42.78	318.86
30-Apr-98	43.21	318.43
31-May-98	43.22	318.42
31-Jul-98	43.68	317.96
31-Aug-98	43.89	317.75
30-Sep-98	44.13	317.51
31-Oct-98	44.16	317.48
30-Nov-98	44.55	317.09
31-Dec-98	44.59	317.05
31-Jan-99	44.82	316.82
28-Feb-99	44.83	316.81
31-Mar-99	44.84	316.80
30-May-99	45.16	316.48
30-Jun-99	45.18	316.46
1-Aug-99	45.24	316.40
2-Sep-99	45.32	316.32
4-Oct-99	45.51	316.13
5-Nov-99	45.76	315.88
6-Dec-99	45.98	315.66
9-Jan-00	45.99	315.65
4-Feb-00	46.28	315.36
25-Feb-00	46.42	315.22
2-Apr-00	46.60	315.04
28-Apr-00	46.72	314.92
6-Jun-00	46.86	314.78
12-Jul-00	47.03	314.61
12-Aug-00	47.22	314.42
26-Aug-00	47.23	314.41
7-Oct-00	47.60	314.04
28-Oct-00	47.59	314.05
22-Nov-00	47.74	313.90
30-Dec-00	47.89	313.75
5-Feb-01	48.02	313.62
5-Mar-01	48.17	313.47
29-Mar-01	48.28	313.36
30-Apr-01	48.40	313.24
29-May-01	48.75	312.89
7-Jul-01	48.84	312.80
27-Jul-01	48.96	312.68
25-Aug-01	49.18	312.46
1-Oct-01	49.35	312.29
9-Nov-01	49.51	312.13
2-Dec-01	49.54	312.10
24-Dec-01	49.59	312.05
3-Feb-02	49.83	311.81
4-Mar-02	49.95	311.69
9-Apr-02	50.15	311.49
30-Apr-02	50.23	311.41
28-May-02	50.24	311.40
25-Jun-02	50.20	311.44
6-Aug-02	50.42	311.22
30-Aug-02	50.28	311.36
17-Oct-02	50.43	311.21
2-Nov-02	50.70	310.94
1-Dec-02	50.78	310.86
20-Dec-02	50.84	310.80
27-Jan-03	51.04	310.60
3-Apr-03	51.35	310.29
30-Apr-03	51.53	310.11
4-Jun-03	51.70	309.94
27-Jun-03	51.63	310.01
31-Jul-03	51.91	309.73
30-Aug-03	52.09	309.55
29-Sep-03	52.03	309.61
31-Oct-03	52.21	309.43
29-Nov-03	52.33	309.31
31-Dec-03	52.45	309.19
31-Mar-04	54.84	306.80
30-May-04	52.90	308.74
2-Aug-04	53.74	307.90
2-Sep-04	53.35	308.29
1-Oct-04	53.49	308.15
2-Nov-04	53.55	308.09
3-Jan-05	53.79	307.85
3-Feb-05	53.90	307.74
7-Mar-05	53.98	307.66
1-Apr-05	54.00	307.64
30-Apr-05	54.08	307.56
31-May-05	54.26	307.38
2-Jul-05	54.33	307.31
3-Aug-05	54.35	307.29
2-Sep-05	54.44	307.20
4-Oct-05	54.58	307.06
25-Oct-05	54.59	307.05
4-Jan-06	54.75	306.89
30-Jan-06	54.89	306.75
11-Mar-06	54.89	306.75
4-Apr-06	55.04	306.60
6-May-06	55.07	306.57
1-Jun-06	55.10	306.54
11-Jul-06	55.23	306.41
30-Jul-06	55.14	306.50
4-Sep-06	55.12	306.52
3-Oct-06	55.09	306.55
30-Oct-06	55.74	305.90
9-Dec-06	55.50	306.14
8-Jan-07	55.50	306.14
6-Feb-07	55.59	306.05
10-Mar-07	55.54	306.10
16-Apr-07	55.64	306.00
1-May-07	55.68	305.96
3-Jun-07	55.77	305.87
30-Jun-07	55.70	305.94
29-Jul-07	55.87	305.77
4-Sep-07	55.97	305.67
2-Nov-07	56.12	305.52
10-Jan-08	56.12	305.52
8-Mar-08	56.30	305.34
4-Apr-08	56.20	305.44
16-May-08	56.24	305.40
02-Sep-08	56.19	305.45
05-Oct-08	56.29	305.35
29-Oct-08	56.24	305.40
24-Dec-08	56.27	305.37
02-Jan-09	56.29	305.35
08-Feb-09	56.32	305.32
21-Mar-09	56.39	305.25
01-Apr-09	56.36	305.28
15-May-09	56.46	305.18
14-Jun-09	56.32	305.32
06-Aug-09	56.44	305.20
11-Jul-09	56.38	305.26
15-Sep-09	53.37	308.27
13-Oct-09	49.24	312.40
11-Nov-09	56.27	305.37

SC073		
	Datum =	371.07
Date	Dip =	90.00
	(m bgl)	(m AHD)
17-Jun-93	85.96	285.11
2-Sep-93	64.35	306.72
1-Oct-93	71.53	299.54
1-Nov-93	62.85	308.22
4-Jan-94	68.90	302.17
16-Mar-94	64.28	306.79
24-Apr-94	63.23	307.84
1-May-94	62.39	308.68
9-Jun-94	66.44	304.63
6-Oct-94	66.11	304.96
3-Nov-94	61.80	309.27
1-Dec-94	61.96	309.11
5-Jan-95	61.28	309.79
16-Feb-95	61.87	309.20
9-Mar-95	67.55	303.52
30-Mar-95	67.95	303.12
30-Apr-95	66.34	304.73
1-Jun-95	66.13	304.94
4-Jul-95	63.65	307.42
7-Aug-95	68.23	302.84
29-Aug-95	68.42	302.65
29-Sep-95	69.86	301.21
31-Oct-95	69.37	301.70
2-Dec-95	74.18	296.89
18-Dec-95	76.63	294.44
31-Jan-96	76.90	294.17
1-Mar-96	71.45	299.62
15-Apr-96	80.42	290.65
5-May-96	78.00	293.07
1-Jun-96	84.09	286.98
4-Jul-96	78.85	292.22
1-Sep-96	78.41	292.66
7-Oct-96	80.85	290.22
4-Nov-96	81.43	289.64
31-Dec-96	81.21	289.86
31-Jan-97	81.35	289.72
28-Feb-97	81.50	289.57
31-Mar-97	81.88	289.19
1-Jul-97	81.74	289.33
1-Sep-97	81.90	289.17
31-Oct-97	83.05	288.02
1-Dec-97	83.01	288.06
31-Dec-97	83.28	287.79
28-Feb-98	83.72	287.35
31-May-98	86.84	284.23
31-Jul-98	86.94	284.13
28-Aug-98	87.35	283.72
29-Oct-98	97.87	273.20
10-Feb-99	95.86	275.21
12-Apr-99	94.78	276.29
3-May-99	92.06	279.01
30-May-99	91.61	279.46
1-Jul-99	91.63	279.44
1-Aug-99	100.42	270.65
2-Sep-99	91.43	279.64
5-Oct-99	90.23	280.84
11-Nov-99	90.05	281.02
15-Dec-99	90.59	280.48
15-Jan-00	90.04	281.03
6-Feb-00	90.16	280.91
28-Feb-00	90.16	280.91
2-Apr-00	90.12	280.95
1-May-00	90.77	280.30
7-Jun-00	91.70	279.37
14-Jul-00	92.14	278.93
12-Aug-00	92.53	278.54
28-Aug-00	92.67	278.40
8-Oct-00	92.98	278.09
29-Oct-00	92.90	278.17
7-Dec-00	93.06	278.01
5-Jan-01	93.10	277.97
11-Mar-01	93.32	277.75
30-Mar-01	93.47	277.60
5-May-01	93.48	277.59
28-May-01	93.49	277.58
4-Jul-01	93.59	277.48
31-Jul-01	93.73	277.34
24-Aug-01	93.98	277.09
5-Oct-01	94.40	276.67
12-Nov-01	96.51	274.56
8-Dec-01	95.40	275.67
12-Jan-02	95.89	275.18
4-Feb-02	96.16	274.91
4-Mar-02	96.36	274.71
8-Apr-02	96.69	274.38
6-May-02	96.80	274.27
9-Jun-02	97.02	274.05
25-Jun-02	97.74	273.33
3-Aug-02	97.79	273.28
31-Aug-02	97.65	273.42
16-Oct-02	101.20	269.87
3-Nov-02	99.41	271.66
4-Dec-02	98.72	272.35
20-Dec-02	98.42	272.65
29-Jan-03	98.51	272.56
3-Mar-03	99.26	271.81
4-Apr-03	99.39	271.68
1-May-03	99.49	271.58
4-Jun-03	100.06	271.01
27-Jun-03	99.70	271.37
31-Jul-03	99.69	271.38
30-Aug-03	99.84	271.23
29-Sep-03	100.37	270.70
31-Oct-03	101.30	269.77
29-Nov-03	101.50	269.57
31-Dec-03	101.15	269.92
30-Mar-04	101.39	269.68
28-Apr-04	101.48	269.59
31-May-04	101.50	269.57
3-Jan-05	103.41	267.66
2-Feb-05	103.47	267.60
8-Mar-05	103.71	267.36
3-Apr-05	103.71	267.36
30-Apr-05	103.57	267.50
30-May-05	103.42	267.65
3-Jul-05	103.61	267.46
1-Aug-05	103.66	267.41
1-Sep-05	103.73	267.34
3-Oct-05	59.93	311.14
26-Oct-05	103.86	267.21
4-Dec-05	104.16	266.91
3-Jan-06	103.97	267.10
31-Jan-06	104.47	266.60
2-Mar-06	104.52	266.55
3-Apr-06	104.57	266.50
2-May-06	104.55	266.52
3-Jun-06	104.20	266.87
1-Jul-06	105.33	265.74
30-Jul-06	105.48	265.59
8-Sep-06	105.61	265.46
4-Oct-06	105.53	265.54
30-Oct-06	105.89	265.18
31-Dec-06	105.88	265.19
30-Jan-07	105.78	265.29
9-Mar-07	105.56	265.51
7-May-07	105.70	265.37
2-Jun-07	108.48	262.59
30-Jun-07	108.74	262.33
28-Jul-07	108.73	262.34
3-Sep-07	110.16	260.91
3-Nov-07	111.96	259.11
2-Dec-07	113.04	258.03
8-Jan-08	113.94	257.13
7-Mar-08	114.38	256.69
1-Apr-08	114.54	256.53
1-Jun-08	114.50	256.57
4-Sep-08	114.81	256.26
4-Oct-08	114.95	256.12
13-Nov-08	115.17	255.90
30-Nov-08	115.43	255.64
24-Dec-08	115.43	255.64
14-Jan-13	117.81	253.26
10-Feb-13	118.60	252.47
12-Mar-13	118.53	252.54
14-Apr-13	118.55	252.52
12-May-13	123.74	247.33
17-Jun-13	119.18	251.89

SC080		
	Datum =	371.40
Date	Dip =	90.00
	(m bgl)	(m AHD)
25-Feb-00	73.34	298.06
2-Apr-00	74.79	296.61
28-Apr-00	74.04	297.36
6-Jun-00	74.49	296.91
12-Jul-00	74.94	296.46
12-Aug-00	74.95	296.45
26-Aug-00	74.85	296.55
7-Oct-00	75.12	296.28
28-Oct-00	74.96	296.44
22-Nov-00	76.27	295.13
30-Dec-00	76.54	294.86
5-Feb-01	76.64	294.76
5-Mar-01	74.54	296.86
29-Mar-01	76.41	294.99
30-Apr-01	75.39	296.01
29-May-01	75.33	296.07
7-Jul-01	74.97	296.43
27-Jul-01	75.09	296.31
25-Aug-01	74.86	296.54
1-Oct-01	74.34	297.06
9-Nov-01	74.08	297.32
2-Dec-01	73.88	297.52
24-Dec-01	74.12	297.28
3-Feb-02	74.94	296.46
4-Mar-02	74.83	296.57
9-Apr-02	74.60	296.80
30-Apr-02	74.80	296.60
28-May-02	74.00	297.40
25-Jun-02	73.57	297.83
6-Aug-02	72.70	298.70
30-Aug-02	72.60	298.80
17-Oct-02	73.10	298.30
2-Nov-02	72.63	298.77
1-Dec-02	70.79	300.61
20-Dec-02	69.90	301.50
27-Jan-03	69.60	301.80
3-Apr-03	68.51	302.89
30-Apr-03	68.47	302.93
4-Jun-03	67.40	304.00
27-Jun-03	67.05	304.35
31-Jul-03	65.77	305.63
30-Aug-03	64.95	306.45
29-Sep-03	64.97	306.43
31-Oct-03	64.25	307.15
29-Nov-03	65.76	305.64
31-Dec-03	66.56	304.84
31-Mar-04	66.37	305.03
30-May-04	65.51	305.89
2-Aug-04	64.25	307.15
2-Sep-04	63.38	308.02
1-Oct-04	63.38	308.02
3-Jan-05	63.68	307.72
3-Feb-05	63.33	308.07
7-Mar-05	63.32	308.08
30-Apr-05	62.30	309.10
31-May-05	61.85	309.55
2-Jul-05	61.32	310.08
3-Aug-05	60.97	310.43
2-Sep-05	60.84	310.56
4-Oct-05	60.50	310.90
25-Oct-05	60.21	311.19
4-Jan-06	61.20	310.20
30-Jan-06	61.20	310.20
11-Mar-06	60.91	310.49
4-Apr-06	60.32	311.08
6-May-06	59.70	311.70
1-Jun-06	59.20	312.20
27-Jun-06	58.96	312.44
11-Jul-06	59.31	312.09
30-Jul-06	59.74	311.66
4-Sep-06	59.84	311.56
19-Sep-06	59.58	311.82
3-Oct-06	59.86	311.54
30-Oct-06	59.63	311.77
9-Dec-06	59.97	311.43
8-Jan-07	59.83	311.57
9-Jan-07	59.83	311.57
6-Feb-07	60.50	310.90
10-Mar-07	60.32	311.08
3-Apr-07	59.80	311.60
16-Apr-07	59.80	311.60
1-May-07	60.47	310.93
3-Jun-07	60.46	310.94
12-Jun-07	60.00	311.40
30-Jun-07	60.71	310.69
29-Jul-07	60.33	311.07
4-Sep-07	60.26	311.14
22-Sep-07	60.77	310.63
4-Apr-08	64.54	306.86
16-May-08	63.93	307.47
12-Jun-08	63.72	307.68
2-Sep-08	64.43	306.97
18-Sep-08	63.48	307.92
5-Oct-08	64.08	307.32
29-Oct-08	63.93	307.47
24-Dec-08	63.82	307.58
02-Jan-09	64.39	307.01
08-Feb-09	65.66	305.74
07-Mar-09	64.18	307.22
21-Mar-09	64.19	307.21
01-Apr-09	64.66	306.74
15-May-09	64.09	307.31
09-Jun-09	63.53	307.87
14-Jun-09	62.22	309.18
11-Jul-09	61.90	309.50
06-Aug-09	61.73	309.67
01-Sep-09	61.00	310.40
15-Sep-09	61.63	309.77
13-Oct-09	61.97	309.43
11-Nov-09	61.59	309.81
22-Dec-09	61.74	309.66
19-Jan-10	61.54	309.86
16-Feb-10	62.21	309.19
15-Mar-10	63.30	308.10
19-Mar-10	63.30	308.10
04-Apr-10	62.63	308.77
02-May-10	62.61	308.79
09-Jun-10	61.32	310.08
28-Jun-10	60.49	310.91
26-Jul-10	60.78	310.62
1-Aug-10	Not Measured	
20-Sep-10	60.83	310.57
16-Oct-10	61.27	310.13
12-Nov-10	61.39	310.01
11-Dec-10	61.94	309.46
24-Dec-10	62.89	308.51
19-Jan-11	62.97	308.43
6-Mar-11	64.14	307.26
19-Mar-11	64.14	307.26
13-Apr-11	65.11	306.29
8-Jun-11	66.07	305.33
21-Jun-11	66.09	305.31
24-Jul-11	66.46	304.94
8-Aug-11	66.45	304.95
2-Sep-11	66.46	304.94
18-Sep-11	66.85	304.55
29-Oct-11	68.09	303.31
10-Nov-11	68.10	303.30
8-Dec-11	67.14	304.26
11-Dec-11	67.14	304.26
19-Jan-12	66.65	304.75
15-Feb-12	67.72	303.68
4-Mar-12	67.20	304.20
16-Mar-12	67.65	303.75
14-Apr-12	67.71	303.69
16-May-12	67.70	303.70
22-Jun-12	67.46	303.94
15-Jul-12	67.70	303.70
15-Aug-12	67.68	303.72
15-Sep-12	66.33	305.07
15-Oct-12	66.33	305.07
9-Nov-12	68.62	302.78
15-Dec-12	69.37	302.03
13-Jan-13	67.08	304.32
14-Jan-13	67.08	304.32
12-Mar-13	67.62	303.78
15-Mar-13	67.62	303.78

SCO75		
	Datum =	366.70
Date	Dip =	90.00
	(m bgl)	(m AHD)
13-Jan-13	159.90	206.80
14-Jan-13	159.90	206.80
10-Feb-13	158.50	208.20
15-Feb-13	158.50	208.20
12-Mar-13	157.97	208.73
15-Mar-13	157.97	208.73
14-Apr-13	157.94	208.76
15-Apr-13	157.94	208.76
12-May-13	157.91	208.79
15-May-13	157.91	208.79
15-Jun-13	157.94	208.76
17-Jun-13	157.94	208.76
10-Jul-13	158.00	208.70
15-Jul-13	158.00	208.70
15-Aug-13	158.06	208.64
18-Aug-13	158.06	208.64
12-Sep-13	158.09	208.61
15-Sep-13	158.09	208.61
19-Dec-13	158.33	208.37
15-Mar-14	158.33	208.37
08-Apr-14	158.32	208.38
15-May-14	160.36	206.34
15-Jun-14	158.33	208.37
17-Jul-14	162.93	203.77
26-Aug-14	162.90	203.80
23-Sep-14	162.92	203.78
07-Oct-14	162.90	203.80
21-Nov-14	164.96	201.74
15-Dec-14	164.93	201.77
26-Jan-15	164.90	201.80
19-Feb-15	164.88	201.82
12-Mar-15	164.97	201.73
27-Apr-15	173.55	193.15
08-May-15	173.57	193.13
07-Jun-15	173.55	193.15
16-Jul-15	173.54	193.16
14-Aug-15	174.12	192.58
23-Sep-15	174.10	192.60
21-Oct-15	174.10	192.60
04-Nov-15	174.87	191.83
01-Dec-15	174.88	191.82
10-Feb-16	174.85	191.85
07-Mar-16	174.76	191.94
14-Apr-16	175.79	190.91
26-Jun-16	174.78	191.92
28-Jul-16	171.73	194.97
20-Aug-16	171.70	195.00
28-Sep-16	171.71	194.99
29-Oct-16	171.75	194.95
29-Dec-16	171.70	195.00
22-Jan-17	171.75	194.95
11-Feb-17	171.70	195.00
15-Mar-17	174.82	191.88
14-Apr-17	171.47	195.23
28-May-17	171.45	195.25
17-Jun-17	171.54	195.16
18-Aug-17	171.50	195.20
23-Sep-17	171.45	195.25
20-Oct-17	Dry	
26-Nov-17	Dry	
22-Dec-17	Dry	
22-Feb-18	Dry	
15-Mar-18	Dry	
07-Apr-18	Dry	
15-May-18	Dry	
25-Jun-18	Dry	
13-Jul-18	Dry	
22-Aug-18	Dry	
15-Oct-18	Dry	
23-Nov-18	Open Pit area	
30-Dec-18	Dry	
22-Jan-19	Dry	
16-Feb-19	Dry	
20-Mar-19	Dry	
19-Apr-19	Dry	
12-Jul-19	Dry	
19-Aug-19	Dry	
12-Sep-19	Dry	
03-Oct-19	Dry	
08-Feb-20	Dry	
19-Mar-20	Dry	
17-Apr-20	Dry	
20-May-20	Dry	
05-Jul-20	Dry	
27-Aug-20	Dry	
11-Sep-20	Dry	
22-Oct-20	Dry	
07-Nov-20	Dry	
17-Jan-21	Dry	

Village Bores

GGW73		
	Datum =	351.99
Date	Dip =	90.00
	(m bgl)	(m AHD)
27-Apr-89	22.37	329.62
12-Jul-93	22.63	329.36
19-Jul-93	22.63	329.36
6-Oct-94	19.38	332.61
3-Nov-94	19.76	332.23
1-Dec-94	20.13	331.86
5-Jan-95	20.56	331.43
16-Feb-95	20.83	331.16
9-Mar-95	20.30	331.69
30-Mar-95	20.27	331.72
30-Apr-95	20.00	331.99
1-Jun-95	19.72	332.27
3-Jul-95	19.54	332.45
7-Aug-95	19.65	332.34
29-Aug-95	19.55	332.44
28-Sep-95	19.50	332.49
2-Dec-95	19.55	332.44
18-Dec-95	19.23	332.76
31-Jan-96	18.23	333.76
3-Mar-96	17.38	334.61
6-Apr-96	16.30	335.69
5-May-96	15.80	336.19
3-Jul-96	14.70	337.29
2-Oct-96	13.34	338.65
31-Dec-96	13.63	338.36
31-May-97	11.64	340.35
31-Jul-97	11.29	340.70
31-Oct-97	12.60	339.39
30-Nov-97	13.17	338.82
31-Dec-97	13.94	338.05
28-Feb-98	14.92	337.07
30-Apr-98	15.67	336.32
31-May-98	15.85	336.14
30-Jul-98	16.41	335.58
30-Aug-98	16.65	335.34
30-Sep-98	16.82	335.17
31-Oct-98	16.93	335.06
30-Nov-98	17.52	334.47
31-Dec-98	17.71	334.28
10-Feb-99	17.96	334.03
29-Mar-99	18.13	333.86
12-Apr-99	18.32	333.67
30-May-99	18.41	333.58
1-Jul-99	18.56	333.43
1-Aug-99	18.64	333.35
2-Sep-99	18.82	333.17
5-Oct-99	19.09	332.90
11-Nov-99	19.73	332.26
15-Dec-99	19.62	332.37
15-Jan-00	19.82	332.17
4-Feb-00	19.89	332.10
28-Feb-00	19.87	332.12
2-Apr-00	20.00	331.99
28-Apr-00	20.12	331.87
6-Jun-00	20.35	331.64
12-Jul-00	20.51	331.48
12-Aug-00	20.73	331.26
26-Aug-00	20.79	331.20
7-Oct-00	21.01	330.98
28-Oct-00	21.08	330.91
22-Nov-00	21.21	330.78
30-Dec-00	21.35	330.64
5-Feb-01	21.45	330.54
5-Mar-01	21.51	330.48
29-Mar-01	21.56	330.43
30-Apr-01	21.67	330.32
29-May-01	21.80	330.19
7-Jul-01	21.94	330.05
27-Jul-01	22.04	329.95
25-Aug-01	22.20	329.79
1-Oct-01	22.30	329.69
9-Nov-01	22.43	329.56
2-Dec-01	22.52	329.47
24-Dec-01	22.67	329.32
3-Feb-02	22.74	329.25
4-Mar-02	22.85	329.14
9-Apr-02	22.99	329.00
30-Apr-02	23.03	328.96
28-May-02	23.18	328.81
25-Jun-02	23.22	328.77
6-Aug-02	23.36	328.63
30-Aug-02	23.45	328.54
17-Oct-02	23.57	328.42
2-Nov-02	23.61	328.38
1-Dec-02	23.72	328.27
20-Dec-02	23.81	328.18
27-Jan-03	23.92	328.07
3-Apr-03	24.16	327.83
30-Apr-03	24.26	327.73
4-Jun-03	24.36	327.63
27-Jun-03	24.45	327.54
31-Jul-03	24.55	327.44
30-Aug-03	24.63	327.36
29-Sep-03	24.70	327.29
31-Oct-03	24.80	327.19
29-Nov-03	24.94	327.05
31-Dec-03	25.05	326.94
30-Jan-04	25.10	326.89
31-Mar-04	25.32	326.67
30-May-04	25.48	326.51
2-Aug-04	25.69	326.30
2-Sep-04	25.75	326.24
1-Oct-04	25.88	326.11
2-Nov-04	25.97	326.02
3-Jan-05	26.13	325.86
3-Feb-05	26.24	325.75
7-Mar-05	26.34	325.65
1-Apr-05	26.41	325.58
30-Apr-05	26.45	325.54
31-May-05	26.57	325.42
2-Jul-05	26.64	325.35
3-Aug-05	26.78	325.21
2-Sep-05	26.84	325.15
4-Oct-05	26.87	325.12
25-Oct-05	26.97	325.02
4-Jan-06	27.14	324.85
30-Jan-06	27.27	324.72
11-Mar-06	27.33	324.66
4-Apr-06	27.39	324.60
6-May-06	27.49	324.50
1-Jun-06	27.54	324.45
11-Jul-06	27.65	324.34
30-Jul-06	27.67	324.32
4-Sep-06	27.78	324.21
3-Oct-06	27.90	324.09
30-Oct-06	27.93	324.06
9-Dec-06	28.07	323.92
8-Jan-07	28.09	323.90
6-Feb-07	28.16	323.83
10-Mar-07	28.25	323.74
16-Apr-07	28.35	323.64
1-May-07	28.42	323.57
3-Jun-07	28.49	323.50
30-Jun-07	28.54	323.45
29-Jul-07	28.64	323.35
4-Sep-07	28.77	323.22
2-Nov-07	28.87	323.12
10-Jan-08	29.02	322.97
8-Mar-08	29.11	322.88
04-Apr-08	29.13	322.86
16-May-08	29.09	322.90
02-Sep-08	29.30	322.69
05-Oct-08	29.41	322.58
29-Oct-08	29.47	322.52
24-Dec-08	29.60	322.39
02-Jan-09	29.62	322.37
08-Feb-09	29.77	322.22
21-Mar-09	29.87	322.12
01-Apr-09	29.89	322.10
15-May-09	29.99	322.00
14-Jun-09	30.09	321.90
11-Jul-09	30.14	321.85
06-Aug-09	30.15	321.84
15-Sep-09	30.25	321.74
13-Oct-09	30.29	321.70
11-Nov-09	30.37	321.62
22-Dec-09	30.40	321.59

GGW53		
	Datum =	356.64
Date	Dip =	90.00
	(m bgl)	(m AHD)
9-Dec-89	23.00	333.64
13-Jan-90	23.30	333.34
3-Feb-90	23.20	333.44
3-Mar-90	26.50	330.14
31-Mar-90	23.60	333.04
5-May-90	23.70	332.94
2-Jun-90	23.10	333.54
7-Jul-90	22.80	333.84
9-Aug-90	21.90	334.74
5-Sep-90	21.40	335.24
10-Oct-90	21.30	335.34
27-Nov-90	22.90	333.74
24-Dec-90	24.90	331.74
5-Feb-91	24.66	331.98
6-Mar-91	24.20	332.44
3-Apr-91	24.86	331.78
4-May-91	24.80	331.84
11-Jun-91	24.30	332.34
10-Jul-91	23.80	332.84
25-Aug-91	23.48	333.16
7-Sep-91	23.72	332.92
13-Sep-91	23.59	333.05
16-Dec-91	25.15	331.49
10-Mar-92	29.61	327.03
4-May-92	28.98	327.66
30-Jun-92	22.45	334.19
7-Jul-92	25.51	331.13
1-Aug-92	21.32	335.32
5-Oct-92	19.92	336.72
8-Nov-92	23.91	332.73
11-Dec-92	22.76	333.88
10-Jan-93	22.62	334.02
12-Feb-93	26.90	329.74
13-Mar-93	23.07	333.57
8-Apr-93	23.14	333.50
7-May-93	22.90	333.74
11-Jun-93	22.65	333.99
3-Jul-93	22.50	334.14
19-Jul-93	22.37	334.27
6-Aug-93	22.30	334.34
2-Sep-93	22.27	334.37
1-Oct-93	22.40	334.24
1-Nov-93	22.80	333.84
4-Jan-94	21.29	335.35
16-Mar-94	24.12	332.52
24-Apr-94	24.05	332.59
1-May-94	22.56	334.08
9-Jun-94	23.40	333.24
6-Oct-94	23.61	333.03
3-Nov-94	23.96	332.68
1-Dec-94	24.30	332.34
5-Jan-95	24.75	331.89
16-Feb-95	25.03	331.61
9-Mar-95	24.52	332.12
30-Mar-95	24.25	332.39
30-Apr-95	24.18	332.46
1-Jun-95	23.90	332.74
4-Jul-95	23.78	332.86
7-Aug-95	23.89	332.75
29-Aug-95	23.86	332.78
29-Sep-95	23.69	332.95
31-Oct-95	24.15	332.49
2-Dec-95	23.88	332.76
12-Dec-95	23.52	333.12
31-Jan-96	22.60	334.04
1-Mar-96	22.80	333.84
6-Apr-96	20.83	335.81
5-May-96	25.60	331.04
1-Jun-96	19.53	337.11
4-Jul-96	18.90	337.74
1-Sep-96	17.95	338.69
12-Sep-96	17.91	338.73
4-Nov-96	17.79	338.85
31-Dec-96	17.79	338.85
31-Jan-97	18.08	338.56
1-Mar-97	18.10	338.54
1-Apr-97	16.00	340.64
28-Feb-98	19.32	337.32
5-Nov-98	21.60	335.04
1-Jul-99	22.83	333.81
1-Aug-99	23.03	333.61
2-Sep-99	23.22	333.42
5-Oct-99	23.49	333.15
15-Dec-99	23.98	332.66
15-Jan-00	24.19	332.45
6-Feb-00	24.27	332.37
28-Feb-00	24.27	332.37
2-Apr-00	24.41	332.23
1-May-00	24.53	332.11
7-Jun-00	24.71	331.93
16-Jul-00	24.92	331.72
12-Aug-00	25.10	331.54
28-Aug-00	25.16	331.48
8-Oct-00	25.36	331.28
29-Oct-00	25.47	331.17
7-Dec-00	25.65	330.99
5-Jan-01	25.70	330.94
11-Mar-01	25.92	330.72
30-Mar-01	25.96	330.68
5-May-01	26.07	330.57
4-Jul-01	26.30	330.34
31-Jul-01	26.40	330.24
24-Aug-01	26.49	330.15
5-Oct-01	26.66	329.98
12-Nov-01	26.77	329.87
8-Dec-01	26.87	329.77
12-Jan-02	26.90	329.74
6-May-02	27.38	329.26
9-Jun-02	27.41	329.23
25-Jun-02	27.30	329.34
3-Aug-02	27.71	328.93
31-Aug-02	27.80	328.84
16-Oct-02	27.94	328.70
3-Nov-02	27.94	328.70
4-Dec-02	28.07	328.57
20-Dec-02	28.13	328.51
29-Jan-03	28.27	328.37
3-Mar-03	28.40	328.24
4-Apr-03	28.50	328.14
31-Oct-03	29.18	327.46
29-Nov-03	29.26	327.38
31-Dec-03	29.30	327.34
28-Apr-04	29.72	326.92
31-May-04	29.81	326.83
3-Jan-05	30.48	326.16
2-Feb-05	30.56	326.08
8-Mar-05	30.67	325.97
3-Apr-05	30.77	325.87
30-Apr-05	30.84	325.80
30-May-05	30.88	325.76
1-Aug-05	30.99	325.65
9-Dec-06	31.25	325.39
16-Jan-07	32.39	324.25
12-Feb-08	32.65	323.99
11-Jan-09	33.85	322.79
1-Feb-09	33.90	322.74
20-Mar-09	34.04	322.60
1-Apr-09	34.04	322.60
1-May-09	34.15	322.49
7-Jul-09	31.30	325.34
4-Aug-09	34.39	322.25
15-Sep-09	35.78	320.86
1-Mar-10	34.84	321.80
2-Apr-10	34.92	321.72
30-Apr-10	34.95	321.69
31-May-10	35.04	321.60
30-Sep-10	35.31	321.33
2-Nov-10	35.38	321.26
24-Dec-10	37.41	319.23
1-Jan-11	35.40	321.24
1-Apr-11	35.57	321.07
13-Apr-11	35.59	321.05
21-Jun-11	35.86	320.78
24-Jul-11	37.70	318.94
8-Aug-11	37.68	318.96
2-Sep-11	35.87	320.77
29-Oct-11	35.93	320.71

Appendix F - Monitoring Bore Water Level Data

Scuddles Mine Area

GGW70		
	Datum =	360.81
Date	Dip =	90.00
	(m bgl)	(m AHD)
13-Apr-11	51.00	309.81
21-Jun-11	51.23	309.58
24-Jul-11	51.39	309.42
08-Aug-11	Not Measured	
02-Sep-11	51.56	309.25
29-Oct-11	51.66	309.15
10-Nov-11	51.68	309.13
11-Dec-11	51.75	309.06
19-Jan-12	51.83	308.98
15-Feb-12	51.88	308.93
04-Mar-12	51.88	308.93
14-Apr-12	51.90	308.91
16-May-12	51.89	308.92
09-Jun-12	52.34	308.47
15-Jul-12	51.90	308.91
15-Aug-12	51.92	308.89
15-Sep-12	52.68	308.13
15-Oct-12	52.68	308.13
09-Nov-12	53.09	307.72
13-Jan-13	51.72	309.09
14-Jan-13	51.72	309.09
10-Feb-13	53.00	307.81
15-Feb-13	53.00	307.81
12-Mar-13	53.13	307.68
15-Mar-13	53.13	307.68
14-Apr-13	53.20	307.61
15-Apr-13	53.20	307.61
12-May-13	53.18	307.63
15-May-13	53.18	307.63
15-Jun-13	53.21	307.60
17-Jun-13	53.21	307.60
10-Jul-13	53.50	307.31
15-Jul-13	53.50	307.31
15-Aug-13	53.60	307.21
18-Aug-13	53.60	307.21
12-Sep-13	53.64	307.17
15-Sep-13	53.64	307.17
19-Dec-13	53.85	306.96
15-Mar-14	54.14	306.67
08-Apr-14	54.12	306.69
15-May-14	54.28	306.53
15-Jun-14	53.92	306.89
17-Jul-14	54.48	306.33
26-Aug-14	54.53	306.28
23-Sep-14	54.52	306.29
07-Oct-14	54.70	306.11
21-Nov-14	54.74	306.07
15-Dec-14	54.76	306.05
26-Jan-15	54.79	306.02
19-Feb-15	55.12	305.69
12-Mar-15	54.76	306.05
27-Apr-15	55.35	305.46
08-May-15	55.43	305.38
07-Jun-15	55.53	305.28
16-Jul-15	55.38	305.43
14-Aug-15	55.71	305.10
23-Sep-15	55.70	305.11
21-Oct-15	55.73	305.08
04-Nov-15	55.92	304.89
01-Dec-15	55.95	304.86
10-Feb-16	55.94	304.87
07-Mar-16	56.32	304.49
14-Apr-16	56.35	304.46
26-Jun-16	56.35	304.46
28-Jul-16	56.67	304.14
20-Aug-16	56.69	304.12
28-Sep-16	56.66	304.15
29-Oct-16	56.80	304.01
29-Dec-16	56.82	303.99
22-Jan-17	56.96	303.85
11-Feb-17	56.94	303.87
15-Mar-17	56.95	303.86
14-Apr-17	57.06	303.75
28-May-17	57.26	303.55
17-Jun-17	57.28	303.53
27-Jul-17	57.24	303.57
18-Aug-17	57.37	303.44
23-Sep-17	57.36	303.45
20-Oct-17	57.37	303.44
26-Nov-17	57.40	303.41
22-Dec-17	57.52	303.29
22-Feb-18	57.60	303.21
15-Mar-18	57.64	303.17
07-Apr-18	57.72	303.09
15-May-18	57.85	302.96
25-Jun-18	57.93	302.88
13-Jul-18	57.95	302.86
22-Aug-18	58.04	302.77
15-Oct-18	58.07	302.74
23-Nov-18	58.21	302.60
30-Dec-18	58.24	302.57
22-Jan-19	58.35	302.46
16-Feb-19	58.53	302.28
20-Mar-19	58.51	302.30
19-Apr-19	58.72	302.09
12-Jul-19	58.86	301.95
19-Aug-19	58.89	301.92
12-Sep-19	58.92	301.89
03-Oct-19	58.96	301.85
14-Nov-19	59.00	301.81
17-Dec-19	59.10	301.71
10-Jan-20	71.51	289.30
25-Jan-20	59.00	301.81
08-Feb-20	59.01	301.80
10-Feb-20	69.80	291.01
19-Mar-20	58.97	301.84
22-Apr-20	59.41	301.40
20-May-20	59.41	301.40
05-Jul-20	59.46	301.35
27-Aug-20	59.62	301.19
11-Sep-20	59.67	301.14
22-Oct-20	59.73	301.08
07-Nov-20	59.71	301.10
17-Jan-21	59.92	300.89
13-Feb-21	59.96	300.85
11-May-21	59.87	300.94
08-Jun-21	59.65	301.16
15-Jul-21	60.29	300.52
14-Aug-21	60.85	299.96
22-Sep-21	60.44	300.37
12-Oct-21	60.57	300.24
09-Nov-21	60.52	300.29
16-Dec-21	60.58	300.23
14-Jan-22	60.65	300.16
11-Feb-22	60.74	300.07
10-Mar-22	60.78	300.03
9-Apr-22	60.85	299.96
7-May-22	60.88	299.93
7-Jun-22	60.90	299.91
3-Jul-22	60.93	299.88
25-Aug-22	60.87	299.94
25-Sep-22	60.90	299.91
23-Oct-22	61.15	299.66
20-Nov-22	61.21	299.60

GGW74		
	Datum =	361.64
Date	Dip =	90.00
	(m bgl)	(m AHD)
22-Dec-09	56.28	305.36
19-Jan-10	56.30	305.34
16-Feb-10	56.37	305.27
19-Mar-10	56.40	305.24
04-Apr-10	56.44	305.20
02-May-10	56.42	305.22
09-Jun-10	56.49	305.15
26-Jul-10	56.39	305.25
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	56.19	305.45
12-Nov-10	56.23	305.41
24-Dec-10	56.51	305.13
19-Jan-11	56.51	305.13
06-Mar-11	56.91	304.73
13-Apr-11	56.88	304.76
21-Jun-11	57.34	304.30
24-Jul-11	57.37	304.27
08-Aug-11	57.37	304.27
02-Sep-11	56.66	304.98
29-Oct-11	57.71	303.93
10-Nov-11	57.70	303.94
11-Dec-11	57.71	303.93
19-Jan-12	57.76	303.88
15-Feb-12	57.67	303.97
04-Mar-12	57.95	303.69
14-Apr-12	57.95	303.69
16-May-12	57.97	303.67
15-Jul-12	57.94	303.70
15-Aug-12	57.93	303.71
15-Sep-12	58.38	303.26
15-Oct-12	58.38	303.26
09-Nov-12	58.91	302.73
13-Jan-13	57.68	303.96
14-Jan-13	57.68	303.96
10-Feb-13	59.52	302.12
15-Feb-13	59.52	302.12
12-Mar-13	58.76	302.88
15-Mar-13	58.76	302.88
14-Apr-13	58.75	302.89
15-Apr-13	58.75	302.89
12-May-13	58.76	302.88
15-May-13	58.76	302.88
15-Jun-13	58.74	302.90
17-Jun-13	58.74	302.90
10-Jul-13	58.91	302.73
15-Jul-13	58.91	302.73
15-Aug-13	59.04	302.60
18-Aug-13	59.04	302.60
12-Sep-13	59.05	302.59
15-Sep-13	59.05	302.59
19-Dec-13	59.21	302.43
15-Mar-14	59.41	302.23
08-Apr-14	59.45	302.19
15-May-14	59.51	302.13
15-Jun-14	59.24	302.40
17-Jul-14	59.74	301.90
26-Aug-14	59.63	302.01
23-Sep-14	59.64	302.00
07-Oct-14	59.80	301.84
21-Nov-14	59.79	301.85
15-Dec-14	59.80	301.84
26-Jan-15	59.81	301.83
19-Feb-15	59.99	301.65
12-Mar-15	59.83	301.81
27-Apr-15	60.10	301.54
08-May-15	60.12	301.52
07-Jun-15	60.05	301.59
16-Jul-15	60.06	301.58
14-Aug-15	59.88	301.76
23-Sep-15	59.86	301.78
21-Oct-15	59.85	301.79
04-Nov-15	59.87	301.77
01-Dec-15	59.87	301.77
10-Feb-16	59.88	301.76
07-Mar-16	60.10	301.54
14-Apr-16	60.14	301.50
26-Jun-16	60.13	301.51
28-Jul-16	60.35	301.29
20-Aug-16	60.38	301.26
28-Sep-16	60.37	301.27
29-Oct-16	60.35	301.29
29-Dec-16	60.33	301.31
22-Jan-17	60.48	301.16
11-Feb-17	64.45	297.19
15-Mar-17	60.48	301.16
14-Apr-17	60.38	301.26
28-May-17	60.56	301.08
17-Jun-17	60.58	301.06
27-Jul-17	60.55	301.09
18-Aug-17	60.79	300.85
23-Sep-17	60.79	300.85
20-Oct-17	60.76	300.88
26-Nov-17	60.81	300.83
22-Dec-17	60.83	300.81
22-Feb-18	60.95	300.69
15-Mar-18	61.04	300.60
07-Apr-18	61.06	300.58
15-May-18	61.10	300.54
25-Jun-18	60.99	300.65
13-Jul-18	61.02	300.62
22-Aug-18	61.00	300.64
15-Oct-18	61.03	300.61
23-Nov-18	61.05	300.59
30-Dec-18	60.98	300.66
22-Jan-19	61.06	300.58
16-Feb-19	61.11	300.53
20-Mar-19	61.15	300.49
19-Apr-19	61.18	300.46
12-Jul-19	61.20	300.44
19-Aug-19	61.12	300.52
12-Sep-19	61.16	300.48
03-Oct-19	61.17	300.47
14-Nov-19	61.17	300.47
17-Dec-19	61.21	300.43
25-Jan-20	61.22	300.42
06-Feb-20	61.27	300.37
19-Mar-20	61.20	300.44
17-Apr-20	61.22	300.42
20-May-20	61.55	300.09
05-Jul-20	61.71	299.93
27-Aug-20	61.80	299.84
11-Sep-20	61.86	299.78
22-Oct-20	61.94	299.70
07-Nov-20	62.00	299.64
17-Jan-21	62.11	299.53
13-Feb-21	62.18	299.46
11-May-21	62.06	299.58
08-Jun-21	61.87	299.77
15-Jul-21	62.31	299.33
14-Aug-21	62.29	299.35
22-Sep-21	62.24	299.40
12-Oct-21	62.27	299.37
09-Nov-21	62.33	299.31

SC073		
	Datum =	371.07
Date	Dip =	90.00
	(m bgl)	(m AHD)
10-Jul-13	118.74	252.33
18-Aug-13	118.71	252.36
12-Sep-13	118.74	252.33
17-Dec-13	111.72	259.35
15-Mar-14	118.82	252.25
8-Apr-14	118.79	252.28
15-May-14	118.83	252.24
15-Jun-14	123.81	247.26
17-Jul-14	123.30	247.77
26-Aug-14	122.97	248.10
23-Sep-14	122.99	248.08
7-Oct-14	122.97	248.10
21-Nov-14	123.59	247.48
15-Dec-14	123.64	247.43
26-Jan-15	127.50	243.57
19-Feb-15	127.00	244.07
12-Mar-15	123.10	247.97
27-Apr-15	121.31	249.76
8-May-15	121.27	249.80
7-Jun-15	120.94	250.13
16-Jul-15	120.93	250.14
14-Aug-15	120.38	250.69
23-Sep-15	120.37	250.70
21-Oct-15	120.36	250.71
4-Nov-15	120.27	250.80
1-Dec-15	120.25	250.82
10-Feb-16	120.30	250.77
7-Mar-16	120.50	250.57
14-Apr-16	120.54	250.53
26-Jun-16	120.47	250.60
28-Jul-16	119.95	251.12
20-Aug-16	119.93	251.14
28-Sep-16	119.75	251.32
29-Oct-16	120.00	251.07
29-Dec-16	120.03	251.04
22-Jan-17	120.54	250.53
11-Feb-17	120.55	250.52
15-Mar-17	120.60	250.47
14-Apr-17	120.12	250.95
28-May-17	120.01	251.06
17-Jun-17	120.09	250.98
27-Jul-17	120.00	251.07
18-Aug-17	120.20	250.87
23-Sep-17	120.22	250.85
20-Oct-17	120.03	251.04
26-Nov-17	120.93	250.14
22-Dec-17	120.13	250.94
22-Feb-18	119.80	251.27
15-Mar-18	119.93	251.14
7-Apr-18	119.97	251.10
15-May-18	119.97	251.10
25-Jun-18	120.23	250.84
13-Jul-18	120.25	250.82
22-Aug-18	119.91	251.16
15-Oct-18	119.95	251.12
23-Nov-18	119.87	251.20
30-Dec-18	120.50	250.57
22-Jan-19	120.17	250.90
16-Feb-19	120.20	250.87
20-Mar-19	120.17	250.90
12-Jul-19	122.26	248.81
19-Aug-19	122.65	248.42
12-Sep-19	122.71	248.36
03-Oct-19	122.75	248.32
10-Dec-19	123.33	247.74
10-Jan-20	123.28	247.79
08-Feb-20	123.25	247.82
09-Mar-20	123.75	247.32
20-Apr-20	123.80	247.27
20-May-20	123.07	248.00
05-Jul-20	122.73	248.34
27-Aug-20	122.50	248.57
11-Sep-20	122.64	248.43
22-Oct-20	122.40	248.67
07-Nov-20	122.37	248.70
17-Jan-21	126.81	244.26
13-Feb-21	124.12	246.95
11-May-21	125.95	245.12
08-Jun-21	125.05	246.02
15-Jul-21	122.82	248.25
14-Aug-21	122.66	248.41
14-Sep-21	123.31	247.76
12-Oct-21	123.86	247.21
09-Nov-21	123.87	247.20
16-Dec-21	123.76	247.31
14-Jan-22	123.81	247.26
15-Feb-22	125.45	245.62
10-Mar-22	123.88	247.19
11-Apr-22	123.78	247.29
9-May-22	123.39	247.68
7-Jun-22		
3-Jul-22		
25-Aug-22		
25-Sep-22		
23-Oct-22		
20-Nov-22		
15-Dec-22	130.32	240.75
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23		
18-May-23	127.50	243.57
17-Jun-23		
13-Jul-23		
13-Aug-23		
15-Sep-23		
15-Oct-23		
17-Nov-23		
29-Dec-23		
30-Jan-24		
25-Feb-24		
23-Mar-24		
15-Apr-24		
20-May-24		
15-Jun-24		
16-Jul-24		
15-Aug-24		
29-Sep-24		
16-Oct-24		
15-Nov-24		
13-Dec-24		
18-Jan-25		
20-Feb-25		
14-Mar-25		

SC080		
	Datum =	371.40
Date	Dip =	90.00
	(m bgl)	(m AHD)
21-Mar-13	67.62	303.78
14-Apr-13	67.94	303.46
15-Apr-13	67.94	303.46
12-May-13	67.94	303.46
15-May-13	67.94	303.46
4-Jun-13	67.63	303.77
15-Jun-13	67.63	303.77
17-Jun-13	67.63	303.77
10-Jul-13	67.60	303.80
15-Jul-13	67.60	303.80
15-Aug-13	67.23	304.17
18-Aug-13	67.23	304.17
12-Sep-13	67.96	303.44
15-Sep-13	67.96	303.44
15-Mar-14	68.76	302.64
30-Mar-14	68.70	302.70
8-Apr-14	68.70	302.70
15-May-14	68.32	303.08
15-Jun-14	68.59	302.81
20-Jun-14	68.59	302.81
17-Jul-14	68.88	302.52
26-Aug-14	69.80	301.60
11-Sep-14	68.76	302.64
23-Sep-14	68.76	302.64
7-Oct-14	68.75	302.65
21-Nov-14	79.87	291.53
5-Dec-14	71.08	300.32
15-Dec-14	71.08	300.32
26-Jan-15	71.28	300.12
19-Feb-15	71.30	300.10
12-Mar-15	71.05	300.35
27-Mar-15	72.17	299.23
27-Apr-15	72.34	299.06
8-May-15	72.29	299.11
7-Jun-15	71.77	299.63
5-Jul-15	72.65	298.75
16-Jul-15	72.65	298.75
14-Aug-15	71.60	299.80
23-Sep-15	71.60	299.80
9-Oct-15	72.09	299.31
21-Oct-15	72.09	299.31
4-Nov-15	72.22	299.18
1-Dec-15	72.21	299.19
14-Jan-16	73.04	298.36
10-Feb-16	72.27	299.13
7-Mar-16	72.00	299.40
14-Apr-16	71.13	300.27
15-Apr-16	71.13	300.27
17-Jun-16	71.56	299.84
26-Jun-16	71.56	299.84
28-Jul-16	72.42	298.98
20-Aug-16	70.40	301.00
28-Sep-16	72.40	299.00
30-Sep-16	71.71	299.69
29-Oct-16	73.05	298.35
29-Dec-16	73.12	298.28
15-Jan-17	73.72	297.68
22-Jan-17	73.72	297.68
11-Feb-17	73.75	297.65
15-Mar-17	74.17	297.23
4-Apr-17	74.17	297.23
14-Apr-17	74.17	297.23
28-May-17	73.27	298.13
17-Jun-17	73.40	298.00
30-Jun-17	73.51	297.89
27-Jul-17	73.51	297.89
18-Aug-17	72.95	298.45
23-Sep-17	74.68	296.72
20-Oct-17	74.84	296.56
26-Nov-17	70.72	300.68
22-Dec-17	72.25	299.15
31-Jan-18	73.70	297.70
22-Feb-18	74.96	296.44
15-Mar-18	74.33	297.07
7-Apr-18	74.31	297.09
19-Apr-18	74.90	296.50
15-May-18	74.49	296.91
25-Jun-18	74.95	296.45
13-Jul-18	73.37	298.03
15-Jul-18	73.37	298.03
22-Aug-18	74.96	296.44
15-Oct-18	75.06	296.34
25-Oct-18	75.06	296.34
23-Nov-18	75.50	295.90
30-Dec-18	76.99	294.41
22-Jan-19	76.58	294.82
13-Feb-19	77.08	294.32
16-Feb-19	77.08	294.32
20-Mar-19	78.62	292.78
19-Apr-19	77.86	293.54
8-May-19	76.83	294.57
12-Jul-19	77.25	294.15
14-Aug-19	78.18	293.22
19-Aug-19	78.18	293.22
12-Sep-19	76.23	295.17
3-Oct-19	76.70	294.70
10-Nov-19	77.65	293.75
17-Dec-19	78.46	292.94
25-Jan-20	78.97	292.43
2-Feb-20	70.47	300.93
6-Feb-20	70.47	300.93
19-Mar-20	78.98	292.42
17-Apr-20	78.96	292.44
24-May-20	79.35	292.05
5-Jul-20	79.59	291.81
27-Aug-20	79.00	292.40
11-Sep-20	78.57	292.83
27-Sep-20	79.59	291.81
22-Oct-20	78.07	293.33
7-Nov-20	80.65	290.75
20-Nov-20	80.07	291.33
17-Jan-21	No go	
13-Feb-21	Dry	
13-Mar-21	81.51	289.89
11-May-21	81.53	289.87
23-May-21	81.53	289.87
8-Jun-21	81.20	290.20
15-Jul-21	Dry	
14-Aug-21	79.92	291.48
11-Sep-21	80.15	291.25
12-Oct-21	80.30	291.10
9-Nov-21	80.30	291.10
22-Nov-21	80.30	291.10
16-Dec-21	80.28	291.12
14-Jan-22	80.33	291.07
11-Feb-22	80.35	291.05
10-Mar-22	82.48	288.92
9-Apr-22	81.89	289.51
7-May-22	81.05	290.35
7-Jun-22	81.06	290.34
3-Jul-22	81.25	290.15
25-Aug-22	81.24	290.16
25-Sep-22	80.83	290.57
23-Oct-22	81.45	289.95

SCO75		
	Datum =	366.70
Date	Dip =	90.00
	(m bgl)	(m AHD)

Village Bores

GGW73		
	Datum =	351.99
Date	Dip =	90.00
	(m bgl)	(m AHD)
19-Jan-10	30.73	321.26
16-Feb-10	30.97	321.02
19-Mar-10	30.64	321.35
04-Apr-10	30.78	321.21
02-May-10	30.76	321.23
09-Jun-10	Not Measured	
26-Jul-10	30.78	321.21
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	31.14	320.85
12-Nov-10	31.21	320.78
24-Dec-10	31.30	320.69
19-Jan-11	31.22	320.77
6-Mar-11	31.40	320.59
13-Apr-11	31.44	320.55
21-Jun-11	37.57	314.42
24-Jul-11	31.66	320.33
8-Aug-11	31.64	320.35
2-Sep-11	31.69	320.30
29-Oct-11	36.89	315.10
10-Nov-11	36.88	315.11
11-Dec-11	31.94	320.05
19-Jan-12	31.95	320.04
15-Feb-12	31.98	320.01
4-Mar-12	32.10	319.89
14-Apr-12	32.09	319.90
16-May-12	32.07	319.92
9-Jun-12	32.32	319.67
15-Jul-12	32.09	319.90
15-Aug-12	32.11	319.88
15-Sep-12	32.61	319.38
15-Oct-12	32.61	319.38
9-Nov-12	32.77	319.22
13-Jan-13	31.96	320.03
14-Jan-13	31.96	320.03
10-Feb-13	33.08	318.91
15-Feb-13	33.08	318.91
12-Mar-13	33.32	318.67
15-Mar-13	33.32	318.67
14-Apr-13	33.30	318.69
15-Apr-13	33.30	318.69
12-May-13	33.39	318.60
15-May-13	33.39	318.60
15-Jun-13	33.40	318.59
17-Jun-13	33.40	318.59
10-Jul-13	33.80	318.19
15-Jul-13	33.80	318.19
15-Aug-13	33.82	318.17
18-Aug-13	33.82	318.17
12-Sep-13	33.83	318.16
15-Sep-13	33.83	318.16
19-Dec-13	34.20	317.79
15-Mar-14	34.46	317.53
8-Apr-14	34.47	317.52
15-May-14	34.71	317.28
15-Jun-14	34.29	317.70
17-Jul-14	34.73	317.26
26-Aug-14	34.86	317.13
23-Sep-14	34.87	317.12
7-Oct-14	34.99	317.00
21-Nov-14	35.07	316.92
15-Dec-14	35.10	316.89
26-Jan-15	35.14	316.85
19-Feb-15	35.47	316.52
12-Mar-15	31.09	320.90
27-Apr-15	35.64	316.35
8-May-15	35.65	316.34
7-Jun-15	35.69	316.30
16-Jul-15	35.67	316.32
14-Aug-15	35.92	316.07
23-Sep-15	35.94	316.05
21-Oct-15	35.90	316.09
4-Nov-15	36.07	315.92
1-Dec-15	36.10	315.89
10-Feb-16	36.06	315.93
7-Mar-16	36.37	315.62
14-Apr-16	36.37	315.62
26-Jun-16	36.36	315.63
28-Jul-16	36.75	315.24
20-Aug-16	36.75	315.24
28-Sep-16	36.75	315.24
29-Oct-16	36.96	315.03
29-Dec-16	36.99	315.00
22-Jan-17	36.95	315.04
11-Feb-17	36.94	315.05
15-Mar-17	36.95	315.04
14-Apr-17	37.15	314.84
28-May-17	37.23	314.76
17-Jun-17	37.28	314.71
27-Jul-17	37.36	314.63
18-Aug-17	37.37	314.62
23-Sep-17	37.39	314.60
20-Oct-17	37.50	314.49
26-Nov-17	37.55	314.44
22-Dec-17	37.65	314.34
22-Feb-18	37.86	314.13
15-Mar-18	37.87	314.12
7-Apr-18	37.95	314.04
15-May-18	38.03	313.96
25-Jun-18	38.16	313.83
13-Jul-18	38.12	313.87
22-Aug-18	38.29	313.70
15-Oct-18	38.30	313.69
23-Nov-18	38.58	313.41
30-Dec-18	38.65	313.34
22-Jan-19	38.73	313.26
16-Feb-19	38.84	313.15
20-Mar-19	38.92	313.07
19-Apr-19	38.98	313.01
12-Jul-19	39.14	312.85
19-Aug-19	39.22	312.77
12-Sep-19	39.24	312.75
03-Oct-19	39.39	312.60
14-Nov-19	39.53	312.46
10-Dec-19	39.63	312.36
25-Jan-20	39.66	312.33
08-Feb-20	39.60	312.39
11-Mar-20	39.58	312.41
17-Apr-20	39.60	312.39
20-May-20	40.07	311.92
05-Jul-20	40.19	311.80
27-Aug-20	40.30	311.69
11-Sep-20	40.37	311.62
22-Oct-20	40.51	311.48
07-Nov-20	40.62	311.37
17-Jan-21	40.86	311.13
13-Feb-21	40.89	311.10
11-May-21	40.80	311.19
08-Jun-21	40.69	311.30
15-Jul-21	40.86	311.13
14-Aug-21	40.81	311.18
25-Sep-21	40.52	311.47
12-Oct-21	40.62	311.37
09-Nov-21	40.61	311.38

GGW53		
	Datum =	356.64
Date	Dip =	90.00
	(m bgl)	(m AHD)
10-Nov-11	35.95	320.69
11-Dec-11	36.04	320.60
19-Jan-12	36.30	320.34
15-Feb-12	36.26	320.38
4-Mar-12	36.33	320.31
14-Apr-12	36.43	320.21
16-May-12	36.41	320.23
9-Jun-12	36.57	320.07
15-Jul-12	36.40	320.24
15-Aug-12	36.44	320.20
15-Sep-12	36.91	319.73
15-Oct-12	36.91	319.73
9-Nov-12	37.07	319.57
13-Jan-13	37.41	319.23
14-Jan-13	34.41	322.23
10-Feb-13	37.37	319.27
15-Feb-13	37.37	319.27
12-Mar-13	37.46	319.18
15-Mar-13	37.46	319.18
14-Apr-13	37.48	319.16
15-Apr-13	37.48	319.16
12-May-13	37.47	319.17
15-May-13	37.47	319.17
15-Jun-13	37.45	319.19
17-Jun-13	37.45	319.19
10-Jul-13	37.97	318.67
15-Jul-13	37.97	318.67
13-May-14	38.98	317.66
21-Jun-14	39.94	316.70
19-Jul-14	39.12	317.52
16-Aug-14	39.30	317.34
24-Sep-14	39.28	317.36
8-Oct-14	39.37	317.27
5-Nov-14	39.35	317.29
13-Dec-14	39.33	317.31
3-Jan-15	39.33	317.31
15-Feb-15	38.12	318.52
12-Mar-15	39.35	317.29
26-Apr-15	39.91	316.73
9-May-15	39.89	316.75
7-Jun-15	39.97	316.67
20-Jul-15	39.96	316.68
12-Aug-15	40.18	316.46
27-Sep-15	40.19	316.45
26-Oct-15	40.17	316.47
8-Nov-15	40.34	316.30
6-Dec-15	40.32	316.32
31-Jan-16	40.30	316.34
14-Feb-16	40.33	316.31
6-Mar-16	40.64	316.00
4-Apr-16	40.62	316.02
26-Jun-16	40.65	315.99
20-Oct-16	41.22	315.42
19-Jan-17	41.45	315.19
9-Feb-17	41.47	315.17
26-Mar-17	41.48	315.16
16-Apr-17	41.35	315.29
18-May-17	41.59	315.05
12-Jun-17	41.53	315.11
8-Jul-17	41.59	315.05
13-Aug-17	41.65	314.99
3-Sep-17	41.68	314.96
12-Oct-17	41.76	314.88
4-Nov-17	41.80	314.84
16-Dec-17	41.95	314.69
20-Feb-18	42.12	314.52
12-Mar-18	42.15	314.49
3-Apr-18	42.16	314.48
10-May-18	42.22	314.42
4-Jun-18	42.39	314.25
12-Jul-18	42.42	314.22
9-Aug-18	42.53	314.11
8-Dec-18	42.91	313.73
19-Jan-19	42.97	313.67
9-Feb-19	42.11	314.53
25-Mar-19	43.17	313.47
16-Apr-19	43.21	313.43
10-Jul-19	43.41	313.23
21-Aug-19	43.49	313.15
10-Sep-19	43.74	312.90
5-Oct-19	43.67	312.97
14-Nov-19	43.78	312.86
10-Feb-20	Dry	
6-Jul-20	44.36	312.28
4-Aug-20	44.42	312.22
13-Sep-20	44.50	312.14
25-Oct-20	44.62	312.02
8-Nov-20	44.75	311.89
3-Jan-21	45.00	311.64
27-Feb-21	45.95	310.69
16-Mar-21	45.12	311.52
13-Apr-21	45.04	311.60
17-Aug-21	Dipper Stuck	
8-Nov-21	44.94	311.70
7-Dec-21	44.88	311.76
14-Jan-22	44.92	311.72
15-Feb-22	45.18	311.46
10-Mar-22	45.24	311.40
11-Apr-22	45.32	311.32
9-May-22	45.39	311.25
7-Jun-22		
3-Jul-22		
25-Aug-22		
25-Sep-22		
23-Oct-22		
20-Nov-22		
29-Dec-22		
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	46.23	310.41
18-May-23	42.17	314.47
17-Jun-23		
13-Jul-23		
13-Aug-23		
15-Sep-23		
15-Oct-23		
17-Nov-23		
29-Dec-23		
30-Jan-24		
25-Feb-24		
23-Mar-24		
15-Apr-24		
20-May-24		
15-Jun-24		
16-Jul-24		
15-Aug-24		
29-Sep-24		
16-Oct-24		
15-Nov-24		
13-Dec-24		
18-Jan-25		
20-Feb-25		
14-Mar-25		

Appendix F - Monitoring Bore Water Level Data

GGW70		
Date	Datum =	360.81
	Dip =	90.00
	(m bgl)	(m AHD)
29-Dec-22	61.27	299.54
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	61.44	299.37
18-May-23	61.44	299.37
17-Jun-23	61.41	299.40
13-Jul-23	61.44	299.37
13-Aug-23	61.42	299.39
15-Sep-23	61.45	299.36
15-Oct-23		
17-Nov-23	61.47	299.34
29-Dec-23	61.45	299.36
30-Jan-24		
25-Feb-24	61.55	299.26
23-Mar-24	61.58	299.23
15-Apr-24	61.66	299.15
20-May-24	61.69	299.12
15-Jun-24	61.69	299.12
16-Jul-24	61.72	299.09
15-Aug-24	61.70	299.11
29-Sep-24	61.70	299.11
16-Oct-24	61.70	299.11
15-Nov-24	61.72	299.09
13-Dec-24	61.72	299.09
18-Jan-25	61.93	298.88
20-Feb-25	62.03	298.78
14-Mar-25	67.04	293.77

GGW74		
Date	Datum =	361.64
	Dip =	90.00
	(m bgl)	(m AHD)
16-Dec-21	62.37	299.27
14-Jan-22	62.27	299.37
11-Feb-22	62.30	299.34
10-Mar-22	62.29	299.35
9-Apr-22	62.30	299.34
7-May-22	62.35	299.29
7-Jun-22	62.33	299.31
3-Jul-22	62.39	299.25
25-Aug-22	62.37	299.27
25-Sep-22	62.42	299.22
23-Oct-22	62.39	299.25
20-Nov-22	62.42	299.22
29-Dec-22	62.48	299.16
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	63.38	298.26
18-May-23	63.37	298.27
17-Jun-23	64.43	297.21
13-Jul-23	64.45	297.19
13-Aug-23	63.29	298.35
15-Sep-23	63.27	298.37
15-Oct-23		
17-Nov-23	63.67	297.97
29-Dec-23	63.27	298.37
30-Jan-24		
25-Feb-24	63.13	298.51
23-Mar-24	63.15	298.49
15-Apr-24	64.42	297.22
20-May-24	64.49	297.15
15-Jun-24	64.49	297.15
16-Jul-24	64.66	296.98
15-Aug-24	46.78	314.86
29-Sep-24	46.62	315.02
16-Oct-24	46.62	315.02
15-Nov-24	64.67	296.97
13-Dec-24	64.68	296.96
18-Jan-25	65.11	296.53
20-Feb-25	64.95	296.69
14-Mar-25	64.74	296.90

SC073		
Date	Datum =	371.07
	Dip =	90.00
	(m bgl)	(m AHD)

SC080		
Date	Datum =	371.40
	Dip =	90.00
	(m bgl)	(m AHD)
20-Nov-22	81.60	289.80
29-Dec-22	82.29	289.11
2-Jan-23		
2-Feb-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	82.55	288.85
18-May-23	82.80	288.60
17-Jun-23	82.83	288.57
13-Jul-23	83.60	287.80
13-Aug-23		
15-Sep-23	83.84	287.56
15-Oct-23		
17-Nov-23		
29-Dec-23	83.84	287.56
30-Jan-24		
25-Feb-24	87.59	283.81
23-Mar-24	87.65	283.75
15-Apr-24	86.56	284.84
20-May-24	87.51	283.89
15-Jun-24	87.51	283.89
16-Jul-24	86.80	284.60
15-Aug-24	86.85	284.55
29-Sep-24	86.72	284.68
16-Oct-24	86.72	284.68
15-Nov-24	86.89	284.51
13-Dec-24	86.90	284.50
18-Jan-25		
20-Feb-25	88.86	282.54
14-Mar-25	90.54	280.86

SCO75		
Date	Datum =	366.70
	Dip =	90.00
	(m bgl)	(m AHD)

GGW73		
Date	Datum =	351.99
	Dip =	90.00
	(m bgl)	(m AHD)
16-Dec-21	40.63	311.36
14-Jan-22	40.89	311.10
11-Feb-22	41.02	310.97
10-Mar-22	41.12	310.87
9-Apr-22	41.20	310.79
7-May-22	41.22	310.77
7-Jun-22	41.23	310.76
3-Jul-22	41.28	310.71
25-Aug-22	41.25	310.74
25-Sep-22	41.28	310.71
23-Oct-22	41.68	310.31
20-Nov-22	41.73	310.26
29-Dec-22	41.84	310.15
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	42.12	309.87
18-May-23	42.17	309.82
17-Jun-23	42.24	309.75
13-Jul-23	42.26	309.73
13-Aug-23	42.35	309.64
15-Sep-23	42.43	309.56
15-Oct-23		
17-Nov-23	42.60	309.39
29-Dec-23	42.43	309.56
30-Jan-24		
25-Feb-24	42.88	309.11
23-Mar-24	42.97	309.02
15-Apr-24	43.07	308.92
20-May-24	43.13	308.86
15-Jun-24	43.13	308.86
16-Jul-24	43.25	308.74
15-Aug-24	43.31	308.68
29-Sep-24	43.33	308.66
16-Oct-24	43.33	308.66
15-Nov-24	43.36	308.63
13-Dec-24	63.38	288.61
18-Jan-25	43.70	308.29
20-Feb-25	43.14	308.85
14-Mar-25	43.81	308.18

GGW53		
Date	Datum =	356.64
	Dip =	90.00
	(m bgl)	(m AHD)

Scuddles Mine Area

Village Bores

Appendix F - Monitoring Bore Water Level Data

Village Bores

GGW54

Date	Datum = 361.71 / Dip = 90.00 (m bgl)	(m AHD)
3-May-89	24.07	337.64
9-Dec-89	27.40	334.31
13-Jan-90	27.60	334.11
3-Feb-90	27.60	334.11
3-Mar-90	24.70	337.01
31-Mar-90	24.80	336.91
5-May-90	24.80	336.91
2-Jun-90	24.30	337.41
7-Jul-90	27.00	334.71
9-Aug-90	23.10	338.61
5-Sep-90	22.60	339.11
10-Oct-90	25.80	335.91
27-Nov-90	27.20	334.51
24-Dec-90	28.20	333.51
1-Feb-91	28.81	332.90
5-Feb-91	28.98	332.73
6-Mar-91	25.39	336.32
3-Apr-91	29.09	332.62
4-May-91	29.19	332.52
11-Jun-91	25.58	336.13
10-Jul-91	28.13	333.58
25-Aug-91	24.69	337.02
7-Sep-91	24.92	336.79
13-Sep-91	27.71	334.00
16-Dec-91	26.42	335.29
10-Mar-92	29.75	331.96
4-May-92	29.60	332.11
30-Jun-92	23.71	338.00
7-Jul-92	26.88	334.83
1-Aug-92	22.17	339.54
5-Oct-92	21.20	340.51
8-Nov-92	21.49	340.22
11-Dec-92	22.12	339.59
10-Jan-93	22.08	339.63
12-Feb-93	27.15	334.56
13-Mar-93	25.10	336.61
8-Apr-93	25.20	336.51
7-May-93	25.25	336.46
11-Jun-93	22.15	339.56
3-Jul-93	25.10	336.61
19-Jul-93	23.76	337.95
6-Aug-93	25.00	336.71
2-Sep-93	25.00	336.71
1-Oct-93	25.00	336.71
1-Nov-93	25.10	336.61
2-Dec-93	26.45	335.26
4-Jan-94	27.41	334.30
16-Mar-94	26.11	335.60
24-Apr-94	25.47	336.24
1-May-94	25.10	336.61
9-Jun-94	24.72	336.99
6-Oct-94	25.02	336.69
3-Nov-94	25.37	336.34
1-Dec-94	25.75	335.96
5-Jan-95	29.31	332.40
16-Feb-95	29.57	332.14
9-Mar-95	25.90	335.81
31-Mar-95	29.15	332.56
30-Apr-95	25.59	336.12
1-Jun-95	25.25	336.46
4-Jul-95	25.15	336.56
7-Aug-95	25.31	336.40
29-Aug-95	25.30	336.41
29-Sep-95	25.19	336.52
31-Oct-95	28.85	332.86
18-Dec-95	25.13	336.58
31-Jan-96	27.20	334.51
1-Mar-96	26.30	335.41
6-Apr-96	22.40	339.31
5-May-96	21.70	340.01
10-Jun-96	24.07	337.64
4-Jul-96	20.50	341.21
1-Sep-96	19.35	342.36
3-Oct-96	22.43	339.28
4-Nov-96	22.36	339.35
31-Dec-96	22.35	339.36
31-Jan-97	22.57	339.14
1-Mar-97	19.80	341.91
31-May-97	17.45	344.26
31-Jul-97	17.05	344.66
1-Dec-97	19.67	342.04
31-Mar-98	20.69	341.02
31-May-98	29.38	332.33
31-Aug-98	22.27	339.44
30-May-99	24.03	337.68
4-Sep-99	24.42	337.29
5-Oct-99	24.70	337.01
11-Nov-99	24.97	336.74
15-Dec-99	25.21	336.50
15-Jan-00	25.42	336.29
5-Feb-00	25.60	336.11
28-Feb-00	25.48	336.23
2-Apr-00	25.66	336.05
1-May-00	25.72	335.99
7-Jun-00	25.92	335.79
16-Jul-00	26.14	335.57
12-Aug-00	26.30	335.41
28-Aug-00	26.40	335.31
8-Oct-00	26.62	335.09
29-Oct-00	26.70	335.01
7-Dec-00	26.90	334.81
5-Jan-01	26.92	334.79
11-Mar-01	27.14	334.57
30-Mar-01	27.20	334.51
5-May-01	27.30	334.41
28-May-01	27.38	334.33
4-Jul-01	27.55	334.16
31-Jul-01	27.65	334.06
24-Aug-01	27.73	333.98
5-Oct-01	27.90	333.81
12-Nov-01	28.05	333.66
8-Dec-01	28.13	333.58
12-Jan-02	28.23	333.48
4-Feb-02	31.23	330.48
4-Mar-02	28.46	333.25
8-Apr-02	28.59	333.12
6-May-02	28.62	333.09
9-Jun-02	28.80	332.91
25-Jun-02	28.84	332.87
3-Aug-02	28.98	332.73
31-Aug-02	29.05	332.66
16-Oct-02	29.19	332.52
3-Nov-02	29.23	332.48
4-Dec-02	29.35	332.36
20-Dec-02	29.40	332.31
29-Jan-03	29.53	332.18
3-Mar-03	29.68	332.03
4-Apr-03	29.76	331.95
1-May-03	29.93	331.78
4-Jun-03	29.97	331.74
27-Jun-03	30.04	331.67
31-Jul-03	30.12	331.59
30-Aug-03	30.22	331.49
29-Sep-03	30.36	331.35
31-Oct-03	30.44	331.27
29-Nov-03	30.54	331.17
31-Dec-03	30.76	330.95
4-Mar-04	30.79	330.92
28-Apr-04	30.99	330.72
31-May-04	31.06	330.65
3-Jan-05	31.66	330.05
2-Feb-05	31.73	329.98
16-Jan-07	33.71	328.00
14-Feb-08	34.11	327.60
11-Jan-09	35.22	326.49
1-Feb-09	35.36	326.35
20-Mar-09	35.40	326.31
1-Apr-09	35.42	326.29
1-May-09	35.50	326.21
7-Jul-09	35.64	326.07
4-Aug-09	35.72	325.99
15-Sep-09	34.41	327.30
1-Mar-10	36.19	325.52
2-Apr-10	36.31	325.40
30-Apr-10	36.53	325.18
31-May-10	36.42	325.29
30-Sep-10	36.73	324.98

Regional Bores

BJDD003

Date	Datum = 388.60 / Dip = 49.00 (m bgl)	(m AHD)
15-Nov-05	66.66	338.29
4-Apr-06	66.72	338.25
6-May-06	66.77	338.21
1-Jun-06	66.73	338.24
4-Sep-06	67.00	338.03
3-Oct-06	67.06	337.99
31-Oct-06	67.19	337.89
9-Dec-06	67.81	337.42
8-Jan-07	67.31	337.80
2-Nov-07	68.13	337.18
29-Jul-07	67.87	337.38
30-Jun-07	67.70	337.51
2-Nov-07	68.13	337.18
10-Jan-08	68.47	336.93
8-Mar-08	67.55	337.62
4-Apr-08	68.28	337.07
29-Oct-08	Not measured	
24-Dec-08	Not measured	
2-Jan-09	68.85	336.64
8-Feb-09	68.96	336.56
21-Mar-09	69.09	336.46
1-Apr-09	69.14	336.42
15-May-09	69.07	336.47
14-Jun-09	69.05	336.49
6-Aug-09	69.07	336.47
15-Sep-09	69.26	336.33
13-Oct-09	69.19	336.38
11-Nov-09	69.14	336.42
22-Dec-09	69.15	336.41
19-Jan-10	69.35	336.26
16-Feb-10	69.40	336.22
19-Mar-10	Not measured	
04-Apr-10	Not measured	
02-May-10	Not measured	
9-Jun-10	69.68	336.01
26-Jul-10	Not measured	
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	Not Measured	
12-Nov-10	Blocked	
24-Dec-10	69.18	336.39
19-Jan-11	69.13	336.43
6-Mar-11	69.52	336.13
13-Apr-11	69.53	336.13
21-Jun-11	Not measured	
24-Jul-11	Not measured	
8-Aug-11	Not measured	
2-Sep-11	Not measured	
29-Oct-11	Not measured	
10-Nov-11	Not measured	
11-Dec-11	Dry	
19-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	Dry	
14-Apr-12	Dry	
16-May-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
13-Jan-13	Dry	
10-Feb-13	70.60	335.32
15-Feb-13	70.60	335.32
12-Mar-13	71.24	334.83
15-Mar-13	71.24	334.83
14-Apr-13	71.31	334.78
15-Apr-13	71.31	334.78
12-May-13	71.35	334.75
15-May-13	71.28	334.80
15-Jun-13	71.28	334.80
17-Jun-13	Not measured	
15-Jul-13	Not measured	
15-Aug-13	Not measured	
15-Sep-13	Not measured	
12-Oct-13	Tape Broken	
12-Nov-13	Tape Broken	
19-Dec-13	Not mesasured	
15-Mar-14	73.89	332.83
8-Apr-14	73.86	332.86
15-Jun-14	71.55	334.60
17-Jul-14	Blocked	
22-Jan-19	72.53	333.86
16-Feb-19	72.58	333.82
20-Mar-19	72.45	333.92
19-Apr-19	72.53	333.86
12-Jul-19	72.90	333.58
19-Aug-19	No Go	
12-Sep-19	No Go	
03-Oct-19	No Go	
14-Nov-19	Blocked	
10-Dec-19	Blocked	
25-Jan-20	Blocked	
19-Mar-20	Blocked	
17-Apr-20	Blocked	
20-May-20	Blocked	
05-Jul-20	73.10	333.43
27-Aug-20	No Go	
11-Sep-20	No Go	
22-Oct-20	No Go	
07-Nov-20	No Go	
17-Jan-21	72.82	333.64
11-May-21	72.91	333.57
08-Jun-21	72.78	333.67
15-Jul-21	Blocked	

BJDD004

Date	Datum = 360.25 / Dip = 59.00 (m bgl)	(m AHD)
15-Jan-08	32.11	332.73
6-Feb-08	32.16	332.68
8-Mar-08	32.10	332.73
4-Apr-08	32.15	332.69
16-May-08	32.22	332.63
2-Sep-08	32.33	332.54
5-Oct-08	32.29	332.57
29-Oct-08	32.38	332.49
24-Dec-08	32.43	332.45
19-Jan-10	32.78	332.15
16-Feb-10	32.94	332.01
19-Mar-10	Not measured	
04-Apr-10	33.27	331.73
02-May-10	33.27	331.73
9-Jun-10	Not Measured	
26-Jul-10	35.29	330.00
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	35.21	330.07
12-Nov-10	35.02	330.23
24-Dec-10	Not Measured	
19-Jan-11	34.92	330.32
6-Mar-11	34.62	330.57
13-Apr-11	34.60	330.59
21-Jun-11	34.42	330.75
24-Jul-11	Not measured	
8-Aug-11	Not measured	
2-Sep-11	34.30	330.85
29-Oct-11	34.35	330.81
10-Nov-11	34.36	330.80
11-Dec-11	34.32	330.83
19-Jan-12	34.30	330.85
15-Feb-12	34.32	330.83
4-Mar-12	34.34	330.81
14-Apr-12	34.33	330.82
16-May-12	34.30	330.85
9-Jun-12	34.38	330.78
15-Jul-12	34.26	330.88
15-Aug-12	34.29	330.86
15-Sep-12	34.47	330.70
15-Oct-12	34.47	330.70
9-Nov-12	34.59	330.60
14-Jan-13	34.40	330.76
10-Feb-13	34.63	330.57
12-Mar-13	35.00	330.25
14-Apr-13	34.97	330.27
12-May-13	35.13	330.14
17-Jun-13	35.13	330.14
10-Jul-13	35.53	329.79
18-Aug-13	35.46	329.85
12-Sep-13	35.46	329.85
12-Oct-13	No tape for SWL	
12-Nov-13	No tape for SWL	
19-Dec-13	35.24	330.04
15-Mar-14	35.43	329.88
8-Apr-14	35.44	329.87
15-May-14	36.15	329.26
15-Jun-14	35.31	329.98
17-Jul-14	36.12	329.29
26-Aug-14	35.98	329.41
23-Sep-14	35.97	329.42
7-Oct-14	36.05	329.35
21-Nov-14	36.24	329.19
15-Dec-14	36.23	329.19
26-Jan-15	36.24	329.19
19-Feb-15	37.20	328.36
12-Mar-15	36.20	329.22
27-Apr-15	37.11	328.44
8-May-15	37.06	328.48
7-Jun-15	36.93	328.59
16-Jul-15	37.10	328.45
14-Aug-15	36.74	328.76
23-Sep-15	36.75	328.75
21-Oct-15	36.72	328.77
4-Nov-15	36.54	328.93
1-Dec-15	36.60	328.88
10-Feb-16	36.60	328.88
7-Mar-16	36.54	328.93
14-Apr-16	36.51	328.95
26-Jun-16	36.57	328.90
28-Jul-16	36.50	328.96
20-Aug-16	36.48	328.98
28-Sep-16	36.56	328.91
29-Oct-16	36.50	328.96
29-Dec-16	36.50	328.96
22-Jan-17	36.53	328.94
11-Feb-17	36.47	328.99
15-Mar-17	36.54	328.93
14-Apr-17	36.79	328.71
28-May-17	36.76	328.74
17-Jun-17	36.78	328.72
27-Jul-17	36.70	328.79
18-Aug-17	36.71	328.78
23-Sep-17	36.73	328.77
20-Oct-17	Blocked	
26-Nov-17	Not mesasured	
22-Feb-18	39.36	326.51

SC093

Date	Datum = 359.65 / Dip = 64.00 (m bgl)	(m AHD)
15-Jan-08	24.04	338.04
2-Sep-08	23.40	338.62
5-Oct-08	23.64	338.40
29-Oct-08	23.72	338.33
24-Dec-08	23.90	338.17
19-Jan-10	Not Measured	
16-Feb-10	Not Measured	
19-Mar-10	Not Measured	
4-Apr-10	23.59	338.45
2-May-10	23.58	338.46
9-Jun-10	Not Measured	
26-Jul-10	23.48	338.55
1-Aug-10	Not Measured	
1-Sep-10	Not Measured	
16-Oct-10	23.34	338.67
12-Nov-10	23.41	338.61
24-Dec-10	Not Measured	
19-Jan-11	23.24	338.76
6-Mar-11	23.08	338.91
13-Apr-11	23.01	338.97
21-Jun-11	23.96	338.11
24-Jul-11	24.27	337.84
8-Aug-11	24.28	337.83
2-Sep-11	24.70	337.45
29-Oct-11	25.36	336.86
10-Nov-11	25.35	336.87
11-Dec-11	25.79	336.47
19-Jan-12	25.26	336.95
15-Feb-12	26.20	336.10
4-Mar-12	26.23	336.07
14-Apr-12	26.21	336.09
16-May-12	26.19	336.11
9-Jun-12	26.99	335.39
15-Jul-12	26.20	336.10
15-Aug-12	26.21	336.09
15-Sep-12	27.00	335.38
15-Oct-12	27.00	335.38
9-Nov-12	27.20	335.20
14-Jan-13	27.44	334.99
10-Feb-13	27.51	334.92
12-Mar-13	27.48	334.95
14-Apr-13	27.63	334.82
12-May-13	27.66	334.79
17-Jun-13	27.68	334.77
10-Jul-13	27.04	335.35
18-Aug-13	27.02	335.36
12-Sep-13	27.04	335.35
12-Oct-13	No tape for SWL	
12-Nov-13	No tape for SWL	
19-Dec-13	27.78	334.68
15-Mar-14	28.19	334.31
8-Apr-14	28.20	334.30
15-May-14	28.32	334.20
15-Jun-14	27.95	334.53
17-Jul-14	28.44	334.09
26-Aug-14	28.53	334.01
23-Sep-14	28.55	333.99
7-Oct-14	28.66	333.89
21-Nov-14	28.77	333.79
15-Dec-14	28.75	333.81
26-Jan-15	28.77	333.79
19-Feb-15	28.62	333.93
12-Mar-15	28.78	333.78
27-Apr-15	28.80	333.76
8-May-15	28.88	333.69
7-Jun-15	28.97	333.61
16-Jul-15	28.80	333.76
14-Aug-15	29.27	333.34
23-Sep-15	29.25	333.36
21-Oct-15	29.29	333.32
4-Nov-15	29.36	333.26
1-Dec-15	29.36	333.26
10-Feb-16	29.34	333.28
7-Mar-16	28.53	334.01
14-Apr-16	28.54	334.00
26-Jun-16	28.55	333.99
28-Jul-16	30.00	332.69
20-Aug-16	30.03	332.66
28-Sep-16	30.05	332.64
29-Oct-16	30.05	332.64
29-Dec-16	30.13	332.57
22-Jan-17	30.44	332.29
11-Feb-17	30.44	332.29
15-Mar-17	30.45	332.28
14-Apr-17	30.42	332.31
28-May-17	30.59	332.16
17-Jun-17	30.60	332.15
27-Jul-17	30.60	332.15
18-Aug-17	30.66	332.09
23-Sep-17	30.65	332.10
20-Oct-17	30.77	331.99
26-Nov-17	30.74	332.02
22-Dec-17	30.82	331.95
22-Feb-18	29.98	332.70
15-Mar-18	30.98	331.81
7-Apr-18	30.96	331.82
15-May-18	30.62	332.13
25-Jun-18	30.29	332.43
13-Jul-18	30.30	332.42
22-Aug-18	30.50	332.24
15-Oct-18	30.52	332.22
23-Nov-18	31.09	331.71
30-Dec-18	31.15	331.65
22-Jan-19	30.96	331.82
16-Feb-19	30.88	331.90
20-Mar-19	31.18	331.63
19-Apr-19	31.13	331.67
12-Jul-19	31.37	331.45
19-Aug-19	31.45	331.38
12-Sep-19	31.51	331.33
3-Oct-19	31.59	331.26
18-Dec-19	31.76	331.10
25-Jan-20	31.77	331.10
8-Feb-20	31.75	331.11
19-Mar-20	31.76	331.10
17-Apr-20	31.79	331.08
20-May-20	35.49	327.75
5-Jul-20	31.87	331.01
27-Aug-20	31.95	330.93
11-Sep-20	31.43	331.40
22-Oct-20	32.01	330.88
7-Nov-20	32.07	330.83
17-Jan-21	32.26	330.65
11-May-21	32.41	330.52
8-Jun-21	32.11	330.79
15-Jul-21	32.21	330.70
14-Aug-21	32.17	330.74
24-Sep-21	32.27	330.65
12-Oct-21	32.33	330.59
9-Nov-21	32.34	330.58
16-Dec-21	32.42	330.51
14-Jan-22	32.43	330.50
11-Feb-22	32.49	330.45
10-Mar-22	32.51	330.43
9-Apr-22	32.29	330.63
7-May-22	32.51	330.43
7-Jun-22	32.53	330.41
3-Jul-22	32.55	330.39
25-Aug-22	32.52	330.42
25-Sep-22	32.57	330.38
23-Oct-22	32.71	330.25
20-Nov-22	32.78	330.19
29-Dec-22	32.73	330.23
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23		
18-May-23		
17-Jun-23		
13-Jul-23	32.80	330.17
13-Aug-23	32.60	330.35
15-Sep-23	32.48	330.46
15-Oct-23		
17-Nov-23	32.63	330.32
29-Dec-23	32.48	330.46
30-Jan-24		
25-Feb-24	32.61	330.34

Old South Bore

Date	Datum = 369.00 / Dip = 90.00 (m bgl)	(m AHD)
15-Nov-05	40.38	328.62
02-May-06	40.75	328.25
16-Jan-07	41.38	327.62
02-Sep-08	42.63	326.37
05-Oct-08	42.69	326.31
29-Oct-08	Not measured	
24-Dec-08	42.80	326.20
02-Jan-09	42.85	326.15
08-Feb-09	42.92	326.08
21-Mar-09	43.98	325.02
01-Apr-09	43.00	326.00
15-May-09	43.09	325.91
14-Jun-09	43.19	325.81
11-Jul-09	43.20	325.80
06-Aug-09	43.26	325.74
15-Sep-09	43.36	325.64
13-Oct-09	43.40	325.60
11-Nov-09	41.43	327.57
22-Dec-09	43.51	325.49
19-Jan-10	43.55	325.45
16-Feb-10	43.90	325.10
19-Mar-10	43.66	325.34
04-Apr-10	36.78	332.22
02-May-10	36.75	332.25
09-Jun-10	43.83	325.17
26-Jul-10	35.68	333.32
01-Aug-10	Not Measured	
01-Sep-10	Not Measured	
16-Oct-10	44.02	324.98
12-Nov-10	44.11	324.89
24-Dec-10	44.21	324.79
19-Jan-11	44.14	324.86
06-Mar-11	44.34	324.66
13-Apr-11	44.33	324.67
21-Jun-11	44.49	324.51
24-Jul-11	Not measured	
08-Aug-11	Not measured	
02-Sep-11	44.56	324.44
29-Oct-11	44.71	324.29
10-Nov-11	44.70	324.30
11-Dec-11	44.76	324.24
19-Jan-12	44.79	324.21
15-Feb-12	44.83	324.17
04-Mar-12	44.90	324.10
14-Apr-12	44.89	324.11
16-May-12	44.90	324.10
09-Jun-12	44.95	324.05
15-Jul-12	44.85	324.15
15-Aug-12	44.81	324.19
15-Sep-12	45.16	323.84
15-Oct-12	45.16	323.84
09-Nov-12	45.21	323.79
13-Jan-13	44.69	324.31
10-Feb-13	45.36	323.64
15-Feb-13	45.36	323.64
12-Mar-13	45.46	323.54
15-Mar-13	45.46	323.54
14-Apr-13	45.51	323.49
15-Apr-13	45.51	323.49
12-May-13	45.52	323.48
15-May-13	45.52	323.48
15-Jun-13	45.50	323.50
17-Jun-13	45.50	323.50
15-Jul-13	Blocked	
15-Aug-13	Vandalised	
15-Sep-13	Blocked	
22-Jan-19	Vandalised	
16-Feb-19	Vandalised	
20-Mar-19	Vandalised	
19-Apr-19	Vandalised	
12-Jul-19	Vandalised	
19-Aug-19	Vandalised	
12-Sep-19	Vandalised	
03-Oct-19	Vandalised	
16-Dec-19	Vandalised	

RMB4

Date	Datum = 364.48 / Dip = 90.00 (m bgl)	(m AHD)
01-May-94	28.60	335.88
19-Feb-96	29.95	334.53
29-May-96	29.25	335.23
13-Jun-96	29.27	335.21
03-Jul-96	29.20	335.28
15-Nov-05	32.44	332.04
12-Jan-06	32.50	331.98
06-May-06	33.05	331.43
08-May-06	32.62	331.86
01-Jun-06	32.70	331.78
30-Jul-06	32.70	331.78
04-Sep-06	32.74	331.74
20-Sep-06	32.79	331.69
03-Oct-06	32.80	331.68
30-Oct-06	32.76	331.72
08-Jan-07	32.84	331.64
09-Jan-07	32.89	331.59
06-Feb-07	32.87	331.61
03-Apr-07	32.92	331.56
16-Apr-07	32.92	331.56
01-May-07	32.98	331.50
03-Jun-07	33.02	331.46
15-Jun-07	33.01	331.47
30-Jun-07	33.04	331.44
04-Sep-07	33.10	331.38
22-Sep-07	33.10	331.38
02-Nov-07	33.13	331.35
10-Jan-08	33.19	331.29
08-Mar-08	33.26	331.22
21-Mar-08	33.28	331.20
04-Apr-08	33.29	331.19
16-May-08	33.35	331.13
13-Jun-08	33.35	331.13
02-Sep-08	33.44	331.04
19-Sep-08	33.46	331.02
05-Oct-08	33.49	330.99
29-Oct-08	33.47	331.01
24-Dec-08	33.59	330.89
02-Jan-09	33.54	330.94
07-Mar-09	33.63	330.85
21-Mar-09	33.58	330.90
01-Apr-09	33.64	330.84
15-May-09	33.69	330.79
11-Jun-09	33.74	330.74
14-Jun-09	33.72	330.76
11-Jul-09	33.74	330.74
06-Aug-09	33.75	330.73
01-Sep-09	30.77	333.71
15-Sep-09	33.86	330.62
13-Oct-09	32.92	331.56
11-Nov-09	33.84	330.64
22-Dec-09	34.80	329.68
01-Apr-11	36.48	328.00
12-May-13	45.92	318.56
15-May-13	45.92	318.56
15-Jun-13	42.87	321.61
17-Jun-13	42.87	321.61
10-Jul-13	39.68	324.80
15-Jul-13	39.68	324.80
15-Aug-13	37.95	326.53
18-Aug-13	37.95	326.53
12-Sep-13	37.91	326.57
15-Sep-13	37.91	326.57
17-Dec-13	36.72	327.76
12-Mar-14	56.26	308.22
09-Apr-14	41.95	322.53
13-May-14	39.61	324.87
21-Jun-14	38.54	325.94
19-Jul-14	38.82	325.66
16-Aug-14	38.13	326.35
24-Sep-14	38.14	326.34
08-Oct-14	38.59	325.89
05-Nov-14	39.40	325.08
13-Dec-14	39.43	325.05
03-Jan-15	57.56	306.92
12-Mar-15	45.03	319.45
26-Apr-15	40.50	323.98
09-May-15	40.05	324.43
07-Jun-15	40.98	323.50
20-Jul-15	40.99	323.49
12-Aug-15	38.72	325.76
27-Sep-15	38.76	325.72
26-Oct-15	38.70	325.78
08-Nov-15	39.28	325.20
06-Dec-15	39.25	325.23
31-Jan-16	38.03	326.45
14-Feb-16	38.13	326.35
06-Mar-16	38.04	326.44
04-Apr-16	38.07	326.41
26-Jun-16	38.11	326.37
14-Jul-16	37.86	326.62
04-Aug-16	37.87	326.61
11-Sep-16	37.89	326.59
20-Oct-16	37.70	326.78
09-Feb-17	38.90	325.58
26-Mar-17	38.95	325.53
16-Apr-17	38.37	326.11
18-May-17	38.32	326.16
12-Jun-17	38.13	326.35
08-Jul-17	38.03	326.45
13-Aug-17	38.05	326.43
03-Sep-17	38.09	326.39
12-Oct-17	37.94	326.54
21-Nov-17	45.23	319.25
16-Dec-17	40.05	324.43
20-Feb-18	43.56	320.92
11-Mar-18	40.81	323.67
03-Apr-18	40.21	324.27
10-May-18	39.47	325.01
04-Jun-18	39.08	325.40
12-Jul-18	39.05	325.43
09-Aug-18	39.20	325.28
17-Nov-18	42.10	322.38
08-Dec-18	46.33	318.15
19-Jan-19	43.62	320.86
9-Feb-19	46.06	318.42
25-Mar-19	45.32	319.16
16-Apr-19	43.79	320.69
10-Jul-19	40.25	324.23
21-Aug-19	39.85	324.63
10-Sep-19	39.70	324.78
5-Oct-19	45.73	318.75
14-Nov-19	48.47	316.01
11-Dec-19	47.63	316.85
10-Feb-20	62.76	301.72
9-Mar-20	71.50	292.98
20-Apr-20	71.48	293.00
6-Jul-20	46.48	318.00
4-Aug-20	47.83	316.65
13-Sep-20	Pumping	
25-Oct-20	50.47	314.01
8-Nov-20	Pumping	
27-Feb-21	53.95	310.53
16-Mar-21	Pumping	
13-Apr-21	Dry	
17-Aug-21	Out of Service	
14-Sep-21	Out of Service	
13-Jan-22	Out of Service	
15-Feb-22	Out of Service	
11-Apr-22	Out of Service	
20-Oct-22	Out of Service	
3-Mar-23	Out of Service	
24-Apr-23	Out of Service	
19-Jan-25	Tagged out	
24-Feb-25	Tagged out	

Appendix F - Monitoring Bore Water Level Data

GGW54		
Date	Datum =	361.71
	Dip =	90.00
	(m bgl)	(m AHD)
Village Bores		
2-Nov-10	36.76	324.95
24-Dec-10	36.83	324.88
1-Jan-11	36.81	324.90
1-Apr-11	36.95	324.76
13-Apr-11	36.97	324.74
21-Jun-11	37.15	324.56
24-Jul-11	37.16	324.55
8-Aug-11	31.80	329.91
2-Sep-11	37.25	324.46
29-Oct-11	37.35	324.36
10-Nov-11	37.32	324.39
11-Dec-11	37.40	324.31
19-Jan-12	37.60	324.11
15-Feb-12	37.51	324.20
4-Mar-12	37.68	324.03
14-Apr-12	37.61	324.10
16-May-12	37.63	324.08
9-Jun-12	37.96	323.75
15-Jul-12	37.65	324.06
15-Aug-12	37.60	324.11
15-Sep-12	38.12	323.59
9-Nov-12	38.00	323.71
13-Jan-13	38.07	323.64
14-Jan-13	38.47	323.24
10-Feb-13	38.57	323.14
15-Feb-13	38.57	323.14
12-Mar-13	38.89	322.82
15-Mar-13	38.89	322.82
14-Apr-13	38.91	322.80
15-Apr-13	38.91	322.80
12-May-13	38.93	322.78
15-May-13	38.93	322.78
15-Jun-13	38.94	322.77
17-Jun-13	38.94	322.77
10-Jul-13	39.21	322.50
15-Jul-13	39.21	322.50
15-Aug-13	39.42	322.29
18-Aug-13	39.42	322.29
12-Sep-13	39.45	322.26
15-Sep-13	39.45	322.26
17-Dec-13	39.80	321.91
12-Mar-14	40.00	321.71
9-Apr-14	40.05	321.66
13-May-14	40.28	321.43
21-Jun-14	38.53	323.18
19-Jul-14	40.36	321.35
16-Aug-14	40.46	321.25
24-Sep-14	40.45	321.26
8-Oct-14	40.57	321.14
5-Nov-14	40.75	320.96
13-Dec-14	40.77	320.94
3-Jan-15	40.77	320.94
15-Feb-15	41.06	320.65
12-Mar-15	40.74	320.97
26-Apr-15	41.10	320.61
9-May-15	41.31	320.40
7-Jun-15	41.52	320.19
20-Jul-15	41.55	320.16
12-Aug-15	41.51	320.20
27-Sep-15	41.50	320.21
26-Oct-15	41.50	320.21
8-Nov-15	41.54	320.17
6-Dec-15	41.45	320.26
31-Jan-16	41.55	320.16
14-Feb-16	41.58	320.13
6-Mar-16	41.92	319.79
4-Apr-16	41.89	319.82
26-Jun-16	41.92	319.79
4-Aug-16	42.37	319.34
20-Oct-16	42.58	319.13
19-Jan-17	42.82	318.89
9-Feb-17	42.80	318.91
26-Mar-17	42.80	318.91
16-Apr-17	42.67	319.04
18-May-17	42.80	318.91
12-Jun-17	48.80	312.91
8-Jul-17	42.88	318.83
13-Aug-17	42.94	318.77
3-Sep-17	42.90	318.81
12-Oct-17	43.09	318.62
4-Nov-17	41.15	320.56
16-Dec-17	43.20	318.51
20-Feb-18	43.27	318.44
12-Mar-18	43.36	318.35
3-Apr-18	43.43	318.28
10-May-18	43.53	318.18
4-Jun-18	42.61	319.10
12-Jul-18	42.60	319.11
9-Aug-18	43.78	317.93
8-Dec-18	44.09	317.62
19-Jan-19	44.12	317.59
9-Feb-19	44.24	317.47
25-Mar-19	44.39	317.32
16-Apr-19	44.41	317.30
10-Jul-19	44.58	317.13
21-Aug-19	44.64	317.07
10-Sep-19	44.69	317.02
5-Oct-19	44.80	316.91
14-Nov-19	44.96	316.75
10-Jan-20	69.90	291.81
10-Feb-20	45.37	316.34
6-Jul-20	45.46	316.25
4-Aug-20	45.65	316.06
13-Sep-20	45.71	316.00
25-Oct-20	45.88	315.83
8-Nov-20	44.91	316.80
3-Jan-21	46.12	315.59
27-Feb-21	46.22	315.49
16-Mar-21	46.15	315.56
13-Apr-21	46.37	315.34

BJDD003		
Date	Datum =	388.60
	Dip =	49.00
	(m bgl)	(m AHD)
Regional Bores		

BJDD004		
Date	Datum =	360.25
	Dip =	59.00
	(m bgl)	(m AHD)

SC093		
Date	Datum =	359.65
	Dip =	64.00
	(m bgl)	(m AHD)
23-Mar-24	32.66	330.30
15-Apr-24	32.73	330.23
20-May-24	32.77	330.20
15-Jun-24	32.77	330.20
16-Jul-24	32.35	330.57
15-Aug-24	32.33	330.59
29-Sep-24	32.39	330.54
16-Oct-24	32.39	330.54
15-Nov-24	86.72	281.71
13-Dec-24	86.73	281.70
18-Jan-25	32.48	330.46
20-Feb-25	32.54	330.40
14-Mar-25	33.96	329.13

Old South Bore		
Date	Datum =	369.00
	Dip =	90.00
	(m bgl)	(m AHD)

RMB4		
Date	Datum =	364.48
	Dip =	90.00
	(m bgl)	(m AHD)

Appendix F - Monitoring Bore Water Level Data

Regional Bores

GGW90		
	Datum =	358.91
Date	Dip =	90.00
	(m bgl)	(m AHD)
15-Oct-18	32.20	326.71
27-Oct-18	32.20	326.71
23-Nov-18	32.98	325.93
30-Dec-18	33.71	325.20
22-Jan-19	33.51	325.40
16-Feb-19	34.17	324.74
20-Mar-19	24.30	334.61
19-Apr-19	34.15	324.76
12-Jul-19	33.14	325.77
19-Aug-19	32.91	326.00
12-Sep-19	32.89	326.02
03-Oct-19	33.61	325.30
14-Nov-19	33.62	325.29
17-Dec-19	34.88	324.03
25-Jan-20	34.88	324.03
06-Feb-20	35.66	323.25
19-Mar-20	34.89	324.02
17-Apr-20	36.13	322.78
20-May-20	36.13	322.78
05-Jul-20	36.21	322.70
27-Aug-20	35.62	323.29
11-Sep-20	36.10	322.81
22-Oct-20	37.14	321.77
07-Nov-20	37.71	321.20
17-Jan-21	40.32	318.59
11-May-21	39.25	319.66
08-Jun-21	38.83	320.08
15-Jul-21	38.97	319.94
14-Aug-21	38.43	320.48
25-Sep-21	39.69	319.22
12-Oct-21	39.01	319.90
09-Nov-21	39.10	319.81
16-Dec-21	39.17	319.74
14-Jan-22	40.04	318.87
11-Feb-22	42.32	316.59
10-Mar-22	42.11	316.80
9-Apr-22	41.74	317.17
7-May-22	41.72	317.19
7-Jun-22	41.73	317.18
3-Jul-22	41.80	317.11
25-Aug-22	41.77	317.14
25-Sep-22	41.80	317.11
23-Oct-22	42.01	316.90
20-Nov-22	42.08	316.83
29-Dec-22	43.47	315.44
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	44.19	314.72
18-May-23	43.90	315.01
17-Jun-23	43.60	315.31
13-Jul-23	43.00	315.91
13-Aug-23	42.96	315.95
15-Sep-23	43.53	315.38
15-Oct-23		
17-Nov-23	45.12	313.79
29-Dec-23	43.53	315.38
30-Jan-24		
25-Feb-24	46.75	312.16
23-Mar-24	43.76	315.15
15-Apr-24	46.40	312.51
20-May-24	46.40	312.51
15-Jun-24	46.40	312.51
16-Jul-24	46.46	312.45
15-Aug-24	44.45	314.46
29-Sep-24	44.47	314.44
16-Oct-24	44.47	314.44
15-Nov-24	44.49	314.42
13-Dec-24	44.50	314.41
18-Jan-25	46.04	312.87
20-Feb-25	46.90	312.01
14-Mar-25	46.95	311.96

GGW91		
	Datum =	364.54
Date	Dip =	90.00
	(m bgl)	(m AHD)
15-Oct-18	36.73	327.81
27-Oct-18	36.73	327.81
23-Nov-18	36.74	327.80
30-Dec-18	36.76	327.78
22-Jan-19	36.80	327.74
16-Feb-19	36.80	327.74
20-Mar-19	36.87	327.67
19-Apr-19	36.83	327.71
12-Jul-19	36.97	327.57
19-Aug-19	36.89	327.65
12-Sep-19	36.91	327.63
03-Oct-19	36.92	327.62
14-Nov-19	37.10	327.44
17-Dec-19	37.01	327.53
25-Jan-20	37.00	327.54
08-Feb-20	37.06	327.48
19-Mar-20	36.98	327.56
17-Apr-20	37.02	327.52
20-May-20	37.10	327.44
05-Jul-20	37.12	327.42
27-Aug-20	37.16	327.38
11-Sep-20	37.13	327.41
22-Oct-20	37.16	327.38
07-Nov-20	37.20	327.34
17-Jan-21	37.27	327.27
11-May-21	37.32	327.22
08-Jun-21	37.26	327.28
15-Jul-21	37.42	327.12
14-Aug-21	37.41	327.13
25-Sep-21	37.28	327.26
12-Oct-21	37.53	327.01
09-Nov-21	37.56	326.98
16-Dec-21	37.42	327.12
14-Jan-22	37.04	327.50
11-Feb-22	37.53	327.01
10-Mar-22	37.49	327.05
9-Apr-22	37.54	327.00
7-May-22	37.55	326.99
7-Jun-22	37.57	326.97
3-Jul-22	37.62	326.92
25-Aug-22	37.61	326.93
25-Sep-22	37.64	326.90
23-Oct-22	37.60	326.94
20-Nov-22	37.63	326.91
29-Dec-22	37.69	326.85
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	41.83	322.71
18-May-23	37.77	326.77
17-Jun-23	37.78	326.76
13-Jul-23	37.81	326.73
13-Aug-23	37.81	326.73
15-Sep-23	37.84	326.70
15-Oct-23		
17-Nov-23		
29-Dec-23	37.84	326.70
30-Jan-24		
25-Feb-24	37.95	326.59
23-Mar-24	38.01	326.53
15-Apr-24	38.04	326.50
20-May-24	38.08	326.46
15-Jun-24	38.08	326.46
16-Jul-24	38.09	326.45
15-Aug-24	38.07	326.47
29-Sep-24	38.05	326.49
16-Oct-24	38.05	326.49
15-Nov-24	38.07	326.47
13-Dec-24	38.08	326.46
18-Jan-25	38.15	326.39
20-Feb-25	38.35	326.19
14-Mar-25	38.22	326.32

GGW92		
	Datum =	367.60
Date	Dip =	90.00
	(m bgl)	(m AHD)
14-Aug-21	47.24	320.36
14-Jan-22	58.54	309.06
11-Feb-22	59.59	308.01
10-Mar-22	56.51	311.09
9-Apr-22	53.25	314.35
7-May-22		
7-Jun-22	55.64	311.96
3-Jul-22	55.68	311.92
25-Aug-22	55.70	311.90
25-Sep-22	55.73	311.87
23-Oct-22	54.68	312.92
20-Nov-22	55.91	311.69
29-Dec-22	62.45	305.15
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23	58.01	309.59
18-May-23	55.43	312.17
17-Jun-23	54.95	312.65
13-Jul-23	53.21	314.39
13-Aug-23	54.09	313.51
15-Sep-23	54.59	313.01
15-Oct-23		
17-Nov-23	53.94	313.66
29-Dec-23	54.59	313.01
30-Jan-24		
25-Feb-24	65.53	302.07
23-Mar-24	62.49	305.11
15-Apr-24	59.73	307.87
20-May-24	59.77	307.83
15-Jun-24	59.77	307.83
16-Jul-24	57.59	310.01
15-Aug-24	55.19	312.41
29-Sep-24	57.15	310.45
16-Oct-24	57.15	310.45
15-Nov-24	57.16	310.44
13-Dec-24	57.18	310.42
18-Jan-25	63.13	304.47
20-Feb-25	62.41	305.19
14-Mar-25	61.19	306.41

GGW93P		
	Datum =	364.80
Date	Dip =	90.00
	(m bgl)	(m AHD)
20-Apr-20	42.72	322.08
06-Jul-20	44.17	320.63
04-Aug-20	41.13	323.67
13-Sep-20	41.63	323.17
25-Oct-20	Pumping	
08-Nov-20	Pumping	
27-Feb-21	52.49	312.31
16-Mar-21	Pumping	
13-Apr-21	Dry	
14-Sep-21	48.42	316.38
08-Nov-21	56.67	308.13
16-Dec-21		
14-Jan-22	58.45	306.35
15-Feb-22	59.59	305.21
10-Mar-22		
11-Apr-22	53.25	311.55
9-May-22	55.73	309.07
7-Jun-22		
3-Jul-22		
25-Aug-22		
25-Sep-22		
23-Oct-22		
20-Nov-22		
29-Dec-22	62.68	302.12
2-Jan-23		
2-Feb-23		
2-Mar-23		
20-Apr-23		
18-May-23		
17-Jun-23		
13-Jul-23		
13-Aug-23		
15-Sep-23		
15-Oct-23		
17-Nov-23		
29-Dec-23		
30-Jan-24		
25-Feb-24		
23-Mar-24		
15-Apr-24		
20-May-24		
15-Jun-24		
16-Jul-24		
15-Aug-24		
29-Sep-24		
16-Oct-24		
15-Nov-24		
13-Dec-24		
18-Jan-25		
20-Feb-25		
14-Mar-25		

Gossan Valley

GVW001		
	Datum =	366.33
Date	Dip =	90.00
	(m bgl)	(m AHD)
1-Feb-20	41.52	324.81
7-Feb-20	41.50	324.83
20-Feb-20	41.51	324.82
11-Mar-20	41.44	324.89
1-Apr-20	41.51	324.82
4-May-20	41.50	324.83
29-May-20	41.59	324.74
30-Jun-20	41.52	324.81
10-Jul-20	41.58	324.75
2-Aug-20	41.49	324.84
13-Aug-20	41.45	324.88
29-Jan-22	41.57	324.76
26-Feb-22	41.60	324.73
29-Mar-22	41.62	324.71
26-Apr-22	41.55	324.78
10-Sep-22	41.53	324.80
21-Oct-22	41.65	324.68
16-Dec-22	41.66	324.67
21-Apr-23	41.68	324.65
19-May-23	41.72	324.61
29-Sep-24	41.70	324.63

GVW002		
	Datum =	343.72
Date	Dip =	90.00
	(m bgl)	(m AHD)
6-Feb-20	22.23	321.49
11-Mar-20	22.98	320.74
12-Mar-20	22.10	321.62
1-Apr-20	27.60	316.12
6-May-20	22.16	321.56
29-May-20	26.14	317.58
30-Jun-20	21.79	321.93
10-Jul-20	21.83	321.89
2-Aug-20	21.76	321.96
13-Aug-20	21.73	321.99
29-Jan-22	21.64	322.08
26-Feb-22	21.66	322.06
29-Mar-22	21.66	322.06
26-Apr-22	21.60	322.12
10-Sep-22	21.65	322.07
21-Oct-22	21.65	322.07
16-Dec-22	21.66	322.06
21-Apr-23	21.70	322.02
19-May-23	21.73	321.99
29-Sep-24	22.15	321.57

GVW003		
	Datum =	352.76
Date	Dip =	90.00
	(m bgl)	(m AHD)
1-Feb-20	27.97	324.79
7-Feb-20	27.95	324.81
20-Feb-20	27.96	324.80
11-Mar-20	27.93	324.83
1-Apr-20	27.95	324.81
29-May-20	27.97	324.79
30-Jun-20	27.95	324.81
10-Jul-20	28.02	324.74
2-Aug-20	27.94	324.82
13-Aug-20	27.92	324.84
29-Jan-22	28.05	324.71
26-Feb-22	28.06	324.70
29-Mar-22	28.08	324.68
26-Apr-22	28.01	324.75
10-Sep-22	28.10	324.66
21-Oct-22	28.10	324.66
16-Dec-22	28.12	324.64
21-Apr-23	28.15	324.61
19-May-23	28.17	324.59
29-Sep-24	28.23	324.53

Appendix F - Monitoring Bore Water Level Data

GVW004		
Date	Datum =	355.45
	Dip =	90.00
	(m bgl)	(m AHD)
Gossan Valley		
3-Feb-20	31.25	324.20
20-Feb-20	31.23	324.22
11-Mar-20	31.18	324.27
1-Apr-20	31.29	324.16
29-May-20	31.28	324.17
30-Jun-20	31.23	324.22
10-Jul-20	31.32	324.13
2-Aug-20	31.25	324.20
12-Aug-20	31.27	324.18
29-Jan-22	31.34	324.11
26-Feb-22	31.35	324.10
29-Mar-22	31.35	324.10
26-Apr-22	31.31	324.14
10-Sep-22	31.38	324.07
21-Oct-22	31.39	324.06
16-Dec-22	31.40	324.05
21-Apr-23	31.77	323.68
19-May-23	31.45	324.00
29-Sep-24	31.50	323.95

GVW005		
Date	Datum =	351.37
	Dip =	90.00
	(m bgl)	(m AHD)
1-Feb-20	28.90	322.47
11-Mar-20	28.92	322.45
1-Apr-20	28.96	322.41
19-Apr-20	28.79	322.58
30-Jun-20	28.82	322.55
10-Jul-20	28.89	322.48
2-Aug-20	28.80	322.57
13-Aug-20	28.80	322.57
29-Jan-22	28.78	322.59
26-Feb-22	28.80	322.57
29-Mar-22	28.81	322.56
26-Apr-22	28.73	322.64
10-Sep-22	28.79	322.58
21-Oct-22	28.79	322.58
16-Dec-22	28.80	322.57
21-Apr-23	28.87	322.50
19-May-23	28.87	322.50
29-Sep-24	29.08	322.29

GVW005P		
Date	Datum =	351.35
	Dip =	90.00
	(m bgl)	(m AHD)
1-Apr-20	28.90	322.45
19-Apr-20	28.80	322.55
29-May-20	28.84	322.51
30-Jun-20	28.75	322.60
10-Jul-20	28.82	322.53
2-Aug-20	28.76	322.59
13-Aug-20	28.91	322.44
29-Jan-22	28.70	322.65
26-Feb-22	28.72	322.63
29-Mar-22	28.73	322.62
26-Apr-22	28.65	322.70
10-Sep-22	28.70	322.65
21-Oct-22	28.71	322.64
16-Dec-22	28.72	322.63
21-Apr-23	28.80	322.55
19-May-23	28.79	322.56
29-Sep-24	29.01	322.34

GVW006		
Date	Datum =	350.32
	Dip =	90.00
	(m bgl)	(m AHD)
6-Feb-20	28.72	321.60
11-Mar-20	27.53	322.79
19-Apr-20	28.57	321.75
29-May-20	27.57	322.75
30-Jun-20	28.53	321.79
10-Jul-20	28.58	321.74
2-Aug-20	28.55	321.77
13-Aug-20	28.53	321.79
29-Jan-22	28.56	321.76
26-Feb-22	28.59	321.73
29-Mar-22	28.60	321.72
26-Apr-22	28.58	321.74
10-Sep-22	28.62	321.70
21-Oct-22	28.57	321.75
16-Dec-22	28.59	321.73
21-Apr-23	28.60	321.72
19-May-23	28.64	321.68
29-Sep-24	28.85	321.47

GVW007P		
Date	Datum =	352.02
	Dip =	90.00
	(m bgl)	(m AHD)
1-Feb-20	31.45	320.57
12-Mar-20	31.77	320.25
30-Apr-20	31.73	320.29
2-Aug-20	31.94	320.08
13-Aug-20	31.90	320.12
29-Jan-22	31.72	320.30
26-Feb-22	31.75	320.27
29-Mar-22	31.76	320.26
26-Apr-22	31.74	320.28
10-Sep-22	31.81	320.21
21-Oct-22	31.73	320.29
16-Dec-22	31.73	320.29
21-Apr-23	31.78	320.24
20-May-23	31.80	320.22
20-Apr-24	40.27	311.75
4-Jun-24	40.89	311.13
24-Jul-24	34.92	317.10
25-Aug-24	33.98	318.04

GVW008		
Date	Datum =	357.81
	Dip =	90.00
	(m bgl)	(m AHD)
1-Feb-20	36.71	321.10
12-Mar-20	36.80	321.01
30-Jun-20	37.10	320.71
10-Jul-20	37.17	320.64
2-Aug-20	37.05	320.76
13-Aug-20	37.05	320.76
29-Jan-22	36.93	320.88
26-Feb-22	36.98	320.83
29-Mar-22	36.96	320.85
26-Apr-22	36.98	320.83
10-Sep-22	37.05	320.76
21-Oct-22	36.97	320.84
16-Dec-22	36.98	320.83
21-Apr-23	37.00	320.81
19-May-23	37.04	320.77
29-Sep-24	40.15	317.66

GVW009		
Date	Datum =	364.59
	Dip =	90.00
	(m bgl)	(m AHD)
1-Feb-20	44.07	320.52
12-Mar-20	44.30	320.29
1-Apr-20	44.01	320.58
30-Jun-20	44.58	320.01
10-Jul-20	44.73	319.86
2-Aug-20	44.47	320.12
13-Aug-20	44.45	320.14
29-Jan-22	44.27	320.32
26-Feb-22	44.32	320.27
29-Mar-22	44.31	320.28
26-Apr-22	44.32	320.27
10-Sep-22	44.37	320.22
21-Oct-22	44.29	320.30
16-Dec-22	44.30	320.29
21-Apr-23	44.34	320.25
19-May-23	44.38	320.21
29-Sep-24	51.23	313.36

Appendix F - Monitoring Bore Water Level Data

GVW010d		
	Datum =	325.10
Date	Dip =	90.00
	(m bgl)	(m AHD)
Gossan Valley		
18-Mar-20	9.60	315.50
29-May-20	9.02	316.08
30-Jun-20	8.93	316.17
10-Jul-20	8.97	316.13
13-Aug-20	8.89	316.21
29-Jan-22	8.95	316.15
26-Feb-22	8.98	316.12
29-Mar-22	8.98	316.12
26-Apr-22	8.87	316.23
10-Sep-22	8.89	316.21
21-Oct-22	8.84	316.26
16-Dec-22	8.98	316.12
21-Apr-23	9.04	316.06
19-May-23	9.05	316.05
29-Sep-24	8.99	316.11

GVW010s		
	Datum =	325.10
Date	Dip =	90.00
	(m bgl)	(m AHD)
24-Feb-20	9.89	315.21
14-Mar-20	8.93	316.17
18-Mar-20	8.91	316.19
1-Apr-20	9.03	316.07
11-May-20	8.93	316.17
29-May-20	8.91	316.19
30-Jun-20	8.87	316.23
10-Jul-20	8.90	316.20
13-Aug-20	8.83	316.27
29-Jan-22	8.92	316.18
26-Feb-22	8.94	316.16
29-Mar-22	8.93	316.17
26-Apr-22	8.82	316.28
10-Sep-22	8.84	316.26
21-Oct-22	8.80	316.30
16-Dec-22	8.95	316.15
21-Apr-23	9.00	316.10
19-May-23	9.03	316.07
29-Sep-24	8.96	316.14

GVW011d		
	Datum =	327.55
Date	Dip =	90.00
	(m bgl)	(m AHD)
24-Feb-20	14.35	313.20
14-Mar-20	12.66	314.89
1-Apr-20	9.62	317.93
11-May-20	9.13	318.42
29-May-20	9.02	318.53
30-Jun-20	9.11	318.44
10-Jul-20	9.13	318.42
13-Aug-20	9.10	318.45
29-Jan-22	9.21	318.34
26-Feb-22	9.24	318.31
29-Mar-22	9.25	318.30
26-Apr-22	9.18	318.37
10-Sep-22	9.22	318.33
21-Oct-22	9.15	318.40
16-Dec-22	9.23	318.32
21-Apr-23	9.27	318.28
19-May-23	9.29	318.26
29-Sep-24	9.55	318.00

GVW011s		
	Datum =	327.55
Date	Dip =	90.00
	(m bgl)	(m AHD)
24-Feb-20	9.74	317.81
14-Mar-20	9.63	317.92
1-Apr-20	9.51	318.04
11-May-20	9.40	318.15
29-May-20	9.42	318.13
30-Jun-20	9.39	318.16
10-Jul-20	9.41	318.14
13-Aug-20	9.39	318.16
29-Jan-22	9.49	318.06
26-Feb-22	9.50	318.05
29-Mar-22	9.51	318.04
26-Apr-22	9.48	318.07
10-Sep-22	9.51	318.04
21-Oct-22	9.44	318.11
16-Dec-22	9.52	318.03
21-Apr-23	9.56	317.99
19-May-23	9.55	318.00
29-Sep-24	9.74	317.81

GVW012d		
	Datum =	331.53
Date	Dip =	90.00
	(m bgl)	(m AHD)
24-Feb-20	12.25	319.81
14-Mar-20	12.85	319.21
19-Mar-20	12.22	319.84
1-Apr-20	12.27	319.79
4-May-20	12.25	319.81
29-May-20	12.24	319.82
30-Jun-20	12.23	319.83
10-Jul-20	12.26	319.80
12-Aug-20	12.24	319.82
29-Jan-22	12.29	319.24
26-Feb-22	12.33	319.20
29-Mar-22	12.34	319.19
26-Apr-22	12.28	319.25
10-Sep-22	12.33	319.20
21-Oct-22	12.24	319.29
16-Dec-22	12.31	319.22
21-Apr-23	12.36	319.17
19-May-23	12.37	319.16
29-Sep-24	12.81	318.72

GVW012s		
	Datum =	331.53
Date	Dip =	90.00
	(m bgl)	(m AHD)
24-Feb-20	Dry	
14-Mar-20	Dry	
1-Apr-20	11.05	320.48
29-May-20	11.78	319.75
30-Jun-20	11.74	319.79
10-Jul-20	11.75	319.78
13-Aug-20	11.75	319.78
29-Jan-22	11.74	319.79
26-Feb-22	11.74	319.79
29-Mar-22	11.75	319.78
26-Apr-22	11.74	319.79
10-Sep-22	11.77	319.76
21-Oct-22	11.75	319.78
16-Dec-22	Dry	
21-Apr-23	11.75	319.78
19-May-23	11.76	319.77
29-Sep-24	11.82	319.71

GVW013		
	Datum =	336.88
Date	Dip =	90.00
	(m bgl)	(m AHD)
26-Feb-20	16.18	320.70
1-Mar-20	15.90	320.98
29-May-20	15.80	321.08
30-Jun-20	15.78	321.10
10-Jul-20	15.80	321.08
13-Aug-20	15.77	321.11
29-Jan-22	15.74	321.14
26-Feb-22	15.79	321.09
29-Mar-22	15.81	321.07
26-Apr-22	15.76	321.12
10-Sep-22	15.80	321.08
21-Oct-22	15.75	321.13
16-Dec-22	15.77	321.11
21-Apr-23	15.83	321.05
19-May-23	15.85	321.03
29-Sep-24	16.15	320.73

Appendix F - Monitoring Bore Water Level Data

GVW014		
Date	Datum =	334.29
	Dip =	90.00
	(m bgl)	(m AHD)
Gossan Valley		
1-Mar-20	15.13	319.16
1-Apr-20	15.12	319.17
30-Jun-20	15.07	319.22
10-Jul-20	15.09	319.20
13-Aug-20	15.11	319.18
29-Jan-22	15.72	318.57
26-Feb-22	15.22	319.07
29-Mar-22	15.23	319.06
26-Apr-22	15.19	319.10
10-Sep-22	15.21	319.08
21-Oct-22	15.32	318.97
16-Dec-22	15.31	318.98
21-Apr-23	15.23	319.06
19-May-23	15.26	319.03
29-Sep-24	15.38	318.91

GVW015		
Date	Datum =	339.53
	Dip =	90.00
	(m bgl)	(m AHD)
1-Mar-20	19.03	320.50
1-Apr-20	18.65	320.88
30-Jun-20	18.66	320.87
10-Jul-20	18.70	320.83
13-Aug-20	18.70	320.83
29-Jan-22	18.85	320.68
26-Feb-22	18.87	320.66
29-Mar-22	18.88	320.65
26-Apr-22	18.85	320.68
10-Sep-22	18.92	320.61
21-Oct-22	18.86	320.67
16-Dec-22	18.88	320.65
21-Apr-23	18.89	320.64
19-May-23	18.91	320.62
29-Sep-24	19.50	320.03

GVW016		
Date	Datum =	349.14
	Dip =	90.00
	(m bgl)	(m AHD)
17-Mar-20	26.44	322.70
1-Apr-20	26.20	322.94
29-May-20	26.24	322.90
30-Jun-20	26.22	322.92
10-Jul-20	26.27	322.87
2-Aug-20	26.24	322.90
13-Aug-20	26.22	322.92
29-Jan-22	26.31	322.83
26-Feb-22	26.34	322.80
29-Mar-22	26.31	322.83
26-Apr-22	26.33	322.81
10-Sep-22	26.35	322.79
21-Oct-22	26.33	322.81
16-Dec-22	26.35	322.79
21-Apr-23	26.38	322.76
19-May-23	26.38	322.76
29-Sep-24	26.41	322.73

GVW017		
Date	Datum =	350.49
	Dip =	90.00
	(m bgl)	(m AHD)
1-Apr-20	28.95	321.54
11-May-20	28.99	321.50
30-Jun-20	29.01	321.48
10-Jul-20	29.05	321.44
13-Aug-20	29.02	321.47
29-Jan-22	29.03	321.46
26-Feb-22	29.04	321.45
29-Mar-22	29.04	321.45
26-Apr-22	29.01	321.48
10-Sep-22	29.10	321.39
21-Oct-22	29.03	321.46
16-Dec-22	29.04	321.45
21-Apr-23	29.08	321.41
19-May-23	29.11	321.38
29-Sep-24	29.69	320.80

GVW018		
Date	Datum =	342.13
	Dip =	90.00
	(m bgl)	(m AHD)
1-Apr-20	21.36	320.77
11-May-20	21.39	320.74
30-Jun-20	21.42	320.71
10-Jul-20	21.46	320.67
13-Aug-20	21.46	320.67
29-Jan-22	21.59	320.54
26-Feb-22	21.60	320.53
29-Mar-22	21.61	320.52
26-Apr-22	21.62	320.51
10-Sep-22	21.70	320.43
21-Oct-22	21.59	320.54
16-Dec-22	21.05	321.08
21-Apr-23	21.65	320.48
19-May-23	21.66	320.47
29-Sep-24	22.75	319.38

GVW019		
Date	Datum =	345.54
	Dip =	90.00
	(m bgl)	(m AHD)
1-Apr-20	25.18	320.36
11-May-20	25.02	320.52
30-Jun-20	25.10	320.44
10-Jul-20	25.14	320.40
13-Aug-20	25.12	320.42
29-Jan-22	25.20	320.34
26-Feb-22	25.21	320.33
29-Mar-22	25.24	320.30
26-Apr-22	25.25	320.29
10-Sep-22	25.31	320.23
21-Oct-22	25.20	320.34
16-Dec-22	25.22	320.32
21-Apr-23	25.67	319.87
19-May-23	25.28	320.26
29-Sep-24	26.55	318.99

GVW020		
Date	Datum =	350.72
	Dip =	90.00
	(m bgl)	(m AHD)
1-Apr-20	29.98	320.74
11-May-20	29.90	320.82
30-Jun-20	29.91	320.81
10-Jul-20	22.97	327.75
13-Aug-20	29.93	320.79
29-Jan-22	29.99	320.73
26-Feb-22	30.03	320.69
29-Mar-22	30.05	320.67
26-Apr-22	30.08	320.64
10-Sep-22	30.15	320.57
21-Oct-22	30.02	320.70
16-Dec-22	30.03	320.69
21-Apr-23	30.05	320.67
19-May-23	30.09	320.63
29-Sep-24	31.15	319.57

HIRD008		
Date	Datum =	328.61
	Dip =	80.00
	(m bgl)	(m AHD)
26-Feb-20	13.92	314.90
1-Mar-20	13.42	315.39
1-Apr-20	14.50	314.33
8-May-20	13.60	315.22
29-May-20	14.16	314.66
30-Jun-20	12.71	316.09
10-Jul-20	12.73	316.07
13-Aug-20	13.27	315.54
29-Jan-22	12.55	316.25
26-Feb-22	12.56	316.24
29-Mar-22	12.52	316.28
26-Apr-22	12.56	316.24
10-Sep-22	12.61	316.19
21-Oct-22	12.62	316.18
16-Dec-22	12.62	316.18
21-Apr-23	13.21	315.60
19-May-23	13.26	315.55
29-Sep-24	13.31	315.50

MB 11		
Date	Datum =	365.47
	(m bgl)	(m AHD)
1-Jan-94	37.33	328.14
14-Feb-94	37.40	328.07
16-Mar-94	37.48	327.99
28-Apr-94	37.46	328.01
9-Jun-94	37.48	327.99
6-Oct-94	37.57	327.90
3-Nov-94	37.51	327.96
1-Dec-94	37.54	327.93
15-Jan-95	37.55	327.92
17-Feb-95	37.63	327.84
10-Mar-95	37.67	327.80
31-Mar-95	37.64	327.83
28-Apr-95	37.55	327.92
2-Jun-95	37.57	327.90
4-Jul-95	37.66	327.81
8-Aug-95	38.55	326.92
30-Aug-95	38.63	326.84
29-Sep-95	38.61	326.86
2-Nov-95	38.88	326.59
20-Nov-95	38.91	326.56
6-Dec-95	38.91	326.56
12-Dec-95	38.91	326.56
1-Jan-96	39.21	326.26
15-Jan-96	39.21	326.26
9-Feb-96	39.95	325.52
15-Apr-96	39.55	325.92
4-Jul-96	39.73	325.74
7-Oct-96	40.08	325.39
30-Dec-96	40.53	324.94
30-Mar-97	40.80	324.67
30-Jun-97	41.05	324.42
30-Sep-97	41.35	324.12
30-Dec-97	41.63	323.84
30-Mar-98	42.09	323.38
30-Jun-98	42.47	323.00
30-Aug-98	43.25	322.22
1-Jan-99	43.76	321.71
30-Mar-99	43.92	321.55
3-Jul-99	44.19	321.28
10-Nov-99	44.81	320.66
16-Jan-00	45.07	320.40
9-Apr-00	45.29	320.18
16-Jul-00	45.77	319.70
11-Oct-00	46.33	319.14
8-Jan-01	46.68	318.79
1-Apr-01	47.36	318.11
4-Jul-01	47.80	317.67
8-Oct-01	48.33	317.14
16-Jan-02	48.96	316.51
25-Mar-02	49.49	315.98
4-Jul-02	49.98	315.49
21-Oct-02	50.66	314.81
21-Dec-02	50.88	314.59
9-Apr-03	51.70	313.77
17-Jul-03	52.36	313.11
10-Nov-03	52.57	312.90
25-Dec-03	53.06	312.41
28-Mar-04	53.64	311.83
6-Nov-04	54.71	310.76
6-Jan-05	55.06	310.41
29-Mar-05	55.45	310.02
30-Jun-05	55.96	309.51
28-Sep-05	56.33	309.14
24-Mar-06	57.04	308.43
28-Jun-06	57.20	308.27
20-Sep-06	57.57	307.90
10-Jan-07	57.76	307.71
4-Apr-07	58.00	307.47
14-Jun-07	58.24	307.23
24-Sep-07	58.57	306.90
16-Dec-07	58.88	306.59
17-Mar-08	59.40	306.07
12-Jun-08	59.76	305.71
18-Sep-08	60.00	305.47
09-Dec-08	Not Measured	
07-Mar-09	60.63	304.84
01-Jun-09	Not Measured	
01-Sep-09	61.04	304.43
07-Dec-09	Not Measured	
18-Mar-10	61.71	303.76
01-Jun-09	Dry	
01-Sep-09	Dry	
07-Dec-09	Dry	
20-Mar-11	Dry	
12-Jun-11	Dry	
16-Sep-11	Dry	
6-Jan-12	Dry	
17-Mar-12	Dry	
24-Jun-12	Dry	
14-Oct-12	Dry	
10-Dec-12	Dry	
27-Sep-13	Dry	
1-Apr-14	Dry	
21-Jun-14	Dry	
12-Sep-14	Dry	
10-Dec-14	Dry	
29-Mar-15	Dry	
2-Jul-15	Dry	
10-Oct-15	Dry	
17-Jan-16	Dry	
16-Apr-16	Dry	
19-Jun-16	Dry	
3-Oct-16	Dry	
15-Jan-17	Dry	
8-Apr-17	Dry	

MB 12B		
Date	Datum =	359.21
	(m bgl)	(m AHD)
24-Mar-13	19.88	339.33
8-Jun-13	19.67	339.54
28-Sep-13	21.45	337.76
31-Mar-14	22.21	337.00
21-Jun-14	21.23	337.98
12-Sep-14	21.22	337.99
9-Dec-14	21.34	337.87
28-Mar-15	21.27	337.94
2-Jul-15	20.89	338.32
10-Oct-15	20.95	338.26
16-Jan-16	21.09	338.12
16-Apr-16	20.95	338.26
17-Jun-16	21.09	338.12
3-Oct-16	21.20	338.01
15-Jan-17	21.57	337.64
9-Apr-17	21.00	338.21
3-Jul-17	21.54	337.67
23-Sep-17	20.52	338.69
1-Feb-18	20.93	338.28
22-Apr-18	21.25	337.96
18-Jul-18	21.48	337.73
27-Oct-18	21.94	337.27
15-Feb-19	21.35	337.86
10-May-19	22.69	336.52
17-Aug-19	22.79	336.42
8-Nov-19	23.06	336.15
31-Jan-20	23.19	336.02
21-May-20	23.45	335.76
24-Sep-20	23.10	336.11
20-Nov-20	23.35	335.86
14-Mar-21	23.50	335.71
20-May-21	23.04	336.17
18-Nov-21	22.07	337.14
23-Mar-22	21.29	337.92
04-Jul-22	19.00	340.21
22-Sep-22	16.76	342.45
02-Dec-22	15.23	343.98
10-Mar-23	13.61	345.60
03-May-23	13.16	346.05
24-Aug-23	12.68	346.53
01-Dec-23	12.79	346.42
23-Feb-24	13.02	346.19
31-May-24	13.37	345.84
24-Aug-24	13.43	345.78
16-Nov-24	13.48	345.73

MB 13		
Date	Datum =	360.89
	(m bgl)	(m AHD)
1-Jan-94	30.48	330.41
14-Feb-94	30.35	330.54
16-Mar-94	31.00	329.89
28-Apr-94	29.29	331.60
9-Jun-94	30.98	329.91
6-Oct-94	30.96	329.93
3-Nov-94	30.89	330.00
1-Dec-94	30.91	329.98
15-Jan-95	30.95	329.94
17-Feb-95	31.08	329.81
10-Mar-95	31.14	329.75
31-Mar-95	31.16	329.73
28-Apr-95	31.15	329.74
2-Jun-95	31.13	329.76
4-Jul-95	31.24	329.65
8-Aug-95	31.91	328.98
30-Aug-95	32.01	328.88
29-Sep-95	32.03	328.86
2-Nov-95	32.27	328.62
20-Nov-95	32.25	328.64
6-Dec-95	32.25	328.64
12-Dec-95	32.25	328.64
1-Jan-96	32.47	328.42
15-Jan-96	32.47	328.42
9-Feb-96	32.51	328.38
15-Apr-96	32.75	328.14
4-Jul-96	33.00	327.89
7-Oct-96	33.30	327.59
30-Dec-96	33.64	327.25
30-Mar-97	33.88	327.01
30-Jun-97	33.91	326.98
30-Sep-97	34.15	326.74
30-Dec-97	34.35	326.54
30-Mar-98	34.79	326.10
30-Jun-98	35.28	325.61
30-Aug-98	36.11	324.78
2-Jul-99	25.47	335.42
17-Jul-00	38.03	322.86
11-Oct-00	38.31	322.58
8-Jan-01	38.61	322.28
1-Apr-01	39.01	321.88
4-Jul-01	39.30	321.59
5-Oct-01	39.60	321.29
16-Jan-02	40.03	320.86
25-Mar-02	40.36	320.53
4-Jul-02	40.75	320.14
21-Oct-02	41.17	319.72
21-Dec-02	41.35	319.54
9-Apr-03	41.96	318.93
17-Jul-03	42.43	318.46
10-Nov-03	42.70	318.19
25-Dec-03	42.94	317.95
28-Mar-04	43.32	317.57
6-Nov-04	44.17	316.72
6-Jan-05	44.32	316.57
29-Mar-05	44.60	316.29
30-Jun-05	45.00	315.89
28-Sep-05	45.24	315.65
12-Jan-06	45.52	315.37
24-Mar-06	45.77	315.12
28-Jun-06	46.00	314.89
20-Sep-06	46.25	314.64
10-Jan-07	46.45	314.44
4-Apr-07	46.66	314.23
24-Sep-07	47.02	313.87
16-Dec-07	47.33	313.56
17-Mar-08	47.84	313.05
12-Jun-08	48.17	312.72
18-Sep-08	48.42	312.47
11-Dec-08	48.67	312.22
06-Mar-09	49.00	311.89
11-Jun-09	49.14	311.75
01-Sep-09	49.46	311.43
07-Dec-09	49.69	311.20
17-Mar-10	49.92	310.97
26-Jun-10	50.26	310.63
19-Sep-10	50.45	310.44
13-Dec-10	50.51	310.38
20-Mar-11	50.82	310.07
12-Jun-11	51.07	309.82
16-Sep-11	51.17	309.72
6-Jan-12	51.43	309.46
17-Mar-12	51.57	309.32
24-Jun-12	51.91	308.98
15-Oct-12	52.14	308.75
10-Dec-12	52.32	308.57
24-Mar-13	52.28	308.61
8-Jun-13	52.48	308.41
28-Sep-13	52.48	308.41
9-Dec-13	52.48	308.41
2-Apr-14	53.09	307.80
21-Jun-14	53.21	307.68
14-Sep-14	53.43	307.46
10-Dec-14	53.61	307.28
29-Mar-15	55.97	304.92
2-Jul-15	54.14	306.75
9-Oct-15	54.27	306.62
18-Jan-16	54.40	306.49
16-Apr-16	54.71	306.18
19-Jun-16	54.71	306.18
3-Oct-16	54.87	306.02
15-Jan-17	55.00	305.89
10-Apr-17	55.16	305.73
4-Jul-17	55.23	305.66
25-Sep-17	55.31	305.58

MB 14/MB 14B		
Date	Datum =	359.13
	(m bgl)	(m AHD)
1-Jan-94	28.93	329.23
14-Feb-94	24.80	333.36
16-Mar-94	24.50	333.66
28-Apr-94	27.75	330.41
9-Jun-94	27.54	330.62
6-Oct-94	27.82	330.34
3-Nov-94	27.80	330.36
1-Dec-94	27.80	330.36
15-Jan-95	27.82	330.34
17-Feb-95	27.92	330.24
10-Mar-95	27.97	330.19
31-Mar-95	27.96	330.20
28-Apr-95	27.95	330.21
2-Jun-95	27.97	330.19
4-Jul-95	28.04	330.12
8-Aug-95	28.56	329.60
30-Aug-95	28.63	329.53
29-Sep-95	28.59	329.57
2-Nov-95	28.78	329.38
20-Nov-95	28.73	329.43
6-Dec-95	28.73	329.43
12-Dec-95	28.75	329.41
1-Jan-96	29.14	329.02
15-Jan-96	29.14	329.02
9-Feb-96	29.85	328.31
15-Apr-96	28.99	329.17
4-Jul-96	29.07	329.09
7-Oct-96	29.27	328.89
30-Dec-96	29.39	328.77
30-Mar-97	29.51	328.65
30-Jun-97	29.46	328.70
30-Dec-97	31.80	326.36
6-Jan-01	33.94	324.22
1-Apr-01	34.26	323.90
4-Jul-01	34.51	323.65
8-Oct-01	34.79	323.37
16-Jan-02	35.16	323.00
25-Mar-02	35.41	322.75
4-Jul-02	35.75	322.41
21-Oct-02	36.07	322.09
21-Dec-02	36.18	321.98
9-Apr-03	36.61	321.55
17-Jul-03	37.00	321.16
10-Nov-03	37.27	320.89
28-Dec-03	37.49	320.67
28-Mar-04	37.78	320.38
6-Nov-04	38.37	319.79
6-Jan-05	38.58	319.58
29-Mar-05	38.84	319.32
30-Jun-05	39.18	318.98
28-Sep-05	39.40	318.76
12-Jan-06	39.62	318.54
24-Mar-06	39.88	318.28
28-Jun-06	40.13	318.03
20-Sep-06	40.36	317.80
11-Jan-07	40.82	317.34
4-Apr-07	40.75	317.41
15-Jun-07	40.92	317.24
24-Sep-07	41.12	317.04
16-Dec-07	41.38	316.78
17-Mar-08	41.72	316.44
12-Jun-08	42.05	316.11
19-Sep-08	42.29	315.87
12-Dec-08	34.57	323.59
06-Mar-09	42.80	315.36
11-Jun-09	42.96	315.20
01-Sep-09	43.23	314.93
07-Dec-09	43.51	314.65
17-Mar-10	43.73	314.43
26-Jun-10	49.98	308.18
19-Sep-10	44.40	313.76
13-Dec-10	44.27	313.89
20-Mar-11	44.52	313.64
12-Jun-11	40.72	317.44
16-Sep-11	44.91	313.25
6-Jan-12	45.21	312.95
17-Mar-12	45.31	312.85
24-Jun-12	45.71	312.45
14-Oct-12	45.83	312.33
10-Dec-12	45.94	312.22
08-Jun-13	46.41	311.75
28-Sep-13	46.52	311.64
9-Dec-13	46.52	311.64
8-Jun-13	46.41	311.75
28-Sep-13	46.52	311.64
1-Apr-14	46.65	312.48
21-Jun-14	46.75	312.38
13-Sep-14	47.00	312.13
10-Dec-14	47.31	311.82
28-Mar-15	47.54	311.59
02-Jul-15	47.75	311.38
10-Oct-15	46.97	312.16
18-Jan-16	48.18	310.95
16-Apr-16	48.27	310.86
18-Jun-16	47.48	311.65
03-Oct-16	48.63	310.50
15-Jan-17	47.84	311.29
10-Apr-17	49.02	310.11
04-Jul-17	49.17	309.96
25-Sep-17	49.12	310.01
03-Feb-18	49.33	309.80
22-Apr-18	40.45	318.68
20-Jul-18	49.56	309.57
29-Oct-18	49.74	309.39
15-Feb-19	50.02	309.11

MB 15/MB 15B		
Date	Datum =	357.73
	(m bgl)	(m AHD)
1-Jan-94	23.89	333.59
14-Feb-94	23.65	333.83
16-Mar-94	24.15	333.33
28-Apr-94	24.50	332.98
9-Jun-94	24.65	332.83
6-Oct-94	24.00	333.48
3-Nov-94	24.69	332.79
1-Dec-94	24.69	332.79
15-Jan-95	24.72	332.76
17-Feb-95	24.78	332.70
10-Mar-95	24.86	332.62
31-Mar-95	24.82	332.66
28-Apr-95	24.81	332.67
2-Jun-95	24.82	332.66
4-Jul-95	24.89	332.59
8-Aug-95	25.32	332.16
30-Aug-95	25.32	332.16
29-Sep-95	25.21	332.27
2-Nov-95	25.36	332.12
20-Nov-95	25.30	332.18
6-Dec-95	25.30	332.18
12-Dec-95	25.30	332.18
1-Jan-96	25.35	332.13
15-Jan-96	25.35	332.13
9-Feb-96	27.22	330.26
15-Apr-96	25.34	332.14
4-Jul-96	25.24	332.24
7-Oct-96	25.22	332.26
30-Dec-96	25.26	332.22
30-Mar-97	25.27	332.21
30-Jun-97	25.06	332.42
30-Dec-97	25.70	331.78
30-Mar-98	26.18	331.30
30-Jun-98	26.70	330.78
30-Aug-98	27.11	330.37
1-Jan-99	27.47	330.01
30-Mar-99	27.62	329.86
3-Jul-99	27.91	329.57
10-Nov-99	28.37	329.11
16-Jan-00	28.49	328.99
8-Apr-00	28.77	328.71
16-Jul-00	29.02	328.46
11-Oct-00	29.23	328.25
7-Jan-01	29.52	327.96
3-Apr-01	29.81	327.67
4-Jul-01	30.07	327.41
6-Oct-01	30.32	327.16
15-Jan-02	30.62	326.86
25-Mar-02	30.99	326.49
4-Jul-02	31.21	326.27
20-Oct-02	31.46	326.02
21-Dec-02	31.62	325.86
10-Apr-03	32.11	325.37
17-Jul-03	32.46	325.02
11-Nov-03	32.74	324.74
27-Dec-03	32.81	324.67
28-Mar-04	33.19	324.29
6-Nov-04	33.75	323.73
6-Jan-05	33.92	323.56
29-Mar-05	34.17	323.31
30-Jun-05	34.48	323.00
28-Sep-05	34.73	322.75
12-Jan-06	34.97	322.51
24-Mar-06	35.17	322.31
28-Jun-06	35.42	322.06
20-Sep-06	35.62	321.86
11-Jan-07	35.90	321.58
4-Apr-07	36.03	321.45
15-Jun-07	36.20	321.28
24-Sep-07	36.38	321.10
16-Dec-07	36.57	320.91
13-Jun-08	45.00	312.48
19-Sep-08	37.33	320.15
11-Dec-08	37.51	319.97
07-Mar-09	37.68	319.80
11-Jun-09	37.97	319.51
01-Sep-09	38.07	319.41
07-Dec-09	38.46	319.02
17-Mar-10	38.67	318.81
25-Jun-10	38.96	318.52
19-Sep-10	38.97	318.51
11-Dec-10	39.17	318.31
16-Mar-11	39.41	318.07
12-Jun-11	41.62	315.86
14-Sep-11	39.71	317.77
4-Jan-12	39.94	317.54
17-Mar-12	40.13	317.35
20-Jun-12	40.35	317.13
11-Oct-12	40.56	316.92
6-Dec-12	40.84	316.64
20-Mar-13	41.09	316.39
4-Jun-13	41.04	316.44
24-Sep-13	41.36	316.12
3-Dec-13	41.36	316.12
20-Mar-13	41.09	316.39
4-Jun-13	41.04	316.44
24-Sep-13	41.36	316.12
1-Apr-14	42.22	315.51
20-Jun-14	42.42	315.31
13-Sep-14	42.59	315.14
10-Dec-14	42.85	314.88
28-Mar-15	43.11	314.62
1-Jul-15	43.33	314.40
10-Oct-15	43.51	314.22
17-Jan-16	43.67	314.06

MB 16/MB 16B		
Date	Datum =	356.83
	(m bgl)	(m AHD)
1-Jan-94	22.04	333.41
14-Feb-94	21.92	333.53
16-Mar-94	22.50	332.95
28-Apr-94	22.56	332.89
9-Jun-94	22.64	332.81
6-Oct-94	22.76	332.69
3-Nov-94	22.78	332.67
1-Dec-94	22.78	332.67
15-Jan-95	22.82	332.63
17-Feb-95	22.90	332.55
10-Mar-95	22.87	332.58
31-Mar-95	22.87	332.58
28-Apr-95	22.89	332.56
2-Jun-95	22.89	332.56
4-Jul-95	22.97	332.48
8-Aug-95	23.32	332.13
30-Aug-95	23.35	332.10
29-Sep-95	23.14	332.31
2-Nov-95	22.96	332.49
20-Nov-95	22.86	332.59
6-Dec-95	22.86	332.59
12-Dec-95	22.82	332.63
1-Jan-96	22.81	332.64
15-Jan-96	22.81	332.64
9-Feb-96	22.70	332.75
15-Apr-96	22.69	332.76
4-Jul-96	22.55	332.90
7-Oct-96	22.36	333.09
30-Dec-96	22.23	333.22
30-Mar-97	22.20	333.25
30-Jun-97	21.95	333.50
30-Sep-97	22.20	333.25
30-Dec-97	23.25	332.20
30-Mar-98	23.91	331.54
30-Jun-98	24.32	331.13
30-Aug-98	24.73	330.72
1-Jan-99	25.15	330.30
30-Mar-99	25.31	330.14
2-Jul-99	25.50	329.95
9-Nov-99	25.94	329.51
16-Jan-00	26.08	329.37
11-Apr-00	26.37	329.08
16-Jul-00	26.64	328.81
10-Oct-00	26.95	328.50
6-Jan-01	27.15	328.30
1-Apr-01	27.45	328.00
4-Jul-01	27.70	327.75
6-Oct-01	27.95	327.50
14-Jan-02	28.25	327.20
25-Mar-02	28.61	326.84
4-Jul-02	28.86	326.59
20-Oct-02	29.09	326.36
21-Dec-02	29.24	326.21
9-Apr-03	29.64	325.81
17-Jul-03	29.92	325.53
11-Nov-03	30.15	325.30
25-Dec-03	30.25	325.20
28-Mar-04	30.58	324.87
6-Nov-04	31.05	324.40
6-Jan-05	31.30	324.15
29-Mar-05	31.56	323.89
30-Jun-05	31.78	323.67
28-Sep-05	31.97	323.48
12-Jan-06	32.22	323.23
24-Mar-06	32.34	323.11
28-Jun-06	32.65	322.80
20-Sep-06	32.84	322.61
11-Jan-07	33.08	322.37
11-Jan-07	33.08	322.37
15-Jun-07	33.43	322.02
24-Sep-07	33.57	321.88
16-Dec-07	33.76	321.69
17-Mar-08	34.08	321.37
13-Jun-08	34.32	321.13
19-Sep-08	34.43	321.02
12-Dec-08	34.70	320.75
01-Mar-09	Not Measured	
11-Jun-09	35.12	320.33
01-Sep-09	35.34	320.11
07-Dec-09	35.59	319.86
17-Mar-10	35.86	319.59
25-Jun-10	36.16	319.29
19-Sep-10	36.28	319.17
13-Dec-10	38.33	317.12
20-Mar-11	36.67	318.78
12-Jun-11	36.97	318.48
16-Sep-11	37.02	318.43
5-Jan-12	37.29	318.16
17-Mar-12	37.24	318.21
24-Jun-12	37.74	317.71
15-Oct-12	37.97	317.48
10-Dec-12	38.06	317.39
24-Mar-13	28.52	326.93
8-Jun-13	38.52	316.93
28-Sep-13	38.28	317.17
9-Dec-13	38.78	316.67
1-Apr-14	40.06	316.77
20-Jun-14	40.24	316.59
13-Sep-14	40.40	316.43
10-Dec-14	40.65	316.18
28-Mar-15	40.94	315.89
1-Jul-15	41.15	315.68
10-Oct-15	23.31	333.52
17-Jan-16	41.50	315.33
16-Apr-16	41.77	315.06

MB 11		
Date	Datum =	365.47
	(m bgl)	(m AHD)
4-Jul-17	Dry	
25-Sep-17	Dry	
3-Feb-18	NS	
23-Apr-18	Dry	
20-Jul-18	Dry	
15-Feb-19	Dry	
12-May-19	Dry	
17-Aug-19	Dry	
10-Nov-19	Dry	
03-Feb-20	Dry	
23-May-20	Dry	
28-Sep-20	Dry	
23-Nov-20	Dry	
10-Mar-21	Dry	
20-May-21	Dry	
26-Aug-21	Dry	
08-Sep-21	N/A	
08-Oct-21	Dry	
06-Nov-21	Dry	
17-Nov-21	Dry	
17-Dec-21	Dry	
23-Mar-22	Dry	
04-Jul-22	Dry	
22-Sep-22	Dry	
02-Dec-22	Dry	
10-Mar-23	Dry	
03-May-23	Dry	
24-Aug-23	Dry	
01-Dec-23	Dry	
23-Feb-24	Dry	
31-May-24	Dry	
24-Aug-24	Dry	
16-Nov-24	Dry	

MB 12B		
Date	Datum =	359.21
	(m bgl)	(m AHD)

MB 13		
Date	Datum =	360.89
	(m bgl)	(m AHD)
3-Feb-18	55.69	305.20
23-Apr-18	55.61	305.28
20-Jul-18	55.70	305.19
29-Oct-18	55.79	305.10
15-Feb-19	55.85	305.04
12-May-19	55.91	304.98
17-Aug-19	Dry	
12-Nov-19	Dry	
4-Feb-20	Dry	
24-May-20	55.89	305.00
28-Sep-20	Dry	
23-Nov-20	Dry	
10-Mar-21	Dry	
20-May-21	Dry	
26-Aug-21	Dry	
8-Sep-21	Dry	
8-Oct-21	Dry	
6-Nov-21	Dry	
17-Nov-21	Dry	
17-Dec-21	Dry	
23-Mar-22	Dry	
04-Jul-22	Dry	
22-Sep-22	Dry	
02-Dec-22	Dry	
10-Mar-23	Dry	
03-May-23	Dry	
24-Aug-23	Dry	
01-Dec-23	Dry	
23-Feb-24	Dry	
31-May-24	Dry	
24-Aug-24	Dry	
16-Nov-24	Dry	

MB 14/MB 14B		
Date	Datum =	359.13
	(m bgl)	(m AHD)
12-May-19	50.16	308.97
17-Aug-19	50.44	308.69
8-Nov-19	50.60	308.53
4-Feb-20	50.82	308.31
24-May-20	50.94	308.19
24-Sep-20	51.23	307.90
23-Nov-20	51.51	307.62
11-Mar-21	51.84	307.29
20-May-21	51.93	307.20
22-Nov-21	52.26	306.87
23-Mar-22	52.92	306.21
04-Jul-22	53.21	305.92
22-Sep-22	53.38	305.75
02-Dec-22	53.45	305.68
10-Mar-23	53.68	305.45
03-May-23	53.77	305.36
24-Aug-23	53.90	305.23
01-Dec-23	54.04	305.09
23-Feb-24	54.19	304.94
31-May-24	54.08	305.05
24-Aug-24	54.47	304.66
16-Nov-24	54.54	304.59

MB 15/MB 15B		
Date	Datum =	357.73
	(m bgl)	(m AHD)
13-Apr-16	No access	
15-Jun-16	No access	
2-Oct-16	44.21	313.52
14-Jan-17	44.38	313.35
9-Apr-17	44.59	313.14
3-Jul-17	44.69	313.04
24-Sep-17	44.65	313.08
3-Feb-18	44.94	312.79
21-Apr-18	45.08	312.65
20-Jul-18	45.30	312.43
29-Oct-18	45.42	312.31
14-Feb-19	45.59	312.14
11-May-19	45.88	311.85
16-Aug-19	46.03	311.70
7-Nov-19	46.21	311.52
30-Jan-20	46.40	311.33
20-May-20	46.62	311.11
24-Sep-20	46.92	310.81
19-Nov-20	47.06	310.67
14-Mar-21	46.50	311.23
20-May-21	47.56	310.17
18-Nov-21	47.89	309.84
23-Mar-22	48.17	309.56
4-Jul-22	47.62	310.11
22-Sep-22	48.53	309.20
2-Dec-22	48.61	309.12
10-Mar-23	48.18	309.55
3-May-23	48.14	309.59
24-Aug-23	48.28	309.45
1-Dec-23	48.40	309.33
23-Feb-24	Dry	
31-May-24	Dry	
24-Aug-24	49.60	308.13
16-Nov-24	Dry	

MB 16/MB 16B		
Date	Datum =	356.83
	(m bgl)	(m AHD)
18-Jun-16	41.85	314.98
2-Oct-16	42.06	314.77
14-Jan-17	42.23	314.60
9-Apr-17	42.49	314.34
3-Jul-17	43.50	313.33
24-Sep-17	42.55	314.28
2-Feb-18	42.84	313.99
21-Apr-18	43.06	313.77
20-Jul-18	43.20	313.63
29-Oct-18	43.36	313.47
14-Feb-19	43.65	313.18
11-May-19	43.83	313.00
16-Aug-19	43.93	312.90
7-Nov-19	44.14	312.69
31-Jan-20	44.30	312.53
20-May-20	44.49	312.34
24-Sep-20	44.67	312.16
24-Oct-20	44.69	312.14
19-Nov-20	44.83	312.00
23-Nov-20	44.83	312.00
31-Jan-21	44.96	311.87
14-Feb-21	45.03	311.80
14-Mar-21	45.47	311.36
23-May-21	45.20	311.63
24-May-21	45.20	311.63
19-Jun-21	45.27	311.56
16-Jul-21	45.39	311.44
26-Aug-21	45.39	311.44
12-Sep-21	45.47	311.36
12-Oct-21	45.52	311.31
22-Nov-21	45.52	311.31
20-Dec-21	45.58	311.25
23-Mar-22	44.88	311.95
04-Jul-22	45.07	311.76
22-Sep-22	45.19	311.64
02-Dec-22	45.25	311.58
10-Mar-23	45.47	311.36
03-May-23	45.56	311.27
24-Aug-23	45.60	311.23
01-Dec-23	45.82	311.01
23-Feb-24	46.93	309.90
31-May-24	46.85	309.98
24-Aug-24	46.13	310.70
16-Nov-24	47.36	309.47

MB 18/MB18B			MB 19			MB 21			MB 22			MB 23			MB 24		
Date	Datum =	356.55	Date	Datum =	355.31	Date	Datum =	358.68	Date	Datum =	361.10	Date	Datum =	358.22	Date	Datum =	363.32
	(m bgl)	(m AHD)		(m bgl)	(m AHD)		(m bgl)	(m AHD)		(m bgl)	(m AHD)		(m bgl)	(m AHD)		(m bgl)	(m AHD)
1-Jan-94	23.75	331.62	20-Nov-95	22.81	332.50	20-Nov-95	26.97	331.71	20-Nov-95	30.28	330.82	20-Nov-95	29.39	328.83	20-Nov-95	36.06	327.26
14-Feb-94	23.82	331.55	12-Dec-95	22.87	332.44	12-Dec-95	27.02	331.66	12-Dec-95	30.33	330.77	12-Dec-95	29.48	328.74	12-Dec-95	36.17	327.15
16-Mar-94	24.22	331.15	1-Jan-96	22.97	332.34	1-Jan-96	26.02	332.66	1-Jan-96	30.41	330.69	1-Jan-96	29.66	328.56	1-Jan-96	37.89	325.43
28-Apr-94	24.24	331.13	15-Jan-96	22.97	332.34	15-Jan-96	26.02	332.66	15-Jan-96	30.41	330.69	15-Jan-96	29.66	328.56	15-Jan-96	37.89	325.43
9-Jun-94	24.32	331.05	9-Feb-96	23.60	331.71	9-Feb-96	26.93	331.75	9-Feb-96	30.45	330.65	9-Feb-96	29.80	328.42	9-Feb-96	37.50	325.82
6-Oct-94	24.60	330.77	15-Apr-96	22.66	332.65	15-Apr-96	26.94	331.74	15-Apr-96	30.48	330.62	15-Apr-96	29.86	328.36	15-Apr-96	36.88	326.44
3-Nov-94	24.59	330.78	4-Jul-96	22.45	332.86	4-Jul-96	26.90	331.78	4-Jul-96	30.52	330.58	4-Jul-96	29.95	328.27	4-Jul-96	37.14	326.18
1-Dec-94	24.60	330.77	7-Oct-96	22.25	333.06	7-Oct-96	26.87	331.81	7-Oct-96	30.64	330.46	7-Oct-96	30.10	328.12	7-Oct-96	37.48	325.84
15-Jan-95	24.61	330.76	30-Dec-96	22.29	333.02	30-Dec-96	26.92	331.76	30-Dec-96	30.79	330.31	30-Dec-96	30.37	327.85	30-Dec-96	37.92	325.40
17-Feb-95	24.71	330.66	30-Mar-97	22.18	333.13	30-Mar-97	26.89	331.79	30-Mar-97	30.88	330.22	30-Mar-97	30.58	327.64	30-Mar-97	38.27	325.05
10-Mar-95	24.75	330.62	30-Jun-97	21.80	333.51	30-Jun-97	26.67	332.01	30-Jun-97	30.81	330.29	30-Jun-97	30.69	327.53	30-Jun-97	38.35	324.97
31-Mar-95	24.71	330.66	30-Sep-97	22.20	333.11	30-Dec-97	27.62	331.06	30-Dec-97	31.37	329.73	30-Sep-97	30.95	327.27	30-Dec-97	38.86	324.46
28-Apr-95	24.69	330.68	30-Dec-97	23.25	332.06	30-Mar-98	28.11	330.57	30-Mar-98	31.87	329.23	30-Dec-97	31.22	327.00	30-Mar-98	39.48	323.84
2-Jun-95	24.71	330.66	30-Mar-98	24.00	331.31	30-Jun-98	28.64	330.04	30-Jun-98	32.30	328.80	30-Mar-98	31.56	326.66	30-Jun-98	39.85	323.47
4-Jul-95	24.77	330.60	30-Jun-98	24.56	330.75	30-Aug-98	29.16	329.52	30-Aug-98	32.80	328.30	30-Jun-98	32.10	326.12	30-Aug-98	41.16	322.16
8-Aug-95	25.23	330.14	30-Aug-98	24.98	330.33	1-Jan-99	29.53	329.15	1-Jan-99	33.26	327.84	30-Aug-98	32.39	325.83	1-Jan-99	41.68	321.64
30-Aug-95	25.26	330.11	1-Jan-99	25.39	329.92	30-Mar-99	32.69	325.99	30-Mar-99	33.40	327.70	1-Jan-99	32.82	325.40	30-Mar-99	42.01	321.31
29-Sep-95	25.15	330.22	30-Mar-99	25.56	329.75	4-Jul-99	29.86	328.82	3-Jul-99	33.64	327.46	30-Mar-99	33.00	325.22	3-Jul-99	42.05	321.27
20-Nov-95	25.24	330.13	2-Jul-99	25.75	329.56	10-Nov-99	30.40	328.28	10-Nov-99	33.99	327.11	2-Jul-99	33.22	325.00	10-Nov-99	42.60	320.72
6-Dec-95	25.24	330.13	9-Nov-99	26.26	329.05	16-Jan-00	30.51	328.17	16-Jan-00	34.20	326.90	10-Nov-99	33.69	324.53	17-Jan-00	42.72	320.60
12-Dec-95	25.25	330.12	15-Jan-00	26.41	328.90	8-Apr-00	30.71	327.97	8-Apr-00	34.38	326.72	16-Jan-00	33.89	324.33	8-Apr-00	42.78	320.54
1-Jan-96	25.31	330.06	7-Apr-00	26.70	328.61	16-Jul-00	31.06	327.62	17-Jul-00	34.71	326.39	8-Apr-00	34.16	324.06	17-Jul-00	43.24	320.08
15-Jan-96	25.31	330.06	17-Jul-00	27.09	328.22	11-Oct-00	31.23	327.45	11-Oct-00	34.89	326.21	17-Jul-00	34.53	323.69	11-Oct-00	43.70	319.62
9-Feb-96	25.15	330.22	10-Oct-00	27.32	327.99	7-Jan-01	31.56	327.12	7-Jan-01	35.19	325.91	10-Oct-00	34.83	323.39	9-Jan-01	44.08	319.24
15-Apr-96	25.39	329.98	6-Jan-01	27.60	327.71	3-Apr-01	31.83	326.85	3-Apr-01	35.50	325.60	6-Jan-01	35.14	323.08	3-Apr-01	44.67	318.65
4-Jul-96	25.33	330.04	3-Apr-01	27.92	327.39	4-Jul-01	32.10	326.58	5-Jul-01	35.75	325.35	3-Apr-01	35.60	322.62	5-Jul-01	45.07	318.25
7-Oct-96	25.36	330.01	4-Jul-01	28.19	327.12	8-Oct-01	32.37	326.31	8-Oct-01	36.01	325.09	5-Jul-01	35.98	322.24	6-Oct-01	45.46	317.86
30-Dec-96	25.55	329.82	8-Oct-01	28.46	326.85	16-Jan-02	32.69	325.99	16-Jan-02	36.37	324.73	8-Oct-01	36.35	321.87	16-Jan-02	46.05	317.27
30-Mar-97	25.62	329.75	14-Jan-02	28.56	326.75	25-Mar-02	32.93	325.75	25-Mar-02	36.61	324.49	15-Jan-02	36.73	321.49	25-Mar-02	46.52	316.80
30-Jun-97	25.50	329.87	25-Mar-02	29.05	326.26	4-Jul-02	33.24	325.44	4-Jul-02	36.94	324.16	25-Mar-02	37.12	321.10	4-Jul-02	47.03	316.29
30-Sep-97	25.90	329.47	4-Jul-02	29.27	326.04	20-Oct-02	33.50	325.18	20-Oct-02	37.21	323.89	4-Jul-02	37.47	320.75	21-Oct-02	47.64	315.68
30-Dec-97	26.35	329.02	20-Oct-02	29.54	325.77	21-Dec-02	33.67	325.01	21-Dec-02	37.39	323.71	20-Oct-02	37.89	320.33	21-Dec-02	47.88	315.44
30-Mar-98	26.83	328.54	21-Dec-02	29.66	325.65	10-Apr-03	34.08	324.60	9-Apr-03	37.83	323.27	21-Dec-02	38.07	320.15	10-Apr-03	48.69	314.63
30-Jun-98	27.36	328.01	9-Apr-03	30.00	325.31	17-Jul-03	34.43	324.25	17-Jul-03	38.19	322.91	9-Apr-03	38.69	319.53	17-Jul-03	49.32	314.00
30-Aug-98	27.77	327.60	17-Jul-03	30.41	324.90	11-Nov-03	34.72	323.96	11-Nov-03	38.46	322.64	17-Jul-03	39.20	319.02	11-Nov-03	49.74	313.58
1-Jan-99	27.98	327.39	10-Nov-03	30.55	324.76	27-Dec-03	33.80	324.88	27-Dec-03	38.58	322.52	10-Nov-03	39.47	318.75	25-Dec-03	50.04	313.28
30-Mar-99	28.30	327.07	27-Dec-03	30.75	324.56	28-Mar-04	35.16	323.52	28-Mar-04	38.97	322.13	28-Dec-03	39.76	318.46	28-Mar-04	50.58	312.74
2-Jul-99	28.35	327.02	28-Mar-04	31.05	324.26	6-Nov-04	35.70	322.98	6-Nov-04	39.53	321.57	28-Mar-04	40.18	318.04	6-Nov-04	51.48	311.84
9-Nov-99	28.73	326.64	6-Nov-04	31.56	323.75	5-Jan-05	35.93	322.75	5-Jan-05	39.74	321.36	6-Nov-04	41.03	317.19	5-Jan-05	51.84	311.48
15-Jan-00	29.00	326.37	5-Jan-05	31.76	323.55	29-Mar-05	36.14	322.54	29-Mar-05	39.88	321.22	5-Jan-05	41.30	316.92	29-Mar-05	52.22	311.10
7-Apr-00	29.13	326.24	29-Mar-05	31.90	323.41	29-Jun-05	36.32	322.36	29-Jun-05	40.30	320.80	29-Mar-05	41.61	316.61	29-Jun-05	52.64	310.68
17-Jul-00	29.46	325.91	29-Jun-05	32.22	323.09	27-Sep-05	36.65	322.03	27-Sep-05	40.55	320.55	29-Jun-05	42.02	316.20	27-Sep-05	53.00	310.32
10-Oct-00	29.70	325.67	27-Sep-05	32.36	322.95	11-Jan-06	36.92	321.76	11-Jan-06	40.86	320.24	27-Sep-05	42.25	315.97	11-Jan-06	53.42	309.90
6-Jan-01	29.94	325.43	11-Jan-06	32.60	322.71	24-Mar-06	37.06	321.62	23-Mar-06	40.97	320.13	11-Jan-06	42.71	315.51	23-Mar-06	53.66	309.66
3-Apr-01	30.46	324.91	24-Mar-06	32.80	322.51	28-Jun-06	37.33	321.35	27-Jun-06	41.21	319.89	23-Mar-06	42.92	315.30	27-Jun-06	53.84	309.48
4-Jul-01	30.60	324.77	27-Jun-06	33.00	322.31	19-Sep-06	37.58	321.10	19-Sep-06	41.53	319.57	27-Jun-06	47.79	310.43	19-Sep-06	54.22	309.10
6-Oct-01	30.75	324.62	20-Sep-06	33.28	322.03	10-Jan-07	41.75	316.93	10-Jan-07	41.75	319.35	19-Sep-06	43.28	314.94	9-Jan-07	54.41	308.91
14-Jan-02	30.96	324.41	9-Jan-07	33.34	321.97	3-Apr-07	37.60	321.08	3-Apr-07	41.89	319.21	9-Jan-07	43.68	314.54	3-Apr-07	54.65	308.67
25-Mar-02	30.48	324.89	2-Apr-07	33.64	321.67	11-Jun-07	38.07	320.61	11-Jun-07	42.02	319.08	3-Apr-07	44.00	314.22	11-Jun-07	54.82	308.50
4-Jul-02	31.67	323.70	11-Jun-07	33.74	321.57	22-Sep-07	38.36	320.32	22-Sep-07	42.34	318.76	11-Jun-07	44.11	314.11	22-Sep-07	55.35	307.97
20-Oct-02	31.75	323.62	22-Sep-07	33.94	321.37	14-Dec-07	38.47	320.21	14-Dec-07	42.53	318.57	22-Sep-07	44.43	313.79	14-Dec-07	55.73	307.59
21-Dec-02	31.84	323.53	13-Dec-07	34.07	321.24	17-Mar-08	35.87	322.81	17-Mar-08	42.90	318.20	14-Dec-07	44.63	313.59	20-Mar-08	56.37	306.95
9-Apr-03	32.27	323.10	17-Mar-08	34.45	320.86	12-Jun-08	39.02	319.66	16-Sep-08	43.32	317.78	19-Mar-08	45.07	313.15	11-Jun-08	56.79	306.53
17-Jul-03	32.58	322.79	13-Jun-08	34.62	320.69	9-Dec-08	34.51	324.17	9-Dec-08	43.56	317.54	12-Jun-08	57.37	300.85	16-Sep-08	56.94	306.38
10-Nov-03	32.73	322.64	16-Sep-08	39.25	316.06	4-Mar-09	39.85	318.83	4-Mar-09	43.96	317.14	16-Sep-08	45.50	312.72	9-Dec-08	57.36	305.96
27-Dec-03	32.84	322.53	19-Sep-08	34.73	320.58	11-Jun-09	39.97	318.71	11-Jun-09	44.12	316.98	9-Dec-08	55.00	303.22	4-Mar-09	57.90	305.42
28-Mar-04	33.14	322.23	9-Dec-08	34.95	320.36	1-Sep-09	40.22	318.46	1-Sep-09	44.30	316.80	3-Mar-09	46.22	312.00	11-Jun-09	58.00	305.32
6-Nov-04	33.62	321.75	5-Mar-09	35.24	320.07	7-Dec-09	40.44	318.24	7-Dec-09	44.63	316.47	11-Jun-09	46.41	311.81	1-Sep-09	58.25	305.07
5-Jan-05	33.73	321.64	9-Jun-09	35.35	319.96	15-Mar-10	40.69	317.99	15-Mar-10	44.75	316.35	1-Sep-09	46.58	311.64	7-Dec-09	58.40	304.92
29-Mar-05	33.97	321.40	1-Sep-09	35.54	319.77	25-Jun-10	41.42	317.26	25-Jun-10	45.21	315.89	7-Dec-09	46.91	311.31	15-Mar-10	Not Measured	
30-Jun-05	34.23	321.14	7-Dec-09	34.84	320.47	18-Sep-10	41.15	317.53	18-Sep-10	45.31	315.79	15-Mar-10	44.21	314.01	25-Jun-10	55.23	308.09
28-Sep-05	34.39	320.98	15-Mar-10	35.89	319.42	11-Dec-10	41.19	317.49	11-Dec-10	45.47	315.63	25-Jun-10	47.47	310.75	20-Sep-10	59.53	303.79
12-Jan-06	34.56	320.81	25-Jun-10	36.17	319.14	16-Mar-11	41.53	317.15	16-Mar-11	45.65	315.45	19-Sep-10	47.77	310.45	13-Dec-10	59.57	303.75
24-Mar-06	34.74	320.63	19-Sep-10	36.36	318.95	8-Jun-11	41.64	317.04	11-Jun-11	45.95	315.15	11-Dec-10	47.86	310.36	17-Mar-11	59.90	303.42
28-Jun-06	34.92	320.45	10-Dec-10	36.45	318.86	14-Sep-11	41.90	316.78	14-Sep-11	45.98	315.12	17-Mar-11	48.24	309.98	10-Jun-11	60.20	303.12
20-Sep-06	35.12	320.25	16-Mar-11	36.67	318.64	4-Jan-12	42.07	316.61	5-Jan-12	46.35	314.75	8-Jun-11	48.28	309.94	14-Sep-11	60.29	303.03
11-Jan-07	35.35	320.02	8-Jun-11	36.57	318.74	14-Mar-12	42.20	316.48	15-Mar-12	46.52	314.58	14-Sep-11	48.53	309.69	4-Jan-12	60.56	302.76
15-Jun-07	35.62	319.75	13-Sep-11	37.00	318.31	20-Jun-12	42.19	316.49	21-Jun-12	46.56	314.54	4-Jan-12	48.89	309.33	15-Mar-12	60.78	302.54
22-Sep-07	35.81	319.56	4-Jan-12	37.21	318.10	11-Oct-12	42.52	316.16	12-Oct-12	46.91	314.19	15-Mar-12	48.97	309.25	21-Jun-12	61.16	302.16
16-Dec-07	35.93	319.44	14-Mar-12	37.32	317.99	6-Dec-12	42.85	315.83	5-Dec-12	27.03	334.07	21-Jun-12	49.26	308.96	13-Oct-12	61.35	301.97
17-Mar-08	36.23	319.14	20-Jun-12	37.64	317.67	20-Mar-13	42.91	315.77	20-Mar-13	47.45	313.65	10-Oct-12	49.46	308.76	9-Dec-12	61.46	301.86
13-Jun-08	36.45	318.92	10-Oct-12	37.85	317.46	4-Jun-13	43.46	315.22	9-Jun-13	47.47	313.63	6-Dec-12	49.55	308.67	24-Mar-13	61.55	301.77
19-Sep-08	36.50	318.87	6-Dec-12	37.90	317.41	24-Sep-13	43.54	315.14	24-Sep-13	47.68	313.42	21-Mar-13	49.83	308.39	9-Jun-13	60.61	302.71
12-Dec-08	36.75	318.62	20-Mar-13	38.40	316.91	3-Dec-13	43.54	315.14	3-Dec-13	47.68	313.42	3-Jun-13	49.96	308.26	24-Sep-13	61.44	301.88
06-Mar-09	36.97	318.40	3-Jun-13	38.33	316.98	20-Mar-13	42.91	315.77	27-Mar-14	48.11	312.99	24-Sep-13	50.19	308.03	4-Dec-13	61.44	301.88
11-Jun-09	37.11	318.26	24-Sep-13	38.60	316.71	4-Jun-13	43.46	315.22	18-Jun-14	48.25	312.85	3-Dec-13	50.19	308.03	27-Mar-14	62.38	300.94
01-Sep-09	37.16	318.21	3-Dec-13	38.60	316.71	24-Sep-13	43.54	315.14	9-Sep-14	48.49	312.61	27-Mar-14	50.65	307.57	18-Jun-14	62.53	300.79
07-Dec-09	37.52	317.85	20-Mar-13	38.40	316.91	27-Mar-14	43.88	314.80	6-Dec-14	48.63	312.47	18-Jun-14	50.81	307.41	12-Sep-14	62.86	300.46
15-Mar-10	37.70	317.67	3-Jun-13	38.33	316.98	18-Jun-14	44.00	314.68	24-Mar-15	48.96	312.14	12-Sep-14	51.00	307.22	6-Dec-14	63.00	300.32
25-Jun-10	38.25	317.12	25-Sep-13	38.60	316.71	9-Sep-14	44.26	314.42	3-Jul-15	49.17	311.93	6-Dec-14	51.12	307.10	25-Mar-15	63.52	299.80
19-Sep-10	38.44	316.93	27-Mar-14	39.00	316.31	6-Dec-14	44.38	314.30	6-Oct-15	49.44	311.66	25-Mar-15	51.54	306.68	4-Jul-15	63.68	299.64
10-Dec-10	38.48	316.89	19-Jun-14	41.19	314.12	24-Mar-15	44.72	313.96	15-Jan-16	49.53	311.57	1-Jul-15	51.71	306.51	6-Oct-15	63.79	299.53
16-Mar-11	38.62	316.75	9-Sep-14	39.32	315.99	3-Jul-15	44.91	313.77	13-Apr-16	49.72	311.38	6-Oct-15	51.91	306.31	15-Jan-16	63.88	299.44
8-Jun-11	38.78	316.59	5-Dec-14	39.49	315.82	6-Oct-15	45.12	313.56	17-Jun-16	49.88	311.22	15-Jan-16	52.10	306.12	14-Apr-16	64.09	299.23
13-Sep-11	38.81	316.56	24-Mar-15	39.77	315.54	15-Jan-16	45.36	313.32	28-Sep-16	50.06	311.04	14-Apr-16	52.31	305.91	15-Jun-16	64.13	299.19
4-Jan-12	39.02	316.35	2-Jul-15	39.98	315.33	13-Apr-16	45.55	313.13	11-Jan-17	50.18	310.92	15-Jun-16	52.23	305.99	29-Sep-16	64.23	299.09
14-Mar-12	39.08	316.29	5-Oct-15	40.20	315.11	15-Jun-16	45.66	313.02	5-Apr-17	50.39	310.71	28-Sep-16	52.60	305.62	12-Jan-17	65.40	297.92
20-Jun-12	39.38	315.99	15-Jan-16	40.40	314.91	28-Sep-16	45.83	312.85	30-Jun-17	50.54	310.56	12-Jan-17	53.70	304.52	6-Apr-17	64.52	298.80
10-Oct-12	39.49	315.88	13-Apr-16	40.57	314.74	11-Jan-17	45.95	312.73	20-Sep-17	50.56	310.54	5-Apr-17	52.92	305.30	2-Jul-17	64.77	298.55
6-Dec-12	39.59	315.78	15-Jun-16	40.69	314.62	5-Apr-17	46.21	312.47	30-Jan-18	51.86	309.24	30-Jun-17	53.05	305.17	21-Sep-17	64.78	298.54
20-Mar-13	39.89	315.48	28-Sep-16	40.88	314.43	30-Jun-17	46.21	312.47	17-Apr-18	51.00	310.10	21-Sep-17	52.59	305.63	30-Jan-18	65.10	298.22
4-Jun-13	40.03	315.34	11-Jan-17	41.05	314.26	20-Sep-17	46.50	312.18	17-Jul-18	51.09	310.01	30-Jan-18	53.38	304.84	18-Apr-18	65.28	298.04
24-Sep-13	40.20	315.17	5-Apr-17	41.24	314.07	29-Jan-18	46.68	312.00	24-Oct-18	51.35	309.75	18-Apr-18	53.53	304.69	17-Jul-18	65.33	297.99
3-Dec-13	40.20	315.17	30-Jun-17	41.37	313.94	18-Apr-18	46.87	311.81	11-Feb-19	51.51	309.59	17-Jul-18	53.67	304.55	25-Oct-18	65.48	297.84
1-Apr-14	39.87	316.68	20-Sep-17	41.45	313.86	16-Jul-18	46.95	311.73	07-May-19	51.72	309.38	25-Oct-18	53.85	304.37	12-Feb-19	65.76	297.56
21-Jun-14	40.15	316.40	29-Jan-18	41.64	313.67	24-Oct-18	47.09	311.59	13-Aug-19	51.85	309.25	12-Feb-19	54.12	304.10	08-May-19	65.99	297.33
13-Sep-14	40.48	316.07	22-Apr-18	41.78	313.53	12-Feb-19	47.42	311.26	08-Nov-19	52.13	308.97	07-May-19	54.33	303.89	14-Aug-19	66.06	297.26
10-Dec-14	40.93	315.62	19-Jul-18	41.95	313.36	8-May-19	47.62	311.06	30-Jan-20	52.30	308.80	14-Aug-19	54.39	303.83	08-Nov-19	66.28	297.04
27-Mar-15	41.27	315.28	28-Oct-18	42.10	313.21	14-Aug-19	47.62	311.06	20-May-20	52.54	308.56	07-Nov-19	54.66	303.56	31-Jan-20	66.56	296.76
1-Jul-15	41.56	314.99	14-Feb-19	42.32	312.99	8-Nov-19	48.02	310.66	24-Sep-20	46.81	314.29	31-Jan-20	54.83	303.39	21-May-20	No Access	
9-Oct-15	41.61	314.94	11-May-19	42.47	312.84	30-Jan-20	48.14	310.54	19-Nov-20	53.00	308.10	22-May-20	54.99	303.23	24-Sep-20	No Access	
17-Jan-16	41.54	315.01	16-Aug-19	42.62	312.69	20-May-20	48.41	310.27	10-Mar-21	53.27	307.83	24-Sep-20	55.21	303.01	20-Nov-20	No Access	
13-Apr-16	41.70	314.85	07-Nov-19	42.83	312.48	24-Sep-20	48.60	310.08	20-May-21	53.50	307.60	20-Nov-20	55.42	302.80	11-Mar-21	67.50	295.82
18-Jun-16	41.83	314.72	29-Jan-20	42.96	312.35	19-Nov-20	48.81	309.87	26-Aug-21	53.67	307.43	11-Mar-21	55.68	302.54	20-May-21	67.70	295.62
1-Oct-16	42.50	314.05	24-May-20	43.10	312.21	10-Mar-21	49.03	309.65	09-Sep-21	53.22	307.88	19-May-21	55.79	302.43	26-Aug-21	67.87	295.45

MB 18/MB18B		
Date	Datum =	356.55
	(m bgl)	(m AHD)
14-Jan-17	42.69	313.86
8-Apr-17	42.65	313.90
3-Jul-17	43.10	313.45
24-Sep-17	42.66	313.89
2-Feb-18	43.28	313.27
22-Apr-18	43.76	312.79
19-Jul-18	43.54	313.01
28-Oct-18	43.84	312.71
14-Feb-19	43.97	312.58
11-May-19	44.26	312.29
16-Aug-19	44.28	312.27
7-Nov-19	44.21	312.34
29-Jan-20	44.50	312.05
19-May-20	44.75	311.80
23-Sep-20	45.00	311.55
19-Nov-20	45.18	311.37
10-Mar-21	45.46	311.09
19-May-21	45.49	311.06
17-Nov-21	45.53	311.02
23-Mar-22	45.76	310.79
04-Jul-22	44.18	312.37
22-Sep-22	45.16	311.39
02-Dec-22	45.15	311.40
10-Mar-23	45.39	311.16
03-May-23	45.40	311.15
24-Aug-23	45.31	311.24
01-Dec-23	45.36	311.19
23-Feb-24	45.66	310.89
31-May-24	45.48	311.07
24-Aug-24	45.44	311.11
16-Nov-24	45.48	311.07

MB 19		
Date	Datum =	355.31
	(m bgl)	(m AHD)
23-Sep-20	43.42	311.89
19-Nov-20	43.54	311.77
10-Mar-21	43.80	311.51
20-May-21	43.80	311.51
26-Aug-21	43.91	311.40
08-Sep-21	43.91	311.40
12-Oct-21	43.45	311.86
18-Nov-21	Dry	
22-Nov-21	Dry	
20-Dec-21	Dry	
23-Mar-22	Dry	
04-Jul-22	Dry	
22-Sep-22	Dry	
02-Dec-22	Dry	
10-Mar-23	Dry	
03-May-23	Dry	
24-Aug-23	Dry	
01-Dec-23	Dry	
23-Feb-24	Dry	
31-May-24	Dry	
24-Aug-24	Dry	
16-Nov-24	Dry	

MB 21		
Date	Datum =	358.68
	(m bgl)	(m AHD)
20-May-21	49.29	309.39
26-Aug-21	49.39	309.29
9-Sep-21	49.46	309.22
12-Oct-21	49.56	309.12
18-Nov-21	49.67	309.01
22-Nov-21	49.67	309.01
20-Dec-21	49.71	308.97
23-Mar-22	49.92	308.76
04-Jul-22	50.22	308.46
22-Sep-22	Dry	
02-Dec-22	50.26	308.42
10-Mar-23	50.75	307.93
03-May-23	50.82	307.86
24-Aug-23	51.00	307.68
01-Dec-23	51.15	307.53
23-Feb-24	51.75	306.93
31-May-24	51.71	306.97
24-Aug-24	52.01	306.67
16-Nov-24	52.12	306.56

MB 22		
Date	Datum =	361.10
	(m bgl)	(m AHD)
12-Oct-21	53.29	307.81
18-Nov-21	53.87	307.23
22-Nov-21	53.87	307.23
20-Dec-21	53.88	307.22
23-Mar-22	54.19	306.91
04-Jul-22	54.51	306.59
22-Sep-22	54.50	306.60
02-Dec-22	54.73	306.37
10-Mar-23	54.96	306.14
03-May-23	55.05	306.05
24-Aug-23	Dry	
01-Dec-23	Dry	
23-Feb-24	Dry	
31-May-24	Dry	
24-Aug-24	Dry	
16-Nov-24	Dry	

MB 23		
Date	Datum =	358.22
	(m bgl)	(m AHD)
26-Aug-21	55.94	302.28
08-Sep-21	55.94	302.28
12-Oct-21	56.06	302.16
17-Nov-21	56.04	302.18
22-Nov-21	56.04	302.18
20-Dec-21	56.10	302.12
23-Mar-22	56.32	301.90
04-Jul-22	56.55	301.67
22-Sep-22	65.71	292.51
02-Dec-22	56.22	302.00
10-Mar-23	56.76	301.46
03-May-23	56.78	301.44
24-Aug-23	56.73	301.49
01-Dec-23	56.70	301.52
23-Feb-24	56.96	301.26
31-May-24	56.92	301.30
24-Aug-24		
16-Nov-24	56.93	301.29

MB 24		
Date	Datum =	363.32
	(m bgl)	(m AHD)
09-Sep-21	67.90	295.42
08-Oct-21	67.98	295.34
06-Nov-21	68.14	295.18
18-Nov-21	67.95	295.37
17-Dec-21	68.22	295.10
23-Mar-22	68.50	294.82
04-Jul-22	68.70	294.62
22-Sep-22	68.63	294.69
02-Dec-22	68.57	294.75
10-Mar-23	68.56	294.76
03-May-23	68.55	294.77
24-Aug-23	68.10	295.22
01-Dec-23	67.96	295.36
23-Feb-24	68.27	295.05
31-May-24	68.24	295.08
24-Aug-24		
16-Nov-24	68.27	295.05

MB 33		
Date	Datum =	358.20
	(m bgl)	(m AHD)
9-Dec-11	25.72	332.48
17-Jan-13	26.84	331.36
28-Sep-13	Dry	
26-Apr-14	27.33	330.87
21-Jun-14	Dry	
13-Sep-14	27.36	330.84
9-Dec-14	Dry	
27-Mar-15	Dry	
1-Jul-15	Dry	
6-Oct-15	Dry	
16-Feb-16	27.38	330.82
16-Mar-16	27.38	330.82
16-Apr-16	Dry	
15-Jun-16	Dry	
2-Oct-16	Dry	
8-Apr-17	27.37	330.83
4-Jul-17	27.33	330.87
25-Sep-17	27.35	330.85
2-Feb-18	27.24	330.96
22-Apr-18	Dry	
18-Jul-18	Dry	
28-Oct-18	27.30	330.90
12-Feb-19	Dry	
11-May-19	Dry	
17-Aug-19	Dry	
08-Nov-19	Dry	
31-Jan-20	Dry	
21-May-20	Dry	
23-Sep-20	Dry	
20-Nov-20	Dry	
14-Mar-21	Dry	
20-May-21	Dry	
18-Nov-21	Dry	

MB 34		
Date	Datum =	356.61
	(m bgl)	(m AHD)
9-Dec-11	26.83	329.78
24-Mar-13	2.93	353.68
7-Jun-13	2.12	354.49
28-Sep-13	2.53	354.08
31-Mar-14	2.66	353.95
21-Jun-14	2.22	354.39
13-Sep-14	2.47	354.14
9-Dec-14	2.86	353.75
28-Mar-15	2.36	354.25
1-Jul-15	2.38	354.23
10-Oct-15	2.00	354.61
17-Jan-16	2.00	354.61
16-Apr-16	2.00	354.61
18-Jun-16	1.61	355.00
2-Oct-16	1.96	354.65
15-Jan-17	2.13	354.48
9-Apr-17	1.87	354.74
3-Jul-17	2.76	353.85
25-Sep-17	1.58	355.03
2-Feb-18	1.86	354.75
22-Apr-18	1.97	354.64
20-Jul-18	1.68	354.93
29-Oct-18	1.67	354.94
15-Feb-19	1.69	354.92
11-May-19	1.48	355.13
17-Aug-19	1.63	354.98
8-Nov-19	1.70	354.91
3-Feb-20	1.69	354.92
21-May-20	1.83	354.78
24-May-21	2.00	354.61

MB 40		
Date	Datum =	362.51
	(m bgl)	(m AHD)
1-Jan-99	30.20	332.31
24-Feb-99	30.24	332.27
12-Apr-99	30.65	331.86
3-Jul-99	30.69	331.82
4-Oct-99	30.69	331.82
12-Nov-99	30.65	331.86
16-Jan-00	30.56	331.95
9-Apr-00	30.24	332.27
18-Jul-00	29.72	332.79
12-Oct-00	29.16	333.35
7-Jan-01	28.62	333.89
4-Apr-01	28.27	334.24
5-Jul-01	27.72	334.79
7-Oct-01	27.17	335.34
3-Dec-01	26.77	335.74
16-Jan-02	26.47	336.04
25-Mar-02	25.99	336.52
4-Jul-02	24.70	337.81
21-Oct-02	23.51	339.00
22-Dec-02	22.88	339.63
10-Apr-03	21.47	341.04
17-Jul-03	20.16	342.35
11-Nov-03	18.45	344.06
28-Dec-03	17.98	344.53
28-Mar-04	16.99	345.52
6-Nov-04	13.94	348.57
6-Jan-05	13.36	349.15
29-Mar-05	12.58	349.93
30-Jun-05	11.60	350.91
28-Sep-05	10.64	351.87
10-Jan-06	9.86	352.65
24-Mar-06	9.16	353.35
28-Jun-06	8.02	354.49
20-Sep-06	7.19	355.32
10-Jan-07	6.58	355.93
2-Apr-07	6.36	356.15
11-Jun-07	5.78	356.73
2-Dec-07	6.10	356.41
23-Dec-08	5.15	357.36
1-Jun-09	Not Measured	
1-Sep-09	4.24	358.27
7-Dec-09	4.10	358.41
29-Apr-10	3.90	358.61
24-Jul-10	3.05	359.46
4-Oct-10	2.67	359.84
13-Dec-10	Not Measured	
16-Apr-11	3.97	358.54
9-Jul-11	6.07	356.44
29-Oct-11	7.87	354.64
21-Jan-12	9.71	352.80
26-Apr-12	11.67	350.84
5-Aug-12	35.50	327.01
29-Oct-12	35.41	327.10
16-Jan-13	10.69	351.82
27-Mar-13	11.10	351.41
4-Jul-13	11.63	350.88
11-Oct-13	12.31	350.20
27-Apr-14	13.11	349.40
4-Jul-14	14.95	347.56
28-Sep-14	15.73	346.78
11-Apr-15	17.75	344.76
28-Jul-15	19.05	343.46
30-Jan-16	20.76	341.75
22-Apr-16	21.26	341.25
14-Jul-16	21.84	340.67
6-Oct-16	24.63	337.88
5-Feb-17	23.38	339.13
29-Apr-17	23.80	338.71
22-Jul-17	24.02	338.49
30-Sep-17	24.37	338.14
18-Feb-18	24.76	337.75
28-Apr-18	25.22	337.29
6-Aug-18	36.14	326.37
3-Nov-18	25.77	336.74
05-Mar-19	25.99	336.52
22-Jun-19	26.30	336.21
04-Sep-19	26.72	335.79
05-Feb-20	34.89	327.62
27-May-20	34.38	328.13
13-Oct-20	35.13	327.38
15-Mar-21	35.45	327.06

MB 41		
Date	Datum =	357.91
	(m bgl)	(m AHD)
1-Jan-99	22.29	335.62
24-Feb-99	22.29	335.62
12-Apr-99	22.04	335.87
31-May-99	21.88	336.03
3-Jul-99	21.78	336.13
4-Oct-99	21.99	335.92
12-Nov-99	22.06	335.85
16-Jan-00	21.85	336.06
9-Apr-00	21.97	335.94
16-Jul-00	22.02	335.89
12-Oct-00	22.02	335.89
7-Jan-01	22.01	335.90
4-Apr-01	22.04	335.87
5-Jul-01	21.94	335.97
7-Oct-01	21.84	336.07
3-Dec-01	21.90	336.01
16-Jan-02	21.90	336.01
25-Mar-02	21.85	336.06
4-Jul-02	21.66	336.25
21-Oct-02	21.54	336.37
22-Dec-02	21.60	336.31
10-Apr-03	21.71	336.20
17-Jul-03	21.62	336.29
11-Nov-03	21.49	336.42
28-Dec-03	21.30	336.61
28-Mar-04	21.16	336.75
6-Nov-04	20.86	337.05
6-Jan-05	20.76	337.15
29-Mar-05	20.41	337.50
30-Jun-05	20.35	337.56
28-Sep-05	19.98	337.93
12-Jan-06	19.81	338.10
24-Mar-06	19.58	338.33
28-Jun-06	19.23	338.68
20-Sep-06	19.05	338.86
10-Jan-07	18.77	339.14
14-Jun-07	18.45	339.46
17-Sep-07	40.33	317.58
23-Dec-08	19.87	338.04
1-Jun-09	Not Measured	
1-Sep-09	19.75	338.16
7-Dec-09	17.19	340.72
29-Apr-10	19.35	338.56
24-Jul-10	18.80	339.11
4-Oct-10	18.86	339.05
13-Dec-10	Not Measured	
16-Apr-11	19.03	338.88
9-Jul-11	20.73	337.18
29-Oct-11	21.81	336.10
26-Apr-12	23.06	334.85
5-Aug-12	34.88	323.03
29-Oct-12	34.43	323.48
16-Jan-13	24.00	333.91
27-Mar-13	24.04	333.87
11-Oct-13	23.85	334.06
27-Apr-14	24.09	333.82
4-Jul-14	24.33	333.58
28-Sep-14	24.55	333.36
12-Dec-14	Not pumping	
11-Apr-15	Track too wet	
22-Apr-16	25.64	332.27
6-Oct-16	25.94	331.97
30-Sep-17	26.37	331.54
28-Apr-18	25.88	332.03
3-Nov-18	26.90	331.01
22-Jun-19	27.05	330.86
27-May-20	37.15	320.76

MB 42		
Date	Datum =	366.30
	(m bgl)	(m AHD)
1-Jan-99	45.45	320.85
24-Feb-99	45.45	320.85
12-Apr-99	45.51	320.79
31-May-99	45.04	321.26
3-Jul-99	45.12	321.18
5-Aug-99	44.79	321.51
4-Oct-99	45.25	321.05
12-Nov-99	45.27	321.03
16-Jan-00	45.52	320.78
9-Apr-00	45.37	320.93
18-Jul-00	45.48	320.82
12-Oct-00	45.41	320.89
8-Jan-01	46.42	319.88
4-Apr-01	46.92	319.38
5-Jul-01	46.20	320.10
7-Oct-01	45.51	320.79
3-Dec-01	45.66	320.64
16-Jan-02	46.08	320.22
25-Mar-02	46.65	319.65
4-Jul-02	45.78	320.52
21-Oct-02	46.43	319.87
22-Dec-02	46.02	320.28
10-Apr-03	45.83	320.47
17-Jul-03	45.02	321.28
11-Nov-03	44.23	322.07
28-Dec-03	44.66	321.64
28-Mar-04	44.77	321.53
6-Nov-04	42.94	323.36
6-Jan-05	43.26	323.04
29-Mar-05	43.48	322.82
30-Jun-05	42.30	324.00
28-Sep-05	41.62	324.68
12-Jan-06	41.67	324.63
24-Mar-06	41.49	324.81
28-Jun-06	40.59	325.71
20-Sep-06	40.50	325.80
10-Jan-07	40.22	326.08
4-Apr-07	40.39	325.91
14-Jun-07	40.50	325.80
16-Dec-07	42.56	323.74
20-Mar-08	43.08	323.22
11-Jun-08	42.90	323.40
18-Sep-08	42.59	323.71
12-Dec-08	42.90	323.40
4-Mar-09	42.87	323.43
11-Jun-09	41.84	324.46
1-Sep-09	40.30	326.00
7-Dec-09	40.02	326.28
18-Mar-10	40.47	325.83
26-Jun-10	31.59	334.71
19-Sep-10	38.67	327.63
13-Dec-10	39.53	326.77
20-Mar-11	40.07	326.23
12-Jun-11	41.93	324.37
16-Sep-11	42.72	323.58
6-Jan-12	43.60	322.70
17-Mar-12	43.97	322.33
24-Jun-12	44.23	322.07
15-Oct-12	44.28	322.02
10-Dec-12	44.40	321.90
24-Mar-13	43.87	322.43
9-Jun-13	44.43	321.87
29-Sep-13	44.51	321.79
2-Apr-14	45.96	320.34
22-Jun-14	45.16	321.14
14-Sep-14	45.33	320.97
11-Dec-14	45.86	320.44
29-Mar-15	46.55	319.75
9-Oct-15	46.96	319.34
16-Apr-16	47.35	318.95
3-Oct-16	47.73	318.57
10-Apr-17	48.50	317.80
25-Sep-17	48.77	317.53
23-Apr-18	49.13	317.17
29-Oct-18	49.45	316.85
12-May-19	50.50	315.80
12-Nov-19	51.05	315.25
24-May-20	51.66	314.64
23-Nov-20	53.23	313.07
22-May-21	52.95	313.35
21-Nov-21	Dry	
23-Mar-22	Dry	
04-Jul-22	Dry	
22-Sep-22		
02-Dec-22	52.95	305.25
10-Mar-23		
03-May-23	52.95	305.25
24-Aug-23	52.95	305.25
01-Dec-23	52.95	305.25
23-Feb-24	6.00	352.20
31-May-24	Dry	
24-Aug-24	Dry	
16-Nov-24	Dry	

MB 43		
Date	Datum =	375.89
	(m bgl)	(m AHD)
1-Jan-99	58.11	317.78
24-Feb-99	58.11	317.78
12-Apr-99	58.64	317.25
31-May-99	58.80	317.09
3-Jul-99	58.30	317.59
5-Aug-99	57.70	318.19
4-Oct-99	58.11	317.78
12-Nov-99	58.00	317.89
16-Jan-00	58.56	317.33
9-Apr-00	58.07	317.82
18-Jul-00	57.91	317.98
12-Oct-00	57.66	318.23
8-Jan-01	58.63	317.26
4-Apr-01	58.79	317.10
5-Jul-01	58.01	317.88
8-Oct-01	57.23	318.66
3-Dec-01	57.14	318.75
17-Jan-02	57.49	318.40
25-Mar-02	58.00	317.89
4-Jul-02	56.82	319.07
21-Oct-02	56.64	319.25
22-Dec-02	56.52	319.37
10-Apr-03	55.81	320.08
17-Jul-03	54.37	321.52
11-Nov-03	52.55	323.34
28-Dec-03	52.76	323.13
28-Mar-04	52.66	323.23
6-Nov-04	47.74	328.15
6-Jan-05	49.79	326.10
29-Mar-05	49.79	326.10
30-Jun-05	48.00	327.89
28-Sep-05	47.21	328.68
12-Jan-06	47.13	328.76
24-Mar-06	47.40	328.49
28-Jun-06	44.60	331.29
20-Sep-06	44.22	331.67
10-Jan-07	43.79	332.10
4-Apr-07	43.93	331.96
14-Jun-07	43.45	332.44
23-Dec-08	46.29	329.60
1-Mar-09	Not Measured	
1-Jun-09	Not Measured	
1-Sep-09	43.24	332.65
7-Dec-09	43.11	332.78
29-Apr-10	43.10	332.79
22-Jun-10	Not Measured	
3-Oct-10	39.40	336.49
13-Dec-10	Not Measured	
16-Apr-11	46.11	329.78
9-Jul-11	47.68	328.21
29-Oct-11	49.88	326.01
21-Jan-12	Not Pumping	
26-Apr-12	51.84	324.05
5-Aug-12	54.25	321.64
29-Oct-12	54.19	321.70
11-Oct-13	50.04	325.85
4-Jul-13	50.00	325.89
27-Apr-14	51.88	324.01
4-Jul-14	53.15	322.74
28-Sep-14	53.84	322.05
12-Dec-14	Not pumping	
11-Apr-15	55.76	320.13
29-Jul-15	56.67	319.22
30-Jan-16	57.63	318.26
22-Apr-16	57.97	317.92
14-Jul-16	58.02	317.87
6-Oct-16	58.32	317.57
5-Feb-17	58.98	316.91
29-Apr-17	Dry	
22-Jul-17	58.53	317.36
30-Sep-17	dry	
18-Feb-18	59.68	316.21
28-Apr-18	60.08	315.81
6-Aug-18	60.45	315.44
3-Nov-18	60.73	315.16
5-Mar-19	Dry	
22-Jun-19	62.26	313.63
4-Sep-19	62.38	313.51
11-Nov-19	Lack of Water	
5-Feb-20	62.93	312.96
27-May-20	Dry	
13-Oct-20	Dry	
7-Dec-20	Lack of Water	
15-Mar-21	64.54	311.35

MB 44		
Date	Datum =	356.27
	(m bgl)	(m AHD)
8-Nov-99	29.70	326.57
15-Jan-00	29.95	326.32
7-Apr-00	30.28	325.99
16-Jul-00	30.65	325.62
10-Oct-00	30.98	325.29
7-Jan-01	31.26	325.01
3-Apr-01	31.70	324.57
6-Jul-01	32.04	324.23
8-Oct-01	32.38	323.89
14-Jan-02	32.68	323.59
25-Mar-02	32.48	323.79
4-Jul-02	32.84	323.43
20-Oct-02	33.41	322.86
22-Dec-02	33.60	322.67
9-Apr-03	34.08	322.19
17-Jul-03	34.53	321.74
11-Nov-03	34.95	321.32
27-Dec-03	35.07	321.20
28-Mar-04	35.51	320.76
6-Nov-04	36.26	320.01
5-Jan-05	36.58	319.69
29-Mar-05	36.85	319.42
29-Jun-05	37.13	319.14
28-Sep-05	37.48	318.79
11-Jan-06	37.85	318.42
23-Mar-06	37.99	318.28
28-Jun-06	37.97	318.30
19-Sep-06	38.49	317.78
9-Jan-07	38.76	317.51
3-Apr-07	39.00	317.27
11-Jun-07	39.17	317.10
17-Sep-07	39.46	316.81
14-Dec-07	39.64	316.63
19-Mar-08	40.04	316.23
12-Jun-08	40.25	316.02
15-Sep-08	40.38	315.89
9-Dec-08	40.65	315.62
3-Mar-09	40.95	315.32
9-Jun-09	41.25	315.02
1-Sep-09	41.35	314.92
7-Dec-09	41.60	314.67
15-Mar-10	41.87	314.40
25-Jun-10	42.20	314.07
19-Sep-10	42.40	313.87
10-Dec-10	42.49	313.78
16-Mar-11	42.65	313.62
8-Jun-11	42.87	313.40
14-Sep-11	43.00	313.27
4-Jan-12	43.30	312.97
14-Mar-12	43.32	312.95
21-Jun-12	43.64	312.63
10-Oct-12	43.83	312.44
6-Dec-12	43.85	312.42
20-Mar-13	41.02	315.25
3-Jun-13	44.15	312.12
24-Sep-13	44.34	311.93
3-Dec-13	44.34	311.93
30-Mar-14	44.67	311.60
18-Jun-14	44.77	311.50
9-Sep-14	44.94	311.33
6-Dec-14	45.07	311.20
24-Mar-15	45.36	310.91
30-Jun-15	45.59	310.68
5-Oct-15	45.73	310.54
15-Jan-16	45.96	310.31
13-Apr-16	46.12	310.15
15-Jun-16	46.19	310.08
28-Sep-16	46.38	309.89
11-Jan-17	46.48	309.79
5-Apr-17	46.64	309.63
2-Jul-17	47.66	308.61
20-Sep-17	46.52	309.75
29-Jan-18	47.03	309.24
17-Apr-18	47.23	309.04
16-Jul-18	47.38	308.89
24-Oct-18	47.47	308.80
11-Feb-19	47.79	308.48
07-May-19	48.10	308.17
13-Aug-19	48.11	308.16
07-Nov-19	48.38	307.89
30-Jan-20	48.59	307.68
21-May-20	48.84	307.43
23-Sep-20	47.49	308.78
19-Nov-20	49.10	307.17
10-Mar-21	49.28	306.99
19-May-21	47.75	308.52
17-Nov-21	49.53	306.74
23-Mar-22	49.75	306.52
04-Jul-22	49.86	306.41
22-Sep-22	49.90	306.37
02-Dec-22	49.90	306.37
10-Mar-23	50.09	306.18
03-May-23	50.01	306.26
24-Aug-23	49.27	307.00
01-Dec-23	49.18	307.09
23-Feb-24	49.29	306.98
31-May-24	49.08	307.19
24-Aug-24	49.06	307.21
16-Nov-24	49.08	307.19

MB 45		
Date	Datum =	356.18
	(m bgl)	(m AHD)
23-Mar-13	43.98	312.20
7-Jun-13	44.02	312.16
1-Mar-14	44.65	311.53
21-Jun-14	44.69	311.49
13-Sep-14	44.89	311.29
10-Dec-14	45.05	311.13
27-Mar-15	45.34	310.84
1-Jul-15	45.60	310.58
10-Oct-15	46.61	309.57
17-Jan-16	45.86	310.32
13-Apr-16	46.11	310.07
18-Jun-16	46.20	309.98
1-Oct-16	46.27	309.91
14-Jan-17	46.56	309.62
8-Apr-17	46.78	309.40
3-Jul-17	47.68	308.50
24-Sep-17	46.77	309.41
2-Feb-18	47.09	309.09
22-Apr-18	47.25	308.93
19-Jul-18	47.41	308.77
28-Oct-18	47.53	308.65
14-Feb-19	47.18	309.00
11-May-19	44.03	312.15
16-Aug-19	48.00	308.18
07-Nov-19	48.26	307.92
30-Jan-20	48.36	307.82
21-May-20	48.64	307.54
23-Sep-20	48.80	307.38
19-Nov-20	48.96	307.22
13-Mar-21	Dry	
19-May-21	49.29	306.89
17-Nov-21	49.43	306.75

MB 47		
Date	Datum =	357.60
	(m bgl)	(m AHD)
8-Nov-99	29.02	328.58
16-Jan-00	29.17	328.43
8-Apr-00	29.41	328.19
16-Jul-00	29.70	327.90
11-Oct-00	29.92	327.68
7-Jan-01	30.21	327.39
3-Apr-01	30.50	327.10
6-Jul-01	30.76	326.84
6-Oct-01	31.02	326.58
15-Jan-02	31.32	326.28
25-Mar-02	31.60	326.00
4-Jul-02	31.91	325.69
20-Oct-02	32.17	325.43
22-Dec-02	32.32	325.28
10-Apr-03	32.72	324.88
17-Jul-03	33.08	324.52
11-Nov-03	33.35	324.25
27-Dec-03	33.47	324.13
28-Mar-04	33.81	323.79
6-Nov-04	34.35	323.25
5-Jan-05	34.57	323.03
29-Mar-05	34.76	322.84
29-Jun-05	35.07	322.53
27-Sep-05	35.30	322.30
10-Jan-06	35.56	322.04
23-Mar-06	35.70	321.90
28-Jun-06	35.98	321.62
18-Sep-06	36.16	321.44
9-Jan-07	36.41	321.19
2-Apr-07	36.57	321.03
12-Jun-07	36.74	320.86
22-Sep-07	36.99	320.61
13-Dec-07	37.17	320.43
18-Mar-08	37.49	320.11
12-Jun-08	37.82	319.78
19-Sep-08	37.92	319.68
11-Dec-08	38.13	319.47
5-Mar-09	38.41	319.19
11-Jun-09	38.47	319.13
1-Sep-09	38.79	318.81
7-Dec-09	39.00	318.60
17-Mar-10	39.25	318.35
25-Jun-10	39.36	318.24
17-Sep-10	39.45	318.15
11-Dec-10	39.59	318.01
16-Mar-11	39.83	317.77
8-Jun-11	40.05	317.55
14-Sep-11	40.22	317.38
7-Dec-11	40.47	317.13
14-Mar-12	40.58	317.02
20-Jun-12	40.80	316.80
11-Oct-12	47.08	310.52
6-Dec-12	41.17	316.43
20-Mar-13	41.45	316.15
4-Jun-13	41.58	316.02
24-Sep-13	41.75	315.85
3-Dec-13	41.75	315.85
27-Mar-14	42.19	315.41
18-Jun-14	42.32	315.28
9-Sep-14	42.57	315.03
10-Dec-14	43.70	313.90
24-Mar-15	43.00	314.60
30-Jun-15	43.22	314.38
6-Oct-15	43.44	314.16
15-Jan-16	43.63	313.97
13-Apr-16	No Access	
12-Jul-16	43.27	314.33
28-Sep-16	44.14	313.46
11-Jan-17	44.25	313.35
5-Apr-17	44.47	313.13
30-Jun-17	44.62	312.98
20-Sep-17	44.70	312.90
30-Jan-18	44.94	312.66
18-Apr-18	45.11	312.49
17-Jul-18	45.24	312.36
24-Oct-18	45.36	312.24
11-Feb-19	45.62	311.98
11-May-19	45.78	311.82
16-Aug-19	46.00	311.60
8-Nov-19	46.26	311.34
30-Jan-20	46.39	311.21
20-May-20	46.60	311.00
24-Sep-20	46.80	310.80
19-Nov-20	47.02	310.58
10-Mar-21	47.08	310.52
20-May-21	47.30	310.30
26-Aug-21	47.44	310.16
9-Sep-21	47.49	310.11
12-Oct-21	47.48	310.12
18-Nov-21	46.63	310.97
22-Nov-21	46.63	310.97
20-Dec-21	46.69	310.91
23-Mar-22	47.92	309.68
04-Jul-22	48.22	309.38
22-Sep-22	48.31	309.29
02-Dec-22	48.38	309.22
10-Mar-23	48.58	309.02
03-May-23	48.81	308.79
24-Aug-23	48.85	308.75
01-Dec-23	49.06	308.54
23-Feb-24	49.18	308.42
31-May-24	49.19	308.41
24-Aug-24	49.43	308.17
16-Nov-24	49.45	308.15

MB 48		
Date	Datum =	377.11
	(m bgl)	(m AHD)
7-Dec-04	48.00	329.11
1-May-05	55.47	321.64
1-Jun-05	54.72	322.39
29-Jun-05	56.00	321.11
3-Aug-05	53.92	323.19
3-Aug-05	53.92	323.19
2-Sep-05	53.44	323.67
27-Sep-05	53.21	323.90
4-Oct-05	53.21	323.90
25-Oct-05	52.98	324.13
4-Jan-06	53.56	323.55
12-Jan-06	53.54	323.57
30-Jan-06	53.55	323.56
11-Mar-06	53.21	323.90
23-Mar-06	52.97	324.14
4-Apr-06	52.79	324.32
6-May-06	51.93	325.18
27-Jun-06	51.09	326.02
30-Jul-06	51.20	325.91
4-Sep-06	51.33	325.78
19-Sep-06	51.09	326.02
30-Oct-06	50.49	326.62
9-Dec-06	50.67	326.44
9-Jan-07	50.69	326.42
10-Mar-07	51.09	326.02
2-Apr-07	52.99	324.12
16-Apr-07	52.92	324.19
1-May-07	50.89	326.22
3-Jun-07	50.85	326.26
12-Jun-07	50.85	326.26
30-Jun-07	50.57	326.54
29-Jul-07	50.46	326.65
4-Sep-07	50.24	326.87
23-Sep-07	52.21	324.90
2-Nov-07	55.41	321.70
17-Dec-07	56.50	320.61
8-Mar-08	56.87	320.24
4-Apr-08	57.11	320.00
12-Jun-08	56.11	321.00
17-Sep-08	55.85	321.26
5-Oct-08	56.12	320.99
10-Dec-08	56.31	320.80
4-Mar-09	56.22	320.89
01-Jun-09	Not Measured	
1-Sep-09	50.60	326.51
7-Dec-09	50.08	327.03
19-Jan-10	51.40	325.71
16-Feb-10	51.77	325.34
16-Mar-10	52.72	324.39
19-Mar-10	52.72	324.39
4-Apr-10	52.34	324.77
2-May-10	50.11	327.00
9-Jun-10	48.95	328.16
23-Jun-10	48.70	328.41
26-Jul-10	50.08	327.03
1-Aug-10	Not Measured	
16-Sep-10	47.19	329.92
16-Oct-10	32.74	344.37
12-Nov-10	50.00	327.11
8-Dec-10	51.08	326.03
24-Dec-10	51.53	325.58
19-Jan-11	52.27	324.84
6-Mar-11	53.67	323.44
18-Mar-11	54.03	323.08
13-Apr-11	55.21	321.90
9-Jun-11	56.10	321.01
21-Jun-11	56.29	320.82
24-Jul-11	56.66	320.45
8-Aug-11	56.68	320.43
2-Sep-11	57.28	319.83
15-Sep-11	57.70	319.41
29-Oct-11	58.04	319.07
10-Nov-11	58.02	319.09
7-Dec-11	58.41	318.70
11-Dec-11	58.41	318.70
19-Jan-12	58.47	318.64
15-Feb-12	40.12	336.99
4-Mar-12	59.08	318.03
13-Mar-12	59.13	317.98
14-Apr-12	59.23	317.88
16-May-12	59.47	317.64
21-Jun-12	59.88	317.23
15-Jul-12	59.48	317.63
15-Aug-12	59.49	317.62
15-Sep-12	58.98	318.13
15-Oct-12	58.98	318.13
9-Nov-12	59.32	317.79
15-Dec-12	59.25	317.86
13-Jan-13	54.47	322.64
14-Jan-13	54.47	322.64
15-Mar-13	56.88	320.23
22-Mar-13	56.88	320.23
14-Apr-13	58.72	318.39
15-Apr-13	58.72	318.39
12-May-13	59.28	317.83
15-May-13	59.28	317.83
5-Jun-13	59.19	317.92
15-Jun-13	59.18	317.93
17-Jun-13	59.18	317.93
10-Jul-13	59.59	317.52
15-Jul-13	59.59	317.52
15-Aug-13	59.41	317.70
18-Aug-13	59.41	317.70
12-Sep-13	58.75	318.36
15-Sep-13	58.75	318.36
24-Sep-13	58.75	318.36
12-Oct-13	58.81	318.30
15-Oct-13	58.81	318.30
5-Dec-13	58.75	318.36

MB 49		
Date	Datum =	372.88
	(m bgl)	(m AHD)
7-Dec-04	39.00	333.88
30-Mar-05	41.38	331.50
30-Mar-05	41.38	331.50
1-May-05	41.01	331.87
1-Jun-05	40.65	332.23
29-Jun-05	40.34	332.54
3-Aug-05	40.07	332.81
3-Aug-05	40.07	332.81
2-Sep-05	39.79	333.09
27-Sep-05	39.65	333.23
4-Oct-05	39.65	333.23
25-Oct-05	39.45	333.43
4-Jan-06	39.16	333.72
11-Jan-06	39.14	333.74
30-Jan-06	39.10	333.78
11-Mar-06	38.75	334.13
23-Mar-06	38.69	334.19
4-Apr-06	38.55	334.33
6-May-06	38.10	334.78
1-Jun-06	37.77	335.11
26-Jun-06	37.49	335.39
11-Jul-06	37.44	335.44
30-Jul-06	31.13	341.75
30-Oct-06	36.38	336.50
9-Dec-06	36.23	336.65
9-Jan-07	36.14	336.74
6-Feb-07	36.13	336.75
10-Mar-07	36.10	336.78
2-Apr-07	36.08	336.80
16-Apr-07	36.08	336.80
1-May-07	36.03	336.85
3-Jun-07	35.86	337.02
12-Jun-07	35.86	337.02
30-Jun-07	35.70	337.18
29-Jul-07	35.67	337.21
4-Sep-07	35.54	337.34
23-Sep-07	35.59	337.29
2-Nov-07	36.15	336.73
17-Dec-07	36.63	336.25
9-Jun-08	34.07	338.81
13-Jul-08	37.10	335.78
17-Sep-08	36.79	336.09
5-Oct-08	36.87	336.01
10-Dec-08	36.59	336.29
4-Mar-09	36.82	336.06
12-Jun-09	36.27	336.61
1-Sep-09	35.35	337.53
7-Dec-09	34.96	337.92
19-Jan-10	34.80	338.08
16-Feb-10	34.85	338.03
16-Mar-10	34.93	337.95
19-Mar-10	34.93	337.95
4-Apr-10	34.82	338.06
2-May-10	34.76	338.12
9-Jun-10	34.37	338.51
23-Jun-10	34.28	338.60
26-Jul-10	34.69	338.19
1-Aug-10	Not Measured	
16-Sep-10	33.62	339.26
16-Oct-10	47.79	325.09
12-Nov-10	33.52	339.36
7-Dec-10	33.65	339.23
24-Dec-10	33.76	339.12
19-Jan-11	33.95	338.93
6-Mar-11	34.60	338.28
18-Mar-11	34.69	338.19
13-Apr-11	35.40	337.48
9-Jun-11	36.61	336.27
21-Jun-11	35.69	337.19
24-Jul-11	37.38	335.50
8-Aug-11	37.50	335.38
2-Sep-11	37.97	334.91
15-Sep-11	38.11	334.77
29-Oct-11	39.00	333.88
10-Nov-11	39.02	333.86
8-Dec-11	39.39	333.49
11-Dec-11	39.39	333.49
19-Jan-12	39.96	332.92
15-Feb-12	58.66	314.22
4-Mar-12	40.71	332.17
14-Mar-12	46.89	325.99
14-Apr-12	41.50	331.38
16-May-12	42.00	330.88
9-Jun-12	42.36	330.52
22-Jun-12	42.40	330.48
15-Jul-12	42.01	330.87
15-Aug-12	42.00	330.88
15-Sep-12	41.91	330.97
15-Oct-12	41.91	330.97
9-Nov-12	41.26	331.62
15-Dec-12	41.61	331.27
13-Jan-13	41.70	331.18
14-Jan-13	41.70	331.18
10-Feb-13	37.89	334.99
15-Feb-13	37.89	334.99
12-Mar-13	56.88	316.00
15-Mar-13	41.82	331.06
22-Mar-13	41.82	331.06
14-Apr-13	42.04	330.84
15-Apr-13	42.04	330.84
12-May-13	42.32	330.56
15-May-13	42.32	330.56
5-Jun-13	42.42	330.46
15-Jun-13	42.42	330.46
17-Jun-13	42.42	330.46
10-Jul-13	42.71	330.17
15-Jul-13	42.71	330.17
15-Aug-13	42.89	329.99
18-Aug-13	42.89	329.99

MB 50		
Date	Datum =	369.10
	(m bgl)	(m AHD)
2-Oct-04	27.70	341.40
7-Dec-04	27.00	342.10
30-Mar-05	26.60	342.50
30-Mar-05	26.60	342.50
1-May-05	26.40	342.70
1-Jun-05	26.18	342.92
29-Jun-05	25.91	343.19
3-Aug-05	25.74	343.36
3-Aug-05	25.74	343.36
2-Sep-05	25.40	343.70
27-Sep-05	25.30	343.80
4-Oct-05	25.17	343.93
25-Oct-05	25.05	344.05
4-Jan-06	24.63	344.47
11-Jan-06	24.60	344.50
30-Jan-06	24.52	344.58
11-Mar-06	24.19	344.91
22-Mar-06	24.10	345.00
4-Apr-06	24.05	345.05
6-May-06	23.51	345.59
1-Jun-06	26.65	342.45
26-Jun-06	23.50	345.60
11-Jul-06	23.43	345.67
30-Jul-06	23.26	345.84
4-Sep-06	23.00	346.10
18-Sep-06	22.93	346.17
3-Oct-06	22.85	346.25
9-Dec-06	22.24	346.86
9-Jan-07	22.29	346.81
6-Feb-07	22.14	346.96
10-Mar-07	21.98	347.12
2-Apr-07	22.00	347.10
16-Apr-07	22.00	347.10
3-Jun-07	21.55	347.55
12-Jun-07	21.55	347.55
30-Jun-07	21.95	347.15
29-Jul-07	21.90	347.20
4-Sep-07	22.48	346.62
23-Sep-07	23.00	346.10
2-Nov-07	23.55	345.55
17-Dec-07	23.71	345.39
8-Mar-08	24.00	345.10
18-Mar-08	23.87	345.23
4-Apr-08	23.32	345.78
10-Jun-08	23.34	345.76
13-Jul-08	23.32	345.78
8-Aug-08	23.04	346.06
17-Sep-08	23.13	345.97
11-Dec-08	22.09	347.01
1-Sep-09	22.26	346.84
7-Dec-09	21.50	347.60
19-Jan-10	20.72	348.38
16-Feb-10	21.07	348.03
17-Mar-10	20.97	348.13
19-Mar-10	20.97	348.13
4-Apr-10	20.81	348.29
2-May-10	20.70	348.40
9-Jun-10	20.62	348.48
23-Jun-10	20.73	348.37
26-Jul-10	20.74	348.36
17-Sep-10	20.04	349.06
16-Oct-10	19.29	349.81
12-Nov-10	19.85	349.25
7-Dec-10	19.43	349.67
24-Dec-10	19.21	349.89
19-Jan-11	19.07	350.03
6-Mar-11	19.11	349.99
19-Mar-11	18.97	350.13
13-Apr-11	19.55	349.55
9-Jun-11	20.43	348.67
21-Jun-11	20.63	348.47
24-Jul-11	21.04	348.06
8-Aug-11	21.17	347.93
2-Sep-11	21.58	347.52
17-Sep-11	21.71	347.39
29-Oct-11	22.34	346.76
10-Nov-11	22.34	346.76
11-Dec-11	22.49	346.61
4-Jan-12	22.56	346.54
4-Jan-12	22.56	346.54
19-Jan-12	23.80	345.30
15-Feb-12	22.61	346.49
4-Mar-12	23.46	345.64
16-Mar-12	24.58	344.52
14-Apr-12	23.98	345.12
16-May-12	24.42	344.68
9-Jun-12	24.60	344.50
22-Jun-12	24.95	344.15
15-Jul-12	24.85	344.25
15-Aug-12	24.85	344.25
15-Sep-12	24.34	344.76
15-Oct-12	24.34	344.76
9-Nov-12	24.59	344.51
15-Dec-12	23.91	345.19
13-Jan-13	25.07	344.03
14-Jan-13	25.07	344.03
10-Feb-13	25.19	343.91
15-Feb-13	25.19	343.91
12-Mar-13	41.82	327.28
15-Mar-13	23.38	345.72
22-Mar-13	25.38	343.72
14-Apr-13	25.52	343.58
15-Apr-13	25.52	343.58
12-May-13	25.74	343.36
15-May-13	25.74	343.36
5-Jun-13	25.84	343.26
15-Jun-13	25.84	343.26
17-Jun-13	25.84	343.26
10-Jul-13	25.96	343.14

MB 44		
Date	Datum =	356.27
	(m bgl)	(m AHD)

MB 45		
Date	Datum =	356.18
	(m bgl)	(m AHD)

MB 47		
Date	Datum =	357.60
	(m bgl)	(m AHD)

MB 48		
Date	Datum =	377.11
	(m bgl)	(m AHD)
18-Dec-13	58.82	318.29
14-Mar-14	59.89	317.22
27-Mar-14	59.67	317.44
8-Apr-14	59.67	317.44
15-May-14	59.50	317.61
15-Jun-14	60.03	317.08
19-Jun-14	60.03	317.08
17-Jul-14	59.72	317.39
26-Aug-14	60.30	316.81
10-Sep-14	60.28	316.83
23-Sep-14	60.28	316.83
9-Oct-14	60.71	316.40
21-Nov-14	61.10	316.01
8-Dec-14	61.39	315.72
15-Dec-14	61.39	315.72
26-Jan-15	61.42	315.69
17-Feb-15	62.68	314.43
11-Mar-15	61.40	315.71
25-Mar-15	62.70	314.41
25-Apr-15	62.86	314.25
7-May-15	62.90	314.21
6-Jun-15	62.93	314.18
4-Jul-15	62.68	314.43
15-Jul-15	62.90	314.21
15-Aug-15	62.84	314.27
24-Sep-15	62.85	314.26
8-Oct-15	62.97	314.14
20-Oct-15	62.97	314.14
4-Nov-15	62.89	314.22
3-Dec-15	62.91	314.20
14-Jan-16	64.29	312.82
12-Feb-16	62.85	314.26
8-Mar-16	63.92	313.19
4-Apr-16	64.18	312.93
14-Apr-16	64.18	312.93
16-Jun-16	64.06	313.05
25-Jun-16	64.06	313.05
29-Jul-16	64.24	312.87
18-Aug-16	64.20	312.91
13-Sep-16	64.43	312.68
29-Sep-16	64.43	312.68
30-Oct-16	65.89	311.22
29-Dec-16	65.75	311.36
12-Jan-17	65.58	311.53
22-Jan-17	65.58	311.53
12-Feb-17	65.60	311.51
15-Mar-17	65.60	311.51
7-Apr-17	65.80	311.31
13-Apr-17	65.80	311.31
26-May-17	65.80	311.31
16-Jun-17	66.05	311.06
1-Jul-17	65.87	311.24
28-Jul-17	65.87	311.24
17-Aug-17	65.73	311.38
21-Sep-17	65.96	311.15
22-Sep-17	65.96	311.15
18-Oct-17	66.14	310.97
27-Nov-17	64.88	312.23
23-Dec-17	64.89	312.22
31-Jan-18	66.05	311.06
22-Feb-18	66.29	310.82
17-Mar-18	66.46	310.65
7-Apr-18	66.51	310.60
18-Apr-18	66.51	310.60
16-May-18	66.72	310.39
24-Jun-18	66.84	310.27
14-Jul-18	66.53	310.58
17-Jul-18	66.53	310.58
24-Aug-18	67.05	310.06
14-Oct-18	67.27	309.84
26-Oct-18	67.27	309.84
25-Nov-18	67.46	309.65
29-Dec-18	67.92	309.19
24-Jan-19	68.17	308.94
13-Feb-19	68.34	308.77
15-Feb-19	68.34	308.77
18-Mar-19	68.35	308.76
21-Apr-19	69.15	307.96
9-May-19	69.15	307.96
11-Jul-19	69.60	307.51
15-Aug-19	69.72	307.39
17-Aug-19	69.72	307.39
13-Sep-19	68.91	308.20
4-Oct-19	68.89	308.22
9-Nov-19	68.87	308.24
10-Dec-19	69.59	307.52
9-Jan-20	70.09	307.02
2-Feb-20	70.21	306.90
6-Feb-20	70.21	306.90
5-Mar-20	70.03	307.08
16-Apr-20	70.05	307.06
23-May-20	70.46	306.65
4-Jul-20	70.64	306.47
29-Aug-20	70.84	306.27
12-Sep-20	70.69	306.42
26-Sep-20	70.70	306.41
23-Oct-20	70.60	306.51
10-Nov-20	71.05	306.06
21-Nov-20	71.07	306.04
18-Jan-21	71.52	305.59
13-Feb-21	71.61	305.50
12-Mar-21	71.85	305.26
9-May-21	71.25	305.86
22-May-21	71.23	305.88
8-Jun-21	71.14	305.97
15-Jul-21	71.21	305.90
13-Aug-21	71.17	305.94
10-Sep-21	71.75	305.36
12-Oct-21	71.79	305.32
19-Nov-21	72.45	304.66
17-Dec-21	72.48	304.63

MB 49		
Date	Datum =	372.88
	(m bgl)	(m AHD)
12-Sep-13	43.09	329.79
15-Sep-13	43.09	329.79
24-Sep-13	43.09	329.79
12-Oct-13	43.14	329.74
15-Oct-13	43.14	329.74
4-Dec-13	43.09	329.79
18-Dec-13	43.60	329.28
14-Mar-14	43.51	329.37
28-Mar-14	44.51	328.37
8-Apr-14	44.51	328.37
15-May-14	44.89	327.99
15-Jun-14	45.05	327.83
18-Jun-14	45.05	327.83
17-Jul-14	45.15	327.73
26-Aug-14	45.46	327.42
9-Sep-14	45.65	327.23
23-Sep-14	45.65	327.23
9-Oct-14	45.74	327.14
21-Nov-14	46.04	326.84
7-Dec-14	46.09	326.79
15-Dec-14	46.09	326.79
26-Jan-15	46.53	326.35
17-Feb-15	46.77	326.11
11-Mar-15	46.09	326.79
25-Mar-15	43.13	329.75
25-Apr-15	47.51	325.37
7-May-15	47.81	325.07
6-Jun-15	47.93	324.95
5-Jul-15	48.24	324.64
15-Jul-15	47.95	324.93
15-Aug-15	48.59	324.29
24-Sep-15	48.60	324.28
7-Oct-15	48.97	323.91
20-Oct-15	48.97	323.91
4-Nov-15	49.02	323.86
3-Dec-15	49.00	323.88
14-Jan-16	49.64	323.24
12-Feb-16	49.06	323.82
8-Mar-16	49.72	323.16
4-Apr-16	49.98	322.90
14-Apr-16	49.98	322.90
16-Jun-16	50.18	322.70
25-Jun-16	50.18	322.70
29-Jul-16	50.29	322.59
18-Aug-16	50.31	322.57
13-Sep-16	50.60	322.28
29-Sep-16	50.60	322.28
30-Oct-16	51.71	321.17
29-Dec-16	51.68	321.20
13-Jan-17	51.18	321.70
22-Jan-17	51.18	321.70
12-Feb-17	51.15	321.73
15-Mar-17	51.23	321.65
6-Apr-17	51.45	321.43
13-Apr-17	51.45	321.43
26-May-17	51.76	321.12
16-Jun-17	51.90	320.98
1-Jul-17	51.87	321.01
28-Jul-17	51.87	321.01
17-Aug-17	52.00	320.88
22-Sep-17	52.04	320.84
18-Oct-17	52.11	320.77
27-Nov-17	52.17	320.71
23-Dec-17	52.18	320.70
31-Jan-18	52.26	320.62
22-Feb-18	52.45	320.43
17-Mar-18	52.52	320.36
7-Apr-18	52.63	320.25
19-Apr-18	52.63	320.25
16-May-18	52.67	320.21
24-Jun-18	52.72	320.16
14-Jul-18	52.81	320.07
17-Jul-18	52.81	320.07
24-Aug-18	52.86	320.02
14-Oct-18	53.04	319.84
26-Oct-18	53.04	319.84
25-Nov-18	53.17	319.71
29-Dec-18	53.28	319.60
24-Jan-19	53.30	319.58
13-Feb-19	53.40	319.48
15-Feb-19	53.40	319.48
18-Mar-19	53.63	319.25
21-Apr-19	53.41	319.47
9-May-19	53.59	319.29
11-Jul-19	54.07	318.81
14-Aug-19	54.14	318.74
17-Aug-19	54.14	318.74
13-Sep-19	54.34	318.54
4-Oct-19	54.51	318.37
9-Nov-19	54.50	318.38
10-Dec-19	55.69	317.19
9-Jan-20	54.84	318.04
2-Feb-20	54.91	317.97
6-Feb-20	54.91	317.97
5-Mar-20	55.04	317.84
16-Apr-20	55.02	317.86
21-May-20	55.46	317.42
4-Jul-20	55.40	317.48
29-Aug-20	55.17	317.71
12-Sep-20	55.72	317.16
26-Sep-20	55.71	317.17
23-Oct-20	55.79	317.09
10-Nov-20	55.94	316.94
22-Nov-20	55.95	316.93
18-Jan-21	56.10	316.78
13-Feb-21	56.18	316.70
12-Mar-21	No access	
9-May-21	56.19	316.69
22-May-21	56.12	316.76
8-Jun-21	55.82	317.06
15-Jul-21	55.79	317.09

MB 50		
Date	Datum =	369.10
	(m bgl)	(m AHD)
15-Jul-13	25.96	343.14
15-Aug-13	26.01	343.09
18-Aug-13	26.01	343.09
12-Sep-13	26.28	342.82
15-Sep-13	26.28	342.82
25-Sep-13	43.09	326.01
12-Oct-13	26.49	342.61
15-Oct-13	26.49	342.61
4-Dec-13	26.28	342.82
18-Dec-13	26.70	342.40
14-Mar-14	27.24	341.86
28-Mar-14	26.24	342.86
8-Apr-14	26.24	342.86
15-May-14	27.63	341.47
15-Jun-14	27.77	341.33
18-Jun-14	27.77	341.33
17-Jul-14	27.93	341.17
26-Aug-14	28.15	340.95
10-Sep-14	28.29	340.81
23-Sep-14	28.29	340.81
9-Oct-14	28.37	340.73
21-Nov-14	48.59	320.51
7-Dec-14	28.36	340.74
15-Dec-14	28.36	340.74
26-Jan-15	29.23	339.87
17-Feb-15	29.52	339.58
11-Mar-15	26.38	342.72
25-Mar-15	23.52	345.58
25-Apr-15	29.58	339.52
7-May-15	30.06	339.04
6-Jun-15	30.46	338.64
5-Jul-15	30.75	338.35
15-Jul-15	30.46	338.64
15-Aug-15	31.02	338.08
24-Sep-15	31.05	338.05
7-Oct-15	30.75	338.35
20-Oct-15	30.75	338.35
4-Nov-15	31.02	338.08
3-Dec-15	31.05	338.05
14-Jan-16	31.92	337.18
12-Feb-16	31.05	338.05
8-Mar-16	31.73	337.37
4-Apr-16	31.92	337.18
14-Apr-16	31.92	337.18
16-Jun-16	32.26	336.84
25-Jun-16	32.26	336.84
29-Jul-16	32.60	336.50
18-Aug-16	32.61	336.49
13-Sep-16	32.92	336.18
29-Sep-16	32.92	336.18
30-Oct-16	33.00	336.10
29-Dec-16	33.03	336.07
13-Jan-17	33.34	335.76
22-Jan-17	33.34	335.76
12-Feb-17	33.50	335.60
15-Mar-17	33.37	335.73
6-Apr-17	33.53	335.57
13-Apr-17	33.53	335.57
26-May-17	33.73	335.37
16-Jun-17	33.67	335.43
2-Jul-17	34.71	334.39
28-Jul-17	34.71	334.39
17-Aug-17	33.90	335.20
22-Sep-17	33.30	335.80
18-Oct-17	33.95	335.15
27-Nov-17	34.03	335.07
23-Dec-17	34.13	334.97
31-Jan-18	34.05	335.05
22-Feb-18	33.89	335.21
17-Mar-18	33.68	335.42
7-Apr-18	33.65	335.45
19-Apr-18	33.61	335.49
16-May-18	34.30	334.80
24-Jun-18	34.44	334.66
14-Jul-18	34.52	334.58
18-Jul-18	34.52	334.58
24-Aug-18	33.94	335.16
14-Oct-18	34.64	334.46
26-Oct-18	34.64	334.46
25-Nov-18	34.35	334.75
29-Dec-18	34.03	335.07
24-Jan-19	34.01	335.09
13-Feb-19	36.97	332.13
15-Feb-19	34.84	334.26
18-Mar-19	34.00	335.10
21-Apr-19	33.98	335.12
10-May-19	34.06	335.04
11-Jul-19	35.11	333.99
15-Aug-19	35.29	333.81
17-Aug-19	35.29	333.81
13-Sep-19	35.42	333.68
4-Oct-19	35.53	333.57
12-Nov-19	35.71	333.39
9-Dec-19	35.75	333.35
9-Jan-20	35.90	333.20
3-Feb-20	35.98	333.12
6-Feb-20	35.98	333.12
5-Mar-20	36.04	333.06
16-Apr-20	36.05	333.05
21-May-20	36.16	332.94
4-Jul-20	36.25	332.85
29-Aug-20	35.44	333.66
12-Sep-20	36.50	332.60
26-Sep-20	35.47	333.63
23-Oct-20	36.54	332.56
10-Nov-20	36.67	332.43
22-Nov-20	36.58	332.52
18-Jan-21	35.93	333.17
13-Feb-21	35.95	333.15
12-Mar-21	35.95	333.15
9-May-21	36.83	332.27

MB 44		
Date	Datum =	356.27
	(m bgl)	(m AHD)

MB 45		
Date	Datum =	356.18
	(m bgl)	(m AHD)

MB 47		
Date	Datum =	357.60
	(m bgl)	(m AHD)

MB 48		
Date	Datum =	377.11
	(m bgl)	(m AHD)
16-Jan-22	72.52	304.59
16-Feb-22	73.10	304.01
25-Mar-22	73.73	303.38
22-Apr-22	73.73	303.38
22-Apr-22	73.52	303.59
15-May-22		
21-Jun-22	73.79	303.32
28-Jul-22	73.93	303.18
28-Aug-22	73.87	303.24
23-Sep-22	73.44	303.67
22-Oct-22	73.24	303.87
19-Nov-22	73.72	303.39
29-Dec-22	73.90	303.21
15-Jan-23		
15-Feb-23		
13-Mar-23	74.78	302.33
20-Apr-23	74.50	302.61
6-May-23	74.46	302.65
17-Jun-23	74.30	302.81
12-Jul-23	74.55	302.56
27-Aug-23	74.30	302.81
15-Sep-23	74.45	302.66
15-Oct-23		
2-Dec-23	75.31	301.80
29-Dec-23	74.45	302.66
30-Jan-24		
25-Feb-24	76.49	300.62
23-Mar-24	76.37	300.74
15-Apr-24	76.74	300.37
29-May-24	76.41	300.70
15-Jun-24	76.41	300.70
15-Jul-24	76.92	300.19
15-Aug-24	77.25	299.86
29-Sep-24	77.11	300.00
16-Oct-24	77.11	300.00
15-Nov-24	77.34	299.77
13-Dec-24	77.32	299.79

MB 49		
Date	Datum =	372.88
	(m bgl)	(m AHD)
13-Aug-21	56.55	316.33
10-Sep-21	56.59	316.29
12-Oct-21	56.17	316.71
19-Nov-21	56.74	316.14
17-Dec-21	56.72	316.16
16-Jan-22	56.78	316.10
16-Feb-22	56.98	315.90
25-Mar-22	57.00	315.88
22-Apr-22	57.08	315.80
15-May-22		
21-Jun-22	57.31	315.57
28-Jul-22	57.21	315.67
28-Aug-22	57.19	315.69
23-Sep-22		
22-Oct-22	57.34	315.54
19-Nov-22	57.42	315.46
29-Dec-22	57.43	315.45
15-Jan-23		
15-Feb-23		
13-Mar-23	57.64	315.24
20-Apr-23	57.78	315.10
6-May-23	57.81	315.07
17-Jun-23	57.77	315.11
12-Jul-23	57.83	315.05
27-Aug-23	57.78	315.10
15-Sep-23	57.91	314.97
15-Oct-23		
2-Dec-23	57.91	314.97
29-Dec-23	57.91	314.97
30-Jan-24		
25-Feb-24	58.04	314.84
23-Mar-24	59.10	313.78
15-Apr-24	58.30	314.58
29-May-24	58.45	314.43
15-Jun-24	58.45	314.43
15-Jul-24	58.75	314.13
15-Aug-24	58.81	314.07
29-Sep-24	58.77	314.11
16-Oct-24	58.77	314.11
15-Nov-24	58.87	314.01
13-Dec-24	58.85	314.03

MB 50		
Date	Datum =	369.10
	(m bgl)	(m AHD)
21-May-21	36.94	332.16
8-Jun-21	35.95	333.15
15-Jul-21	36.07	333.03
13-Aug-21	36.04	333.06
10-Sep-21	36.05	333.05
12-Oct-21	36.17	332.93
19-Nov-21	36.22	332.88
17-Dec-21	36.27	332.83
16-Jan-22	36.30	332.80
16-Feb-22	36.25	332.85
25-Mar-22	36.22	332.88
22-Apr-22	36.28	332.82
15-May-22		
21-Jun-22	36.27	332.83
28-Jul-22	36.21	332.89
28-Aug-22	36.23	332.87
23-Sep-22	36.43	332.67
22-Oct-22	36.56	332.54
19-Nov-22	36.56	332.54
29-Dec-22	36.57	332.53
15-Jan-23		
15-Feb-23		
13-Mar-23	36.88	332.22
20-Apr-23	36.96	332.14
6-May-23	36.97	332.13
17-Jun-23	36.97	332.13
12-Jul-23	37.02	332.08
27-Aug-23	37.28	331.82
15-Sep-23	37.30	331.80
15-Oct-23		
2-Dec-23	37.29	331.81
29-Dec-23	37.30	331.80
30-Jan-24		
25-Feb-24	37.32	331.78
23-Mar-24	37.40	331.70
15-Apr-24	37.40	331.70
29-May-24	37.41	331.69
15-Jun-24	37.41	331.69
15-Jul-24	37.46	331.64
15-Aug-24	37.53	331.57
29-Sep-24	37.51	331.59
16-Oct-24	37.51	331.59
15-Nov-24	37.61	331.49
13-Dec-24	37.63	331.47

MB 51		
Date	Datum =	363.24
	(m bgl)	(m AHD)
2-Oct-04	14.93	348.31
7-Dec-04	14.00	349.24
30-Mar-05	13.15	350.09
30-Mar-05	13.15	350.09
1-May-05	12.78	350.46
1-Jun-05	12.45	350.79
29-Jun-05	12.06	351.18
3-Aug-05	11.78	351.46
3-Aug-05	11.78	351.46
2-Sep-05	11.39	351.85
27-Sep-05	11.20	352.04
4-Oct-05	11.20	352.04
25-Oct-05	10.88	352.36
4-Jan-06	10.37	352.87
11-Jan-06	10.30	352.94
30-Jan-06	10.19	353.05
11-Mar-06	9.79	353.45
22-Mar-06	9.64	353.60
4-Apr-06	9.55	353.69
6-May-06	9.10	354.14
1-Jun-06	8.78	354.46
27-Jun-06	8.48	354.76
11-Jul-06	8.36	354.88
30-Jul-06	8.12	355.12
4-Sep-06	7.72	355.52
18-Sep-06	19.35	343.89
3-Oct-06	7.54	355.70
30-Oct-06	7.28	355.96
9-Dec-06	7.27	355.97
9-Jan-07	7.05	356.19
6-Feb-07	6.93	356.31
10-Mar-07	6.79	356.45
2-Apr-07	6.72	356.52
16-Apr-07	6.72	356.52
1-May-07	6.53	356.71
3-Jun-07	6.22	357.02
12-Jun-07	6.22	357.02
30-Jun-07	5.98	357.26
29-Jul-07	5.85	357.39
4-Sep-07	6.57	356.67
23-Sep-07	6.66	356.58
2-Nov-07	6.86	356.38
17-Dec-07	7.04	356.20
8-Mar-08	7.40	355.84
18-Mar-08	6.79	356.45
4-Apr-08	6.37	356.87
11-Jun-08	5.70	357.54
13-Jul-08	5.56	357.68
8-Aug-08	6.08	357.16
5-Oct-08	6.35	356.89
11-Dec-08	6.09	357.15
6-Mar-09	5.92	357.32
12-Jun-09	5.53	357.71
1-Sep-09	5.36	357.88
7-Dec-09	5.16	358.08
19-Jan-10	4.62	358.62
16-Feb-10	5.10	358.14
17-Mar-10	4.96	358.28
19-Mar-10	4.96	358.28
4-Apr-10	4.87	358.37
2-May-10	4.70	358.54
9-Jun-10	4.65	358.59
23-Jun-10	4.64	358.60
26-Jul-10	4.73	358.51
1-Aug-10	Not Measured	
18-Sep-10	3.87	359.37
16-Oct-10	3.57	359.67
12-Nov-10	3.64	359.60
7-Dec-10	3.75	359.49
24-Dec-10	3.21	360.03
19-Jan-11	4.04	359.20
6-Mar-11	3.78	359.46
19-Mar-11	3.82	359.42
13-Apr-11	5.16	358.08
9-Jun-11	6.21	357.03
21-Jun-11	6.55	356.69
24-Jul-11	7.19	356.05
8-Aug-11	7.32	355.92
2-Sep-11	7.74	355.50
17-Sep-11	7.93	355.31
29-Oct-11	9.08	354.16
10-Nov-11	9.16	354.08
11-Dec-11	9.73	353.51
4-Jan-12	10.22	353.02
19-Jan-12	10.56	352.68
15-Feb-12	11.74	351.50
4-Mar-12	11.41	351.83
16-Mar-12	11.60	351.64
14-Apr-12	12.29	350.95
16-May-12	12.90	350.34
9-Jun-12	13.05	350.19
22-Jun-12	8.26	354.98
15-Jul-12	13.06	350.18
15-Aug-12	13.09	350.15
15-Sep-12	11.43	351.81
15-Oct-12	11.43	351.81
9-Nov-12	11.29	351.95
15-Dec-12	11.32	351.92
13-Jan-13	11.44	351.80
14-Jan-13	11.44	351.80
10-Feb-13	11.66	351.58
15-Feb-13	11.66	351.58
12-Mar-13	23.38	339.86
15-Mar-13	11.84	351.40
22-Mar-13	11.84	351.40

MB 52		
Date	Datum =	358.93
	(m bgl)	(m AHD)
2-Oct-04	21.37	337.56
7-Dec-04	21.00	337.93
30-Mar-05	21.13	337.80
30-Mar-05	21.13	337.80
1-May-05	21.01	337.92
1-Jun-05	20.83	338.10
29-Jun-05	20.73	338.20
3-Aug-05	20.67	338.26
3-Aug-05	20.67	338.26
2-Sep-05	20.33	338.60
28-Sep-05	20.33	338.60
4-Oct-05	20.33	338.60
25-Oct-05	20.25	338.68
4-Jan-06	20.21	338.72
11-Jan-06	20.19	338.74
30-Jan-06	20.20	338.73
11-Mar-06	19.96	338.97
22-Mar-06	19.96	338.97
4-Apr-06	19.90	339.03
6-May-06	19.66	339.27
1-Jun-06	19.53	339.40
27-Jun-06	19.48	339.45
11-Jul-06	19.57	339.36
30-Jul-06	19.48	339.45
4-Sep-06	19.37	339.56
3-Oct-06	19.28	339.65
30-Oct-06	19.15	339.78
9-Dec-06	19.10	339.83
9-Jan-07	19.04	339.89
6-Feb-07	18.98	339.95
10-Mar-07	18.96	339.97
16-Apr-07	18.84	340.09
1-May-07	18.76	340.17
3-Jun-07	18.66	340.27
12-Jun-07	18.66	340.27
30-Jun-07	18.53	340.40
29-Jul-07	18.48	340.45
4-Sep-07	19.42	339.51
23-Sep-07	19.58	339.35
2-Nov-07	19.68	339.25
17-Dec-07	19.83	339.10
8-Mar-08	20.38	338.55
18-Mar-08	19.89	339.04
4-Apr-08	19.21	339.72
9-Jun-08	18.68	340.25
13-Jul-08	18.60	340.33
8-Aug-08	18.92	340.01
18-Sep-08	19.74	339.19
5-Oct-08	19.90	339.03
11-Dec-08	20.27	338.66
6-Mar-09	20.54	338.39
12-Jun-09	20.45	338.48
1-Sep-09	20.37	338.56
7-Dec-09	20.27	338.66
19-Jan-10	18.78	340.15
16-Feb-10	19.75	339.18
17-Mar-10	19.96	338.97
19-Mar-10	19.19	339.74
4-Apr-10	20.08	338.85
2-May-10	20.10	338.83
9-Jun-10	20.03	338.90
23-Jun-10	20.00	338.93
26-Jul-10	20.11	338.82
1-Aug-10	Not Measured	
17-Sep-10	19.55	339.38
16-Oct-10	19.40	339.53
12-Nov-10	19.93	339.00
7-Dec-10	19.27	339.66
24-Dec-10	18.86	340.07
19-Jan-11	18.83	340.10
6-Mar-11	18.68	340.25
19-Mar-11	18.58	340.35
13-Apr-11	20.11	338.82
9-Jun-11	21.03	337.90
21-Jun-11	21.26	337.67
24-Jul-11	21.67	337.26
8-Aug-11	21.77	337.16
2-Sep-11	22.15	336.78
17-Sep-11	22.17	336.76
29-Oct-11	22.91	336.02
10-Nov-11	22.89	336.04
11-Dec-11	23.28	335.65
4-Jan-12	23.45	335.48
19-Jan-12	23.55	335.38
15-Feb-12	23.64	335.29
4-Mar-12	23.97	334.96
16-Mar-12	24.02	334.91
14-Apr-12	24.20	334.73
16-May-12	24.42	334.51
9-Jun-12	24.46	334.47
22-Jun-12	21.62	337.31
15-Jul-12	25.52	333.41
15-Aug-12	25.52	333.41
15-Sep-12	22.98	335.95
15-Oct-12	22.98	335.95
9-Nov-12	23.31	335.62
15-Dec-12	24.77	334.16
13-Jan-13	24.84	334.09
14-Jan-13	24.84	334.09
10-Feb-13	23.93	335.00
15-Feb-13	23.93	335.00
12-Mar-13	11.84	347.09
15-Mar-13	24.56	334.37
22-Mar-13	24.56	334.37
14-Apr-13	24.98	333.95

MB 53		
Date	Datum =	375.50
	(m bgl)	(m AHD)
15-Dec-07	30.28	345.22
18-Mar-08	30.50	345.00
11-Jun-08	30.09	345.41
17-Sep-08	29.59	345.91
10-Dec-08	29.19	346.31
5-Mar-09	28.62	346.88
12-Jun-09	28.89	346.61
1-Sep-09	28.76	346.74
15-Mar-10	28.02	347.48
24-Jun-10	27.77	347.73
16-Sep-10	27.77	347.73
12-Dec-10	26.47	349.03
18-Mar-11	25.96	349.54
8-Jun-11	28.45	347.05
15-Sep-11	30.04	345.46
7-Dec-11	30.48	345.02
16-Mar-12	31.90	343.60
19-Jun-12	33.11	342.39
13-Oct-12	31.58	343.92
4-Dec-12	33.90	341.60
19-Mar-13	33.65	341.85
4-Jun-13	33.92	341.58
25-Sep-13	34.41	341.09
6-Dec-13	34.41	341.09
28-Mar-14	35.54	339.96
17-Jun-14	25.93	349.57
8-Sep-14	36.28	339.22
7-Dec-14	36.12	339.38
26-Mar-15	37.40	338.10
4-Jul-15	38.43	337.07
7-Oct-15	38.89	336.61
12-Jan-16	39.40	336.10
14-Apr-16	39.12	336.38
16-Jun-16	39.46	336.04
29-Sep-16	39.98	335.52
13-Jan-17	40.38	335.12
4-Apr-17	40.50	335.00
1-Jul-17	40.65	334.85
22-Sep-17	40.38	335.12
30-Jan-18	40.86	334.64
18-Apr-18	40.60	334.90
18-Jul-18	41.05	334.45
27-Oct-18	41.20	334.30
13-Feb-19	40.63	334.87
10-May-19	40.56	334.94
15-Aug-19	41.75	333.75
11-Nov-19	42.28	333.22
3-Feb-20	42.36	333.14
22-May-20	42.35	333.15
26-Sep-20	42.84	332.66
22-Nov-20	42.94	332.56
13-Mar-21	42.50	333.00
21-May-21	42.50	333.00
19-Nov-21	42.66	332.84
23-Mar-22	42.67	332.83
04-Jul-22	42.79	332.71
22-Sep-22	42.83	332.67
02-Dec-22	42.89	332.61
10-Mar-23	43.28	332.22
03-May-23	43.41	332.09
24-Aug-23	43.51	331.99
01-Dec-23	43.32	332.18
23-Feb-24	43.34	332.16
31-May-24	43.28	332.22
24-Aug-24	43.49	332.01
16-Nov-24	43.65	331.85

MB 54		
Date	Datum =	372.00
	(m bgl)	(m AHD)
14-Dec-07	23.14	348.86
18-Mar-08	24.37	347.63
17-Sep-08	23.10	348.90
11-Dec-08	22.72	349.28
4-Mar-09	21.92	350.08
12-Jun-09	18.58	353.42
2-Sep-09	22.23	349.77
16-Mar-10	21.63	350.37
22-Jun-10	21.48	350.52
16-Sep-10	21.74	350.26
7-Dec-10	20.25	351.75
18-Mar-11	19.88	352.12
9-Jun-11	21.68	350.32
16-Sep-11	25.53	346.47
8-Dec-11	26.07	345.93
16-Mar-12	28.00	344.00
22-Jun-12	29.62	342.38
13-Oct-12	26.70	345.30
7-Dec-12	28.82	343.18
22-Mar-13	29.48	342.52
5-Jun-13	30.09	341.91
25-Sep-13	30.65	341.35
4-Dec-13	30.65	341.35
14-Jan-16	36.59	335.41
14-Apr-16	36.09	335.91
16-Jun-16	36.33	335.67
29-Sep-16	37.17	334.83
13-Jan-17	37.60	334.40
6-Apr-17	38.81	333.19
1-Jul-17	37.97	334.03
22-Sep-17		
31-Jan-18	38.27	333.73
19-Apr-18	38.23	333.77
18-Jul-18	38.35	333.65
27-Oct-18	38.48	333.52
13-Feb-19	37.89	334.11
09-May-19	37.67	334.33
15-Aug-19	39.22	332.78
11-Nov-19	39.19	332.81
02-Feb-20	39.85	332.15
21-May-20	40.06	331.94
26-Sep-20	40.07	331.93
22-Nov-20	Dry	
13-Mar-21	Dry	
22-May-21	Dry	
19-Nov-21	Dry	

MB 55		
Date	Datum =	372.00
	(m bgl)	(m AHD)
15-Dec-07	27.50	344.50
18-Mar-08	25.07	346.93
11-Jun-08	26.53	345.47
18-Sep-08	26.50	345.50
11-Dec-08	26.10	345.90
5-Mar-09	23.37	348.63
12-Jun-09	25.95	346.05
2-Sep-09	25.91	346.09
16-Mar-10	22.04	349.96
22-Jun-10	24.77	347.23
16-Sep-10	24.19	347.81
7-Dec-10	26.65	345.35
19-Mar-11	20.14	351.86
9-Jun-11	25.50	346.50
16-Sep-11	26.69	345.31
8-Dec-11	26.51	345.49
16-Mar-12	28.90	343.10
22-Jun-12	30.39	341.61
13-Oct-12	28.65	343.35
7-Dec-12	30.00	342.00
25-Sep-13	31.66	340.34
22-Mar-13	30.56	341.44
5-Jun-13	31.17	340.83
11-Dec-13	31.66	340.34
28-Mar-14	32.70	339.30
18-Jun-14	33.16	338.84
9-Sep-14	32.64	339.36
7-Dec-14	32.66	339.34
25-Mar-15	34.64	337.36
5-Jul-15	35.80	336.20
7-Oct-15	35.87	336.13
14-Jan-16	35.75	336.25
14-Apr-16	35.24	336.76
16-Jun-16	36.35	335.65
29-Sep-16	36.52	335.48
13-Jan-17	36.58	335.42
6-Apr-17	36.58	335.42
1-Jul-17	35.57	336.43
22-Sep-17	36.41	335.59
31-Jan-18	36.38	335.62
19-Apr-18	36.40	335.60
18-Jul-18	36.70	335.30
26-Oct-18	36.84	335.16
14-Feb-19	36.38	335.62
09-May-19	35.36	336.64
15-Aug-19	36.41	335.59
11-Nov-19	37.77	334.23
02-Feb-20	38.06	333.94
21-May-20	35.28	336.72
26-Sep-20	35.52	336.48
22-Nov-20	38.70	333.30
12-Mar-21	38.10	333.90
22-May-21	38.12	333.88
19-Nov-21	38.29	333.71
23-Mar-22	38.33	333.67
04-Jul-22	38.42	333.58
22-Sep-22	38.57	333.43
02-Dec-22	38.52	333.48
10-Mar-23	39.69	332.31
03-May-23	39.71	332.29
24-Aug-23	39.34	332.66
01-Dec-23	39.12	332.88
23-Feb-24	39.13	332.87
31-May-24	39.32	332.68
24-Aug-24	39.28	332.72
16-Nov-24	Dry	

MB 56		
Date	Datum =	372.00
	(m bgl)	(m AHD)
15-Dec-07	29.76	342.24
18-Mar-08	27.06	344.94
10-Jun-08	29.10	342.90
18-Sep-08	28.08	343.92
11-Dec-08	28.29	343.71
5-Mar-09	27.78	344.22
12-Jun-09	29.02	342.98
3-Sep-09	28.41	343.59
16-Mar-10	25.28	346.72
22-Jun-10	24.05	347.95
16-Sep-10	24.55	347.45
7-Dec-10	23.80	348.20
19-Mar-11	22.38	349.62
9-Jun-11	25.08	346.92
17-Sep-11	25.74	346.26
3-Jan-12	26.13	345.87
16-Mar-12	27.53	344.47
22-Jun-12	28.77	343.23
13-Oct-12	28.56	343.44
7-Dec-12	28.10	343.90
22-Mar-13	28.14	343.86
5-Jun-13	29.31	342.69
25-Sep-13	29.95	342.05
4-Dec-13	29.95	342.05
28-Mar-14	31.10	340.90
18-Jun-14	31.60	340.40
9-Sep-14	32.22	339.78
7-Dec-14	33.59	338.41
25-Mar-15	32.32	339.68
5-Jul-15	35.98	336.02
7-Oct-15	33.18	338.82
14-Jan-16	35.70	336.30
14-Apr-16	36.56	335.44
16-Jun-16	36.56	335.44
29-Sep-16	37.30	334.70
13-Jan-17	37.66	334.34
6-Apr-17	37.83	334.17
1-Jul-17	37.78	334.22
22-Sep-17	36.29	335.71
31-Jan-18	37.68	334.32
19-Apr-18	35.39	336.61
18-Jul-18	38.41	333.59
26-Oct-18	38.34	333.66
13-Feb-19	36.08	335.92
09-May-19	35.58	336.42
15-Aug-19	36.09	335.91
11-Nov-19	39.19	332.81
02-Feb-20	39.46	332.54
21-May-20	39.39	332.61
26-Sep-20	39.59	332.41
22-Nov-20	39.09	332.91
12-Mar-21	36.27	335.73
22-May-21	37.27	334.73
19-Nov-21	37.47	334.53
23-Mar-22	37.49	334.51
04-Jul-22	37.62	334.38
22-Sep-22	37.65	334.35
02-Dec-22	38.52	333.48
10-Mar-23	38.12	333.88
03-May-23	38.20	333.80
24-Aug-23	39.11	332.89
01-Dec-23	39.13	332.87
23-Feb-24	39.13	332.87
31-May-24	39.32	332.68
24-Aug-24	39.46	332.54
16-Nov-24	39.34	332.66

MB 51		
Date	Datum =	363.24
	(m bgl)	(m AHD)
14-Apr-13	12.04	351.20
15-Apr-13	12.04	351.20
12-May-13	12.14	351.10
15-May-13	12.14	351.10
5-Jun-13	12.11	351.13
15-Jun-13	12.11	351.13
17-Jun-13	12.11	351.13
10-Jul-13	12.16	351.08
15-Jul-13	12.16	351.08
15-Aug-13	12.53	350.71
18-Aug-13	12.53	350.71
12-Sep-13	12.64	350.60
15-Sep-13	12.64	350.60
12-Oct-13	13.23	350.01
15-Oct-13	13.23	350.01
18-Dec-13	13.50	349.74
14-Mar-14	14.54	348.70
29-Mar-14	14.83	348.41
8-Apr-14	14.83	348.41
15-May-14	15.24	348.00
15-Jun-14	15.47	347.77
19-Jun-14	15.47	347.77
17-Jul-14	15.73	347.51
26-Aug-14	16.00	347.24
10-Sep-14	16.19	347.05
23-Sep-14	16.19	347.05
9-Oct-14	16.48	346.76
21-Nov-14	16.97	346.27
7-Dec-14	17.10	346.14
15-Dec-14	17.10	346.14
26-Jan-15	17.60	345.64
17-Feb-15	17.83	345.41
11-Mar-15	17.14	346.10
26-Mar-15	18.32	344.92
25-Apr-15	18.52	344.72
7-May-15	18.80	344.44
6-Jun-15	19.13	344.11
15-Jul-15	19.12	344.12
15-Aug-15	19.92	343.32
24-Sep-15	19.94	343.30
7-Oct-15	20.45	342.79
20-Oct-15	20.45	342.79
4-Nov-15	20.59	342.65
3-Dec-15	20.57	342.67
12-Feb-16	20.63	342.61
8-Mar-16	21.63	341.61
4-Apr-16	21.96	341.28
14-Apr-16	21.96	341.28
25-Jun-16	21.65	341.59
29-Jul-16	22.80	340.44
18-Aug-16	22.83	340.41
13-Sep-16	23.18	340.06
29-Sep-16	23.18	340.06
30-Oct-16	23.40	339.84
29-Dec-16	23.42	339.82
22-Jan-17	24.10	339.14
12-Feb-17	24.13	339.11
15-Mar-17	24.08	339.16
6-Apr-17	24.43	338.81
13-Apr-17	24.43	338.81
26-May-17	24.67	338.57
16-Jun-17	24.59	338.65
28-Jul-17	24.65	338.59
17-Aug-17	23.87	339.37
22-Sep-17	25.05	338.19
18-Oct-17	25.15	338.09
27-Nov-17	25.23	338.01
23-Dec-17	25.36	337.88
22-Feb-18	25.67	337.57
17-Mar-18	25.75	337.49
7-Apr-18	25.79	337.45
19-Apr-18	25.82	337.42
16-May-18	25.98	337.26
24-Jun-18	26.07	337.17
14-Jul-18	26.10	337.14
24-Aug-18	26.06	337.18
14-Oct-18	26.40	336.84
27-Oct-18	26.40	336.84
25-Nov-18	26.57	336.67
29-Dec-18	26.58	336.66
24-Jan-19	26.58	336.66
15-Feb-19	26.69	336.55
18-Mar-19	26.71	336.53
21-Apr-19	26.72	336.52
10-May-19	26.84	336.40
11-Jul-19	27.19	336.05
17-Aug-19	27.4	335.84
13-Sep-19	27.53	335.71
4-Oct-19	27.48	335.76
12-Nov-19	27.76	335.48
10-Dec-19	28.2	335.04
9-Jan-20	28.26	334.98
8-Feb-20	28.5	334.74
5-Mar-20	28.59	334.65
16-Apr-20	28.62	334.62
20-May-20	28.87	334.37
22-May-20	28.85	334.39
4-Jul-20	28.99	334.25
29-Aug-20	29.2	334.04
12-Sep-20	29.3	333.94
23-Oct-20	29.37	333.87
10-Nov-20	29.5	333.74
22-Nov-20	29.48	333.76
18-Jan-21	27.69	335.55
13-Feb-21	29.72	333.52
9-May-21	29.8	333.44
22-May-21	29.84	333.40
8-Jun-21	29.92	333.32
15-Jul-21	30.05	333.19
13-Aug-21	30.04	333.20
10-Sep-21	30.07	333.17
12-Oct-21	30.19	333.05
19-Nov-21	30.2	333.04

MB 52		
Date	Datum =	358.93
	(m bgl)	(m AHD)
15-Apr-13	24.98	333.95
12-May-13	24.12	334.81
15-May-13	24.12	334.81
5-Jun-13	23.70	335.23
15-Jun-13	23.70	335.23
17-Jun-13	23.70	335.23
10-Jul-13	23.12	335.81
15-Jul-13	23.12	335.81
15-Aug-13	23.92	335.01
18-Aug-13	23.92	335.01
12-Sep-13	24.68	334.25
15-Sep-13	24.68	334.25
12-Oct-13	25.00	333.93
15-Oct-13	25.00	333.93
18-Dec-13	24.93	334.00
14-Mar-14	24.80	334.13
29-Mar-14	25.18	333.75
8-Apr-14	25.18	333.75
15-May-14	25.22	333.71
15-Jun-14	25.28	333.65
19-Jun-14	25.28	333.65
17-Jul-14	25.33	333.60
26-Aug-14	25.41	333.52
10-Sep-14	25.47	333.46
23-Sep-14	25.47	333.46
9-Oct-14	25.47	333.46
21-Nov-14	25.42	333.51
7-Dec-14	24.47	334.46
15-Dec-14	24.47	334.46
26-Jan-15	25.63	333.30
17-Feb-15	24.47	334.46
11-Mar-15	24.45	334.48
25-Mar-15	24.15	334.78
25-Apr-15	25.75	333.18
7-May-15	25.88	333.05
6-Jun-15	26.01	332.92
15-Jul-15	26.00	332.93
15-Aug-15	26.25	332.68
24-Sep-15	26.25	332.68
7-Oct-15	26.44	332.49
20-Oct-15	26.44	332.49
4-Nov-15	26.04	332.89
3-Dec-15	26.04	332.89
12-Feb-16	26.09	332.84
8-Mar-16	26.60	332.33
4-Apr-16	26.62	332.31
14-Apr-16	26.62	332.31
25-Jun-16	26.58	332.35
29-Jul-16	26.87	332.06
18-Aug-16	26.87	332.06
13-Sep-16	27.40	331.53
29-Sep-16	27.40	331.53
30-Oct-16	27.05	331.88
29-Dec-16	27.12	331.81
22-Jan-17	27.37	331.56
12-Feb-17	27.38	331.55
15-Mar-17	27.37	331.56
6-Apr-17	27.51	331.42
13-Apr-17	27.43	331.50
26-May-17	27.62	331.31
16-Jun-17	27.14	331.79
28-Jul-17	27.63	331.30
17-Aug-17	27.69	331.24
22-Sep-17	27.72	331.21
18-Oct-17	27.72	331.21
27-Nov-17	27.74	331.19
23-Dec-17	27.80	331.13
22-Feb-18	27.85	331.08
17-Mar-18	27.91	331.02
7-Apr-18	27.92	331.01
19-Apr-18	27.04	331.89
16-May-18	26.31	332.62
24-Jun-18	26.02	332.91
14-Jul-18	26.08	332.85
24-Aug-18	26.55	332.38
14-Oct-18	27.87	331.06
26-Oct-18	27.87	331.06
25-Nov-18	28.01	330.92
29-Dec-18	27.56	331.37
24-Jan-19	27.04	331.89
15-Feb-19	27.58	331.35
18-Mar-19	28.17	330.76
21-Apr-19	27.79	331.14
10-May-19	25.23	333.70
11-Jul-19	28.29	330.64
17-Aug-19	28.40	330.53
13-Sep-19	28.46	330.47
4-Oct-19	28.47	330.46
12-Nov-19	28.57	330.36
9-Dec-19	28.57	330.36
9-Jan-20	28.67	330.26
8-Feb-20	28.64	330.29
5-Mar-20	28.64	330.29
16-Apr-20	28.63	330.30
20-May-20	28.64	330.29
22-May-20	28.60	330.33
4-Jul-20	28.56	330.37
29-Aug-20	28.57	330.36
12-Sep-20	28.62	330.31
23-Oct-20	28.62	330.31
10-Nov-20	28.70	330.23
22-Nov-20	28.66	330.27
18-Jan-21	28.77	330.16
13-Feb-21	28.88	330.05
9-May-21	28.82	330.11
22-May-21	28.96	329.97
8-Jun-21	28.89	330.04
15-Jul-21	29.11	329.82
13-Aug-21	29.09	329.84
10-Sep-21	29.11	329.82
12-Oct-21	29.20	329.73
19-Nov-21	29.22	329.71
17-Dec-21	29.25	329.68

MB 53		
Date	Datum =	375.50
	(m bgl)	(m AHD)

MB 54		
Date	Datum =	372.00
	(m bgl)	(m AHD)

MB 55		
Date	Datum =	372.00
	(m bgl)	(m AHD)

MB 56		
Date	Datum =	372.00
	(m bgl)	(m AHD)

MB 51		
Date	Datum =	363.24
	(m bgl)	(m AHD)
17-Dec-21	30.21	333.03
16-Jan-22	30.27	332.97
16-Feb-22	29.31	333.93
25-Mar-22	30.42	332.82
22-Apr-22	30.48	332.76
15-May-22		
21-Jun-22	30.51	332.73
28-Jul-22	30.49	332.75
28-Aug-22	30.42	332.82
23-Sep-22	30.49	332.75
22-Oct-22	30.52	332.72
19-Nov-22	30.90	332.34
29-Dec-22	30.88	332.36
15-Jan-23		
15-Feb-23		
13-Mar-23		
20-Apr-23	31.12	332.12
6-May-23	30.90	332.34
17-Jun-23	30.87	332.37
12-Jul-23	31.22	332.02
27-Aug-23		
15-Sep-23	31.78	331.46
15-Oct-23		
2-Dec-23	30.91	332.33
29-Dec-23	31.78	331.46
30-Jan-24		
25-Feb-24	30.97	332.27
23-Mar-24	31.00	332.24
15-Apr-24	31.02	332.22
29-May-24	31.00	332.24
15-Jun-24	31.00	332.24
15-Jul-24	31.04	332.20
15-Aug-24	31.13	332.11
29-Sep-24	31.09	332.15
16-Oct-24	31.09	332.15
15-Nov-24	31.13	332.11
13-Dec-24	31.15	332.09

MB 52		
Date	Datum =	358.93
	(m bgl)	(m AHD)
16-Jan-22	29.29	329.64
16-Feb-22	29.31	329.62
25-Mar-22	29.33	329.60
22-Apr-22	29.32	329.61
15-May-22		
21-Jun-22	29.28	329.65
28-Jul-22	29.27	329.66
28-Aug-22	29.23	329.70
23-Sep-22	29.38	329.55
22-Oct-22	29.52	329.41
19-Nov-22	29.56	329.37
29-Dec-22	29.52	329.41
15-Jan-23		
15-Feb-23		
13-Mar-23		
20-Apr-23	29.65	329.28
6-May-23	29.65	329.28
17-Jun-23	29.63	329.30
12-Jul-23	29.64	329.29
27-Aug-23		
15-Sep-23	29.17	329.76
15-Oct-23		
2-Dec-23	28.95	329.98
29-Dec-23	29.17	329.76
30-Jan-24		
25-Feb-24	28.77	330.16
23-Mar-24	28.65	330.28
15-Apr-24	28.69	330.24
29-May-24		
15-Jun-24		
15-Jul-24		
15-Aug-24		
29-Sep-24		
16-Oct-24		
15-Nov-24		
13-Dec-24		

MB 53		
Date	Datum =	375.50
	(m bgl)	(m AHD)

MB 54		
Date	Datum =	372.00
	(m bgl)	(m AHD)

MB 55		
Date	Datum =	372.00
	(m bgl)	(m AHD)

MB 56		
Date	Datum =	372.00
	(m bgl)	(m AHD)

MB 57		
Date	Datum =	375.00
	(m bgl)	(m AHD)
15-Dec-07	56.60	318.40
18-Mar-08	56.62	318.38
10-Jun-08	55.96	319.04
18-Sep-08	55.65	319.35
10-Dec-08	55.65	319.35
6-Mar-09	55.47	319.53
10-Jun-09	46.75	328.25
1-Sep-09	44.77	330.23
15-Mar-10	52.21	322.79
24-Jun-10	43.30	331.70
15-Sep-10	41.75	333.25
12-Dec-10	49.97	325.03
19-Mar-11	54.31	320.69
10-Jun-11	56.03	318.97
17-Sep-11	56.58	318.42
7-Jan-12	57.67	317.33
13-Mar-12	58.27	316.73
22-Jun-12	58.66	316.34
11-Oct-12	58.23	316.77
6-Dec-12	58.19	316.81
22-Mar-13	51.36	323.64
5-Jun-13	58.22	316.78
25-Sep-13	55.10	319.90
6-Dec-13	55.10	319.90
28-Mar-14	56.00	319.00
19-Jun-14	56.33	318.67
1-Sep-14	55.94	319.06
8-Dec-14	57.90	317.10
27-Mar-15	59.44	315.56
5-Jul-15	57.29	317.71
8-Oct-15	57.61	317.39
13-Jan-16	61.26	313.74
15-Apr-16	61.32	313.68
16-Jun-16	61.42	313.58
30-Sep-16	61.65	313.35
13-Jan-17	62.42	312.58
7-Apr-17	62.63	312.37
1-Jul-17	62.74	312.26
22-Sep-17	62.88	312.12
31-Jan-18	62.92	312.08
20-Apr-18	63.33	311.67
18-Jul-18	63.39	311.61
26-Oct-18	63.82	311.18
13-Feb-19	64.65	310.35
09-May-19	64.98	310.02
15-Aug-19	63.68	311.32
10-Nov-19	63.41	311.59
01-Feb-20	64.25	310.75
23-May-20	64.60	310.40
25-Sep-20	64.97	310.03
21-Nov-20	65.16	309.84
12-Mar-21	65.66	309.34
22-May-21	65.98	309.02
19-Nov-21	66.12	308.88
23-Mar-22	67.06	307.94
04-Jul-22	66.98	308.02
22-Sep-22	66.95	308.05
02-Dec-22	60.95	314.05
10-Mar-23	67.48	307.52
03-May-23	67.40	307.60
24-Aug-23	67.34	307.66
01-Dec-23	67.90	307.10
23-Feb-24	67.47	307.53
31-May-24	68.79	306.21
24-Aug-24	69.09	305.91
16-Nov-24	69.14	305.86

MB 58		
Date	Datum =	368.00
	(m bgl)	(m AHD)
15-Dec-07	24.44	343.56
19-Mar-08	24.55	343.45
11-Jun-08	24.34	343.66
16-Sep-08	24.03	343.97
10-Dec-08	23.96	344.04
5-Mar-09	23.85	344.15
10-Jun-09	23.59	344.41
2-Sep-09	23.53	344.47
16-Mar-10	22.96	345.04
24-Jun-10	22.59	345.41
16-Sep-10	22.28	345.72
16-Oct-10	22.16	345.84
12-Nov-10	22.10	345.90
12-Dec-10	21.95	346.05
24-Dec-10	21.95	346.05
19-Jan-11	21.79	346.21
6-Mar-11	21.72	346.28
18-Mar-11	21.52	346.48
13-Apr-11	21.72	346.28
8-Jun-11	21.97	346.03
21-Jun-11	22.00	346.00
24-Jul-11	22.17	345.83
8-Aug-11	22.32	345.68
2-Sep-11	22.36	345.64
15-Sep-11	6.57	361.43
29-Oct-11	22.71	345.29
10-Nov-11	22.70	345.30
11-Dec-11	22.68	345.32
7-Jan-12	22.68	345.32
19-Jan-12	10.56	357.44
15-Feb-12	23.09	344.91
4-Mar-12	23.28	344.72
15-Mar-12	23.23	344.77
14-Apr-12	23.46	344.54
16-May-12	23.86	344.14
9-Jun-12	23.73	344.27
19-Jun-12	23.94	344.06
15-Jul-12	23.87	344.13
15-Aug-12	23.84	344.16
15-Sep-12	23.97	344.03
15-Oct-12	23.97	344.03
9-Nov-12	24.00	344.00
15-Dec-12	24.16	343.84
13-Jan-13	22.70	345.30
14-Jan-13	22.70	345.30
10-Feb-13	24.34	343.66
15-Feb-13	24.34	343.66
12-Mar-13	24.56	343.44
15-Mar-13	24.39	343.61
19-Mar-13	24.39	343.61
14-Apr-13	24.54	343.46
15-Apr-13	24.54	343.46
12-May-13	24.63	343.37
15-May-13	24.63	343.37
4-Jun-13	24.63	343.37
15-Jun-13	24.63	343.37
17-Jun-13	24.63	343.37
10-Jul-13	24.73	343.27
15-Jul-13	24.73	343.27
15-Aug-13	24.80	343.20
18-Aug-13	24.80	343.20
12-Sep-13	24.88	343.12
15-Sep-13	24.88	343.12
12-Oct-13	24.87	343.13
15-Oct-13	24.87	343.13
18-Dec-13	25.20	342.80
12-Jan-16	28.37	339.63
14-Jan-16	28.37	339.63
12-Feb-16	27.90	340.10
8-Mar-16	28.41	339.59
4-Apr-16	28.61	339.39
12-Apr-16	28.61	339.39
16-Jun-16	28.83	339.17
25-Jun-16	28.83	339.17
29-Jul-16	28.98	339.02
18-Aug-16	29.00	339.00
13-Sep-16	29.22	338.78
30-Sep-16	29.22	338.78
30-Oct-16	29.38	338.62
29-Dec-16	29.39	338.61
13-Jan-17	29.62	338.38
22-Jan-17	29.62	338.38
12-Feb-17	29.66	338.34
15-Mar-17	29.65	338.35
8-Apr-17	29.90	338.10
13-Apr-17	29.90	338.10
26-May-17	29.97	338.03
16-Jun-17	30.02	337.98
2-Jul-17	30.95	337.05
28-Jul-17	30.95	337.05
17-Aug-17	30.14	337.86
22-Sep-17	30.04	337.96
23-Sep-17	30.04	337.96
18-Oct-17	30.20	337.80
27-Nov-17	30.26	337.74
23-Dec-17	30.33	337.67
30-Jan-18	30.40	337.60
22-Feb-18	30.39	337.61
17-Mar-18	30.40	337.60
7-Apr-18	30.34	337.66
18-Apr-18	30.35	337.65
16-May-18	30.57	337.43
24-Jun-18	30.72	337.28
14-Jul-18	30.76	337.24
18-Jul-18	30.76	337.24

MB 59		
Date	Datum =	363.50
	(m bgl)	(m AHD)
15-Dec-07	20.13	343.37
19-Mar-08	20.52	342.98
10-Jun-08	38.89	324.61
11-Jun-08	19.80	343.70
16-Sep-08	19.79	343.71
10-Dec-08	20.20	343.30
5-Mar-09	20.45	343.05
10-Jun-09	20.25	343.25
1-Sep-09	20.17	343.33
16-Mar-10	19.85	343.65
23-Jun-10	19.75	343.75
16-Sep-10	20.00	343.50
12-Dec-10	20.19	343.31
18-Mar-11	19.52	343.98
8-Jun-11	21.51	341.99
15-Sep-11	22.42	341.08
7-Jan-12	23.39	340.11
15-Mar-12	24.25	339.25
20-Jun-12	24.82	338.68
12-Oct-12	23.60	339.90
7-Dec-12	25.02	338.48
19-Mar-13	25.62	337.88
4-Jun-13	24.45	339.05
25-Sep-13	24.55	338.95
6-Dec-13	24.55	338.95
28-Mar-14	25.04	338.46
17-Jun-14	25.06	338.44
10-Sep-14	25.32	338.18
6-Dec-14	24.89	338.61
26-Mar-15	24.81	338.69
4-Jul-15	26.28	337.22
6-Oct-15	25.64	337.86
12-Jan-16	26.88	336.62
15-Apr-16	26.72	336.78
16-Jun-16	26.87	336.63
30-Sep-16	27.30	336.20
13-Jan-17	27.59	335.91
8-Apr-17	27.81	335.69
2-Jul-17	27.92	335.58
22-Sep-17	27.86	335.64
30-Jan-18	28.13	335.37
18-Apr-18	28.04	335.46
18-Jul-18	27.27	336.23
27-Oct-18	27.94	335.56
12-Feb-19	27.85	335.65
10-May-19	28.46	335.04
15-Aug-19	28.65	334.85
11-Nov-19	28.75	334.75
03-Feb-20	28.79	334.71
22-May-20	28.61	334.89
27-Sep-20	28.66	334.84
22-Nov-20	28.78	334.72
12-Mar-21	27.60	335.90
21-May-21	29.71	333.79
21-Nov-21	29.80	333.70
23-Mar-22	29.57	333.93
04-Jul-22	28.64	334.86
22-Sep-22	29.68	333.82
02-Dec-22	29.75	333.75
10-Mar-23	29.85	333.65
03-May-23	29.89	333.61
24-Aug-23	29.30	334.20
01-Dec-23	29.56	333.94
23-Feb-24	29.06	334.44
31-May-24	28.92	334.58
24-Aug-24	29.39	334.11
16-Nov-24	29.60	333.90

MB 60		
Date	Datum =	365.50
	(m bgl)	(m AHD)
15-Dec-07	39.58	325.92
19-Mar-08	39.68	325.82
17-Sep-08	38.92	326.58
10-Dec-08	39.41	326.09
6-Mar-09	39.41	326.09
10-Jun-09	38.51	326.99
2-Sep-09	36.59	328.91
16-Mar-10	38.55	326.95
24-Jun-10	36.44	329.06
15-Sep-10	35.78	329.72
12-Dec-10	36.29	329.21
19-Mar-11	39.28	326.22
10-Jun-11	38.25	327.25
17-Sep-11	39.46	326.04
7-Jan-12	40.36	325.14
16-Mar-12	40.67	324.83
22-Jun-12	41.41	324.09
11-Oct-12	41.56	323.94
5-Dec-12	41.44	324.06
22-Mar-13	40.93	324.57
6-Jun-13	40.77	324.73
25-Sep-13	40.88	324.62
6-Dec-13	40.88	324.62
29-Mar-14	41.54	323.96
19-Jun-14	41.84	323.66
11-Sep-14	42.48	323.02
8-Dec-14	43.01	322.49
26-Mar-15	43.56	321.94
8-Oct-15	43.41	322.09
15-Apr-16	44.60	320.90
30-Sep-16	44.55	320.95
7-Apr-17	45.51	319.99
22-Sep-17	46.07	319.43
20-Apr-18	46.28	319.22
26-Oct-18	46.34	319.16
09-May-19	48.16	317.34
10-Nov-19	47.71	317.79
24-May-20	48.95	316.55
20-Nov-20	49.81	315.69
21-May-21	50.96	314.54
21-Nov-21	51.08	314.42
23-Mar-22		
04-Jul-22		
22-Sep-22		
02-Dec-22	51.23	314.27
10-Mar-23		
03-May-23	51.49	314.01
24-Aug-23		
01-Dec-23	51.82	313.68
23-Feb-24	6.00	359.50
31-May-24	53.22	312.28
24-Aug-24	6.00	359.50
16-Nov-24	6.00	359.50

MB 61		
Date	Datum =	359.00
	(m bgl)	(m AHD)
19-Mar-08	19.89	339.11
11-Jun-08	18.84	340.16
16-Sep-08	19.91	339.09
10-Dec-08	20.65	338.35
6-Mar-09	20.91	338.09
10-Jun-09	20.83	338.17
2-Sep-09	36.59	322.41
16-Mar-10	26.70	332.30
23-Jun-10	20.55	338.45
16-Sep-10	19.83	339.17
12-Dec-10	19.19	339.81
18-Mar-11	18.64	340.36
11-Jun-11	21.35	337.65
15-Sep-11	22.36	336.64
7-Jan-12	23.28	335.72
16-Mar-12	24.14	334.86
20-Jun-12	24.68	334.32
12-Oct-12	23.39	335.61
7-Dec-12	23.92	335.08
19-Mar-13	25.11	333.89
6-Jun-13	25.51	333.49
24-Sep-13	24.90	334.10
6-Dec-13	24.90	334.10
28-Mar-14	25.35	333.65
17-Jun-14	25.39	333.61
10-Sep-14	25.63	333.37
6-Dec-14	25.39	333.61
26-Mar-15	24.00	335.00
6-Oct-15	26.54	332.46
15-Apr-16	26.73	332.27
30-Sep-16	27.05	331.95
8-Apr-17	27.61	331.39
22-Sep-17	27.70	331.30
18-Apr-18	26.93	332.07
27-Oct-18	27.94	331.06
10-May-19	28.19	330.81
11-Nov-19	28.55	330.45
23-May-20	28.60	330.40
22-Nov-20	28.73	330.27
21-May-21	28.99	330.01
21-Nov-21	29.21	329.79
23-Mar-22		
04-Jul-22		
22-Sep-22		
02-Dec-22	29.52	329.48
10-Mar-23		
03-May-23	29.62	329.38
24-Aug-23	28.26	330.74
01-Dec-23	28.83	330.17
23-Feb-24	6.00	353.00
31-May-24	28.54	330.46
24-Aug-24	6.00	353.00
16-Nov-24	6.00	353.00

MB 62		
Date	Datum =	362.00
	(m bgl)	(m AHD)
15-Dec-07	29.02	332.98
20-Mar-08	29.55	332.45
10-Jun-08	28.93	333.07
17-Sep-08	28.72	333.28
10-Dec-08	28.72	333.28
6-Mar-09	28.66	333.34
10-Jun-09	27.97	334.03
2-Sep-09	27.12	334.88
16-Mar-10	37.35	324.65
24-Jun-10	26.54	335.46
15-Sep-10	25.76	336.24
12-Dec-10	26.30	335.70
20-Mar-11	27.80	334.20
10-Jun-11	27.95	334.05
17-Sep-11	29.95	332.05
7-Jan-12	30.96	331.04
16-Mar-12	31.91	330.09
22-Jun-12	32.64	329.36
12-Oct-12	32.08	329.92
5-Dec-12	32.03	329.97
23-Mar-13	31.96	330.04
6-Jun-13	32.32	329.68
23-Mar-13	31.96	330.04
6-Jun-13	32.32	329.68
26-Sep-13	32.57	329.43
6-Dec-13	32.57	329.43
30-Mar-14	33.49	328.51
19-Jun-14	33.77	328.23
11-Sep-14	34.19	327.81
8-Dec-14	35.62	326.38
27-Mar-15	35.50	326.50
7-Oct-15	36.23	325.77
15-Apr-16	36.15	325.85
30-Sep-16	37.62	324.38
7-Apr-17	38.51	323.49
23-Sep-17	37.86	324.14
20-Apr-18	39.23	322.77
25-Oct-18	39.84	322.16
9-May-19	40.74	321.26
10-Nov-19	41.12	320.88
23-May-20	41.82	320.18
23-Nov-20	42.34	319.66
23-May-21	42.90	319.10
21-Nov-21	43.11	318.89
23-Mar-22		
04-Jul-22		
22-Sep-22		
02-Dec-22	44.05	317.95
10-Mar-23		
03-May-23	44.33	317.67
24-Aug-23		
01-Dec-23	44.86	317.14
23-Feb-24	6.00	356.00
31-May-24	45.53	316.47
24-Aug-24	6.00	356.00
16-Nov-24	6.00	356.00

MB 57		
Date	Datum =	375.00
	(m bgl)	(m AHD)

MB 58		
Date	Datum =	368.00
	(m bgl)	(m AHD)
24-Aug-18	30.63	337.37
14-Oct-18	30.95	337.05
27-Oct-18	30.95	337.05
25-Nov-18	30.88	337.12
29-Dec-18	31.81	336.19
24-Jan-19	30.80	337.20
13-Feb-19	30.80	337.20
15-Feb-19	30.80	337.20
18-Mar-19	30.84	337.16
21-Apr-19	30.86	337.14
10-May-19	30.89	337.11
11-Jul-19	31.32	336.68
15-Aug-19	31.41	336.59
17-Aug-19	31.41	336.59
13-Sep-19	31.47	336.53
04-Oct-19	31.59	336.41
11-Nov-19	31.67	336.33
10-Dec-19	31.81	336.19
11-Jan-20	31.86	336.14
03-Feb-20	31.90	336.10
06-Feb-20	31.90	336.10
05-Mar-20	31.98	336.02
16-Apr-20	31.99	336.01
22-May-20	32.09	335.91
04-Jul-20	32.15	335.85
29-Aug-20	32.29	335.71
12-Sep-20	32.31	335.69
26-Sep-20	32.52	335.48
23-Oct-20	32.42	335.58
10-Nov-20	32.51	335.49
22-Nov-20	32.51	335.49
18-Jan-21	32.33	335.67
13-Feb-21	32.36	335.64
12-Mar-21	32.38	335.62
09-May-21	32.30	335.70
21-May-21	32.37	335.63
08-Jun-21	32.40	335.60
15-Jul-21	32.47	335.53
13-Aug-21	32.45	335.55
10-Sep-21	32.28	335.72
12-Oct-21	32.57	335.43
19-Nov-21	32.75	335.25
17-Dec-21	32.79	335.21
16-Feb-22	32.68	335.32
25-Mar-22	32.69	335.31
22-Apr-22	32.70	335.30
21-Jun-22	33.72	334.28
01-Jul-22	33.80	334.20
28-Jul-22	33.80	334.20
28-Aug-22	33.81	334.19
23-Sep-22	32.83	335.17
22-Oct-22	32.90	335.10
19-Nov-22	32.93	335.07
01-Dec-22	32.89	335.11
29-Dec-22	32.95	335.05
02-Feb-23	33.50	334.50
02-Mar-23	33.09	334.91
12-Mar-23		
02-Apr-23	33.08	334.92
21-Apr-23	33.13	334.87
07-May-23	33.13	334.87
25-Aug-23		
01-Dec-23		
23-Feb-24		
20-May-24		
21-Aug-24		
14-Nov-24		

MB 59		
Date	Datum =	363.50
	(m bgl)	(m AHD)

MB 60		
Date	Datum =	365.50
	(m bgl)	(m AHD)

MB 61		
Date	Datum =	359.00
	(m bgl)	(m AHD)

MB 62		
Date	Datum =	362.00
	(m bgl)	(m AHD)

MB 63		
Date	Datum =	358.00
	(m bgl)	(m AHD)
15-Dec-07	25.49	332.51
20-Mar-08	25.57	332.43
10-Jun-08	25.46	332.54
17-Sep-08	25.48	332.52
10-Dec-08	25.56	332.44
7-Mar-09	25.52	332.48
2-Sep-09	15.59	342.41
15-Sep-10	15.60	342.40
16-Oct-10	15.71	342.29
12-Nov-10	15.66	342.34
12-Dec-10	15.76	342.24
19-Jan-11	15.21	342.79
6-Mar-11	15.24	342.76
20-Mar-11	15.27	342.73
13-Apr-11	Not Measured	
10-Jun-11	15.35	
21-Jun-11	15.35	
24-Jul-11	Not Measured	
8-Aug-11	Not Measured	
2-Sep-11	Not Measured	
18-Sep-11	15.57	342.43
29-Oct-11	15.87	342.13
10-Nov-11	15.90	342.10
11-Dec-11	16.00	342.00
7-Jan-12	16.00	342.00
19-Jan-12	16.77	341.23
15-Feb-12	16.54	341.46
16-Mar-12	No Access	
14-Apr-12	15.81	342.19
16-May-12	15.79	342.21
9-Jun-12	Wet	
23-Jun-12	16.21	341.79
15-Jul-12	15.80	342.20
15-Aug-12	15.77	342.23
15-Sep-12	16.31	341.69
15-Oct-12	21.06	336.94
9-Nov-12	21.99	336.01
15-Dec-12	16.53	341.47
13-Jan-13	15.88	342.12
14-Jan-13	15.88	342.12
10-Feb-13	16.41	341.59
15-Feb-13	16.41	341.59
12-Mar-13	24.39	333.61
15-Mar-13	16.48	341.52
23-Mar-13	16.48	341.52
14-Apr-13	16.44	341.56
15-Apr-13	16.44	341.56
12-May-13	16.63	341.37
15-May-13	16.63	341.37
6-Jun-13	16.58	341.42
15-Jun-13	16.58	341.42
17-Jun-13	16.58	341.42
10-Jul-13	16.60	341.40
15-Jul-13	16.60	341.40
15-Aug-13	16.63	341.37
18-Aug-13	16.63	341.37
12-Sep-13	26.71	331.29
15-Sep-13	26.71	331.29
12-Oct-13	26.74	331.26
15-Oct-13	26.74	331.26
18-Dec-13	26.71	331.29
14-Mar-14	16.98	341.02
27-Mar-14	16.93	341.07
8-Apr-14	16.93	341.07
15-May-14	16.71	341.29
15-Jun-14	16.62	341.38
20-Jun-14	16.62	341.38
17-Jul-14	16.67	341.33
26-Aug-14	16.74	341.26
10-Sep-14	16.79	341.21
23-Sep-14	16.79	341.21
9-Oct-14	16.83	341.17
21-Nov-14	17.02	340.98
7-Dec-14	17.06	340.94
15-Dec-14	17.06	340.94
26-Jan-15	17.22	340.78
17-Feb-15	17.20	340.80
11-Mar-15	17.09	340.91
26-Mar-15	TSF3 Lift	
25-Apr-15	17.02	340.98
7-May-15	17.02	340.98
6-Jun-15	17.10	340.90
5-Jul-15	17.14	340.86
15-Jul-15	17.11	340.89
15-Aug-15	17.06	340.94
24-Sep-15	23.50	334.50
7-Oct-15	17.21	340.79
20-Oct-15	17.21	340.79
4-Nov-15	17.17	340.83
3-Dec-15	17.28	340.72
13-Jan-16	17.51	340.49
12-Feb-16	17.28	340.72
8-Mar-16	17.45	340.55
4-Apr-16	17.36	340.64
16-Apr-16	17.36	340.64
16-Jun-16	17.33	340.67
25-Jun-16	17.33	340.67
29-Jul-16	17.32	340.68
18-Aug-16	17.35	340.65
13-Sep-16	17.51	340.49
1-Oct-16	17.51	340.49
30-Oct-16	17.54	340.46
29-Dec-16	17.50	340.50
14-Jan-17	17.73	340.27
22-Jan-17	17.73	340.27

MB 64		
Date	Datum =	355.70
	(m bgl)	(m AHD)
23-Jun-10	19.90	335.80
16-Sep-10	19.72	335.98
16-Oct-10	19.74	335.96
12-Nov-10	19.74	335.96
13-Dec-10	19.81	335.89
24-Dec-10	19.75	335.95
19-Jan-11	19.68	336.02
6-Mar-11	19.59	336.11
18-Mar-11	19.57	336.13
13-Apr-11	19.62	336.08
11-Jun-11	19.82	335.88
21-Jun-11	19.82	335.88
24-Jul-11	19.95	335.75
8-Aug-11	Not measured	
2-Sep-11	20.01	335.69
18-Sep-11	20.00	335.70
29-Oct-11	20.30	335.40
10-Nov-11	20.30	335.40
11-Dec-11	20.41	335.29
3-Jan-12	20.45	335.25
19-Jan-12	20.46	335.24
15-Feb-12	20.61	335.09
4-Mar-12	20.60	335.10
18-Mar-12	20.67	335.03
14-Apr-12	20.62	335.08
16-May-12	20.69	335.01
9-Jun-12	20.73	334.97
20-Jun-12	20.77	334.93
15-Jul-12	20.69	335.01
15-Aug-12	20.66	335.04
15-Sep-12	20.73	334.97
15-Oct-12	16.31	339.39
9-Nov-12	20.85	334.85
15-Dec-12	20.85	334.85
13-Jan-13	20.92	334.78
14-Jan-13	20.92	334.78
10-Feb-13	20.93	334.77
15-Feb-13	20.93	334.77
12-Mar-13	16.48	339.22
15-Mar-13	20.95	334.75
23-Mar-13	20.95	334.75
14-Apr-13	21.01	334.69
15-Apr-13	21.01	334.69
12-May-13	20.98	334.72
15-May-13	20.98	334.72
6-Jun-13	20.98	334.72
15-Jun-13	20.98	334.72
17-Jun-13	20.98	334.72
10-Jul-13	20.91	334.79
15-Jul-13	20.91	334.79
15-Aug-13	20.94	334.76
18-Aug-13	20.94	334.76
12-Sep-13	21.01	334.69
15-Sep-13	21.01	334.69
12-Oct-13	21.08	334.62
15-Oct-13	21.08	334.62
18-Dec-13	21.13	334.57
14-Mar-14	21.20	334.50
31-Mar-14	21.25	334.45
8-Apr-14	21.25	334.45
15-Jun-14	21.19	334.51
17-Jun-14	21.19	334.51
17-Jul-14	21.22	334.48
26-Aug-14	21.29	334.41
12-Sep-14	21.27	334.43
23-Sep-14	21.27	334.43
9-Oct-14	21.29	334.41
21-Nov-14	21.39	334.31
9-Dec-14	21.37	334.33
26-Jan-15	21.37	334.33
26-Jan-15	21.43	334.27
17-Feb-15	21.40	334.30
11-Mar-15	21.35	334.35
28-Mar-15	21.40	334.30
25-Apr-15	21.46	334.24
7-May-15	21.46	334.24
6-Jun-15	21.51	334.19
2-Jul-15	21.51	334.19
15-Jul-15	21.54	334.16
15-Aug-15	21.57	334.13
24-Sep-15	21.56	334.14
11-Oct-15	21.64	334.06
20-Oct-15	21.64	334.06
4-Nov-15	21.61	334.09
3-Dec-15	21.59	334.11
16-Jan-16	21.73	333.97
12-Feb-16	21.60	334.10
8-Mar-16	21.71	333.99
4-Apr-16	21.74	333.96
16-Apr-16	21.74	333.96
18-Jun-16	21.80	333.90
25-Jun-16	21.80	333.90
29-Jul-16	21.83	333.87
18-Aug-16	21.84	333.86
13-Sep-16	21.93	333.77
1-Oct-16	21.93	333.77
30-Oct-16	21.96	333.74
29-Dec-16	21.98	333.72
13-Jan-17	22.00	333.70
22-Jan-17	22.00	333.70
12-Feb-17	22.03	333.67
15-Mar-17	22.04	333.66
8-Apr-17	21.97	333.73
13-Apr-17	21.97	333.73
26-May-17	21.93	333.77

MB 65		
Date	Datum =	356.80
	(m bgl)	(m AHD)
23-Jun-10	21.00	335.80
16-Sep-10	18.08	338.72
16-Oct-10	18.10	338.70
12-Nov-10	18.45	338.35
13-Dec-10	Not measured	
19-Jan-11	17.63	339.17
6-Mar-11	17.43	339.37
18-Mar-11	17.32	339.48
13-Apr-11	18.29	338.51
10-Jun-11	19.00	337.80
21-Jun-11	19.24	337.56
24-Jul-11	19.51	337.29
8-Aug-11	Not measured	
2-Sep-11	19.91	336.89
18-Sep-11	19.97	336.83
29-Oct-11	20.50	336.30
10-Nov-11	20.56	336.24
11-Dec-11	20.94	335.86
3-Jan-12	21.00	335.80
19-Jan-12	21.11	335.69
15-Feb-12	21.16	335.64
4-Mar-12	21.46	335.34
18-Mar-12	21.50	335.30
14-Apr-12	21.70	335.10
16-May-12	21.81	334.99
9-Jun-12	21.84	334.96
20-Jun-12	22.03	334.77
15-Jul-12	21.80	335.00
15-Aug-12	21.83	334.97
15-Sep-12	21.06	335.74
15-Oct-12	20.73	336.07
9-Nov-12	16.40	340.40
15-Dec-12	22.32	334.48
13-Jan-13	22.37	334.43
14-Jan-13	22.37	334.43
10-Feb-13	22.47	334.33
15-Feb-13	22.47	334.33
12-Mar-13	20.95	335.85
15-Mar-13	22.40	334.40
23-Mar-13	22.40	334.40
14-Apr-13	22.49	334.31
15-Apr-13	22.49	334.31
12-May-13	22.04	334.76
15-May-13	22.04	334.76
6-Jun-13	21.65	335.15
15-Jun-13	21.65	335.15
17-Jun-13	21.65	335.15
10-Jul-13	21.00	335.80
15-Jul-13	21.00	335.80
15-Aug-13	21.64	335.16
18-Aug-13	21.64	335.16
12-Sep-13	22.23	334.57
15-Sep-13	22.23	334.57
12-Oct-13	22.20	334.60
15-Oct-13	22.20	334.60
18-Dec-13	22.47	334.33
14-Mar-14	22.46	334.34
31-Mar-14	22.67	334.13
8-Apr-14	22.67	334.13
15-Jun-14	22.65	334.15
17-Jun-14	22.65	334.15
17-Jul-14	22.77	334.03
26-Aug-14	22.89	333.91
12-Sep-14	22.84	333.96
23-Sep-14	22.84	333.96
9-Oct-14	22.91	333.89
21-Nov-14	22.91	333.89
9-Dec-14	22.34	334.46
15-Dec-14	22.34	334.46
26-Jan-15	23.04	333.76
17-Feb-15	22.26	334.54
11-Mar-15	22.35	334.45
29-Mar-15	22.51	334.29
25-Apr-15	23.16	333.64
7-May-15	23.17	333.63
6-Jun-15	23.33	333.47
2-Jul-15	23.36	333.44
15-Jul-15	23.31	333.49
15-Aug-15	23.51	333.29
24-Sep-15	23.54	333.26
11-Oct-15	23.71	333.09
20-Oct-15	23.71	333.09
4-Nov-15	23.41	333.39
3-Dec-15	23.42	333.38
16-Jan-16	23.86	332.94
12-Feb-16	23.44	333.36
8-Mar-16	23.80	333.00
4-Apr-16	23.92	332.88
16-Apr-16	23.92	332.88
25-Jun-16	24.88	331.92
29-Jul-16	23.13	333.67
18-Aug-16	23.15	333.65
13-Sep-16	24.25	332.55
1-Oct-16	24.25	332.55
30-Oct-16	24.39	332.41
29-Dec-16	24.44	332.36
13-Jan-17	24.51	332.29
22-Jan-17	24.51	332.29
12-Feb-17	24.49	332.31
15-Mar-17	24.50	332.30
8-Apr-17	24.78	332.02
13-Apr-17	24.78	332.02
26-May-17	24.80	332.00
16-Jun-17	24.92	331.88

MB 67		
Date	Datum =	369.57
	(m bgl)	(m AHD)
25-Jun-10	28.25	341.32
18-Sep-10	58.15	311.42
16-Oct-10	58.40	311.17
12-Nov-10	58.39	311.18
11-Dec-10	58.45	311.12
23-Jan-11	58.76	310.81
6-Mar-11	58.79	310.78
17-Mar-11	58.81	310.76
13-Apr-11	59.06	310.51
11-Jun-11	59.08	310.49
21-Jun-11	59.04	310.53
24-Jul-11	59.24	310.33
8-Aug-11	59.19	310.38
2-Sep-11	59.22	310.35
15-Sep-11	59.23	310.34
29-Oct-11	59.31	310.26
10-Nov-11	59.29	310.28
11-Dec-11	59.43	310.14
21-Jan-12	59.44	310.13
15-Feb-12	59.51	310.06
4-Mar-12	59.67	309.90
15-Mar-12	59.62	309.95
14-Apr-12	59.71	309.86
16-May-12	59.77	309.80
21-Jun-12	59.96	309.61
15-Jul-12	59.78	309.79
15-Aug-12	59.77	309.80
15-Sep-12	60.05	309.52
15-Oct-12	60.37	309.20
15-Dec-12	60.63	308.94
13-Jan-13	60.32	309.25
14-Jan-13	60.32	309.25
15-Feb-13	Long tape broken	
12-Mar-13	60.57	309.00
15-Mar-13	60.51	309.06
20-Mar-13	60.51	309.06
14-Apr-13	60.57	309.00
15-Apr-13	60.57	309.00
12-May-13	60.64	308.93
15-May-13	60.64	308.93
9-Jun-13	60.64	308.93
15-Jun-13	60.64	308.93
17-Jun-13	60.64	308.93
10-Jul-13	60.81	308.76
15-Jul-13	60.81	308.76
15-Aug-13	60.90	308.67
18-Aug-13	60.90	308.67
12-Sep-13	60.64	308.93
15-Sep-13	60.64	308.93
17-Dec-13	60.98	308.59
14-Mar-14	61.73	307.84
31-Mar-14	61.25	308.32
8-Apr-14	61.25	308.32
21-May-14	61.32	308.25
15-Jun-14	61.44	308.13
20-Jun-14	61.44	308.13
18-Jul-14	61.53	308.04
29-Aug-14	61.59	307.98
12-Sep-14	61.70	307.87
22-Sep-14	61.70	307.87
12-Oct-14	61.70	307.87
22-Nov-14	61.83	307.74
9-Dec-14	61.89	307.68
15-Dec-14	61.89	307.68
26-Jan-15	61.98	307.59
19-Feb-15	62.09	307.48
13-Mar-15	62.06	307.51
23-Mar-15	62.25	307.32
25-Apr-15	TSF 3 Lift	
9-May-15	TSF 3 Lift	
6-Jun-15	TSF 3 Lift	
3-Jul-15	62.40	307.17
16-Jul-15	62.40	307.17
16-Aug-15	62.51	307.06
24-Sep-15	62.50	307.07
10-Oct-15	62.64	306.93
20-Oct-15	62.64	306.93
5-Nov-15	62.54	307.03
6-Dec-15	62.63	306.94
16-Jan-16	62.78	306.79
14-Feb-16	62.88	306.69
9-Mar-16	62.84	306.73
16-Apr-16	61.95	307.62
17-Jun-16	63.00	306.57
26-Jun-16	63.00	306.57
29-Jul-16	63.06	306.51
20-Aug-16	63.04	306.53
28-Sep-16	63.14	306.43
2-Oct-16	63.14	306.43
29-Oct-16	TSF 3 Lift	
14-Jan-17	63.42	306.15
22-Jan-17	63.42	306.15
12-Feb-17	63.45	306.12
15-Mar-17	63.44	306.13
9-Apr-17	63.58	305.99
13-Apr-17	63.58	305.99
27-May-17	63.63	305.94
18-Jun-17	63.66	305.91
3-Jul-17	63.67	305.90
27-Jul-17	63.67	305.90
17-Aug-17	65.73	303.84
23-Sep-17	63.76	305.81
24-Sep-17	63.76	305.81
19-Oct-17	63.85	305.72
25-Nov-17	63.89	305.68

MB 68A		
Date	Datum =	365.56
	(m bgl)	(m AHD)
25-Jun-10	Dry	
18-Sep-10	Dry	
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	Dry	
6-Mar-11	Dry	
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	Dry	
24-Jul-11	Dry	
8-Aug-11	Dry	
2-Sep-11	Dry	
15-Sep-11	Dry	
29-Oct-11	Dry	
10-Nov-11	Dry	
11-Dec-11	Dry	
21-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	Dry	
15-Mar-12	Dry	
14-Apr-12	Dry	
16-May-12	Dry	
21-Jun-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	Dry	
15-Feb-13	Long tape broken	
15-Mar-13	Dry	
15-Apr-13	Dry	
15-May-13	Dry	
15-Jun-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	Dry	
31-Mar-14	Dry	
8-Apr-14	Dry	
21-May-14	Dry	
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
12-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
9-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
23-Mar-15	Dry	
25-Apr-15	TSF 3 Lift	
9-May-15	TSF 3 Lift	
6-Jun-15	TSF 3 Lift	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	Dry	
24-Sep-15	Dry	
8-Oct-15	Dry	
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
16-Apr-16	Dry	
17-Jun-16	Dry	
26-Jun-16	Dry	
29-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
2-Oct-16	Dry	
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
12-Feb-17	Dry	
15-Mar-17	Dry	
6-Apr-17	Dry	
13-Apr-17	Dry	
27-May-17	Dry	
18-Jun-17	Dry	
3-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	Dry	
23-Sep-17	Dry	
19-Oct-17	Dry	
25-Nov-17	Dry	
24-Dec-17	Dry	
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	
8-Apr-18	Dry	
21-Apr-18	Dry	
16-May-18	Dry	
24-Jun-18	Dry	

MB 68B		
Date	Datum =	365.64
	(m bgl)	(m AHD)
25-Jun-10	Dry	
18-Sep-10	Dry	
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	Dry	
6-Mar-11	Dry	
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	Dry	
24-Jul-11	Dry	
8-Aug-11	Dry	
2-Sep-11	Dry	
15-Sep-11	Dry	
29-Oct-11	Dry	
10-Nov-11	Dry	
11-Dec-11	Dry	
21-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	Dry	
15-Mar-12	Dry	
14-Apr-12	Dry	
16-May-12	Dry	
9-Jun-12	Dry	
21-Jun-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	Dry	
15-Feb-13	Dry	
15-Mar-13	Dry	
15-Apr-13	Dry	
15-May-13	Dry	
15-Jun-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	Dry	
31-Mar-14	Dry	
8-Apr-14	Dry	
21-May-14	Dry	
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
12-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
9-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
23-Mar-15	Dry	
25-Apr-15	TSF 3 Lift	
9-May-15	TSF 3 Lift	
6-Jun-15	TSF3 Lift	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	Dry	
24-Sep-15	Dry	
8-Oct-15	Dry	
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
16-Apr-16	Dry	
17-Jun-16	Dry	
26-Jun-16	Dry	
29-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
2-Oct-16	Dry	
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
12-Feb-17	Dry	
15-Mar-17	Dry	
6-Apr-17	Dry	
13-Apr-17	Dry	
27-May-17	Dry	
18-Jun-17	Dry	
3-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	Dry	
23-Sep-17	Dry	
19-Oct-17	Dry	
25-Nov-17	Dry	
24-Dec-17	Dry	
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	
8-Apr-18	Dry	
21-Apr-18	Dry	
16-May-18	Dry	
24-Jun-18	Dry	

MB 63		
Date	Datum = (m bgl)	358.00 (m AHD)
12-Feb-17	17.75	340.25
15-Mar-17	17.75	340.25
7-Apr-17	16.83	341.17
13-Apr-17	16.83	341.17
26-May-17	16.84	341.16
16-Jun-17	16.95	341.05
1-Jul-17	17.01	340.99
28-Jul-17	17.01	340.99
17-Aug-17	17.33	340.67
21-Sep-17	17.45	340.55
22-Sep-17	17.45	340.55
18-Oct-17	17.70	340.30
27-Nov-17	17.67	340.33
23-Dec-17	17.76	340.24
31-Jan-18	17.88	340.12
22-Feb-18	17.85	340.15
17-Mar-18	17.98	340.02
7-Apr-18	17.99	340.01
20-Apr-18	17.94	340.06
16-May-18	18.01	339.99
24-Jun-18	17.96	340.04
14-Jul-18	No Access TSF3 Work	
18-Jul-18	No Access TSF3 Work	
24-Aug-18	17.94	340.06
14-Oct-18	18.14	339.86
25-Oct-18	18.14	339.86
25-Nov-18	18.13	339.87
29-Dec-18	18.19	339.81
24-Jan-19	18.21	339.79
12-Feb-19	18.27	339.73
15-Feb-19	18.27	339.73
18-Mar-19	18.25	339.75
21-Apr-19	18.26	339.74
9-May-19	18.15	339.85
11-Jul-19	18.11	339.89
15-Aug-19	18.15	339.85
17-Aug-19	18.15	339.85
13-Sep-19	18.27	339.73
4-Oct-19	18.32	339.68
10-Nov-19	18.42	339.58
10-Dec-19	18.51	339.49
11-Jan-20	18.61	339.39
1-Feb-20	18.65	339.35
6-Feb-20	7.76	350.24
5-Mar-20	18.54	339.46
16-Apr-20	18.55	339.45
23-May-20	No access	
4-Jul-20	No access	
29-Aug-20	No access	
12-Sep-20	No access	
25-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
21-Nov-20	No access	
18-Jan-21	No access	
13-Feb-21	18.89	339.11
12-Mar-21	No access	
9-May-21	No access	
8-Jun-21	No access	
15-Jul-21	No access	
13-Aug-21	No access	
10-Sep-21	No access	
12-Oct-21	No access	
19-Nov-21	No access	
20-Nov-21	No access	
17-Dec-21	No access	
16-Jan-22	No access	
16-Feb-22	No access	
25-Mar-22	No access	
22-Apr-22	No access	
15-May-22	No access	
21-Jun-22	No access	
28-Jul-22	No access	
28-Aug-22	No access	
23-Sep-22	No access	
22-Oct-22	No access	
19-Nov-22	No access	
29-Dec-22	No access	
15-Jan-23	No access	
15-Feb-23	No access	
13-Mar-23	No access	
20-Apr-23	No access	
6-May-23	No access	
17-Jun-23	No access	
12-Jul-23	No access	
27-Aug-23	No access	
15-Sep-23	No access	
15-Oct-23	No access	
17-Nov-23	No access	
29-Dec-23	No access	
30-Jan-24	No access	
25-Feb-24	No access	
23-Mar-24	No access	
15-Apr-24	No access	
29-May-24	No access	
15-Jun-24	No access	
15-Jul-24	No access	
15-Aug-24	No access	
29-Sep-24	No access	
16-Oct-24	No access	
15-Nov-24	No access	
13-Dec-24	No access	

MB 64		
Date	Datum = (m bgl)	355.70 (m AHD)
16-Jun-17	21.93	333.77
2-Jul-17	21.95	333.75
28-Jul-17	21.95	333.75
17-Aug-17	21.99	333.71
22-Sep-17	22.02	333.68
23-Sep-17	22.02	333.68
18-Oct-17	22.02	333.68
27-Nov-17	22.04	333.66
23-Dec-17	22.07	333.63
1-Feb-18	22.16	333.54
22-Feb-18	22.28	333.42
17-Mar-18	22.22	333.48
7-Apr-18	22.21	333.49
21-Apr-18	22.21	333.49
16-May-18	22.17	333.53
24-Jun-18	22.64	333.06
14-Jul-18	22.40	333.30
19-Jul-18	22.14	333.56
24-Aug-18	22.25	333.45
14-Oct-18	22.30	333.40
27-Oct-18	22.30	333.40
25-Nov-18	22.24	333.46
29-Dec-18	22.56	333.14
24-Jan-19	22.36	333.34
14-Feb-19	22.35	333.35
15-Feb-19	22.35	333.35
18-Mar-19	22.42	333.28
21-Apr-19	22.47	333.23
10-May-19	22.42	333.28
11-Jul-19	22.48	333.22
16-Aug-19	22.49	333.21
17-Aug-19	22.49	333.21
13-Sep-19	22.56	333.14
4-Oct-19	22.55	333.15
11-Nov-19	22.61	333.09
10-Dec-19	22.64	333.06
11-Jan-20	22.67	333.03
3-Feb-20	22.69	333.01
6-Feb-20	22.69	333.01
5-Mar-20	22.74	332.96
16-Apr-20	22.73	332.97
23-May-20	22.72	332.98
4-Jul-20	22.70	333.00
29-Aug-20	22.77	332.93
12-Sep-20	22.73	332.97
27-Sep-20	22.75	332.95
23-Oct-20	22.82	332.88
10-Nov-20	23.84	331.86
21-Nov-20	22.82	332.88
18-Jan-21	22.88	332.82
13-Feb-21	22.90	332.80
12-Mar-21	22.90	332.80
9-May-21	23.05	332.65
21-May-21	22.87	332.83
8-Jun-21	22.85	332.85
15-Jul-21	22.87	332.83
13-Aug-21	22.84	332.86
10-Sep-21	22.82	332.88
12-Oct-21	25.95	329.75
19-Nov-21	22.99	332.71
20-Nov-21	22.99	332.71
17-Dec-21	22.97	332.73
16-Jan-22	23.00	332.70
16-Feb-22	23.05	332.65
25-Mar-22	23.04	332.66
22-Apr-22	23.06	332.64
15-May-22		
21-Jun-22	23.08	332.62
28-Jul-22	23.11	332.59
28-Aug-22	23.15	332.55
23-Sep-22	23.13	332.57
22-Oct-22	23.16	332.54
19-Nov-22	23.19	332.51
29-Dec-22	23.18	332.52
15-Jan-23	23.22	332.48
15-Feb-23	23.25	332.45
13-Mar-23	24.26	331.44
20-Apr-23	23.22	332.48
6-May-23	23.19	332.51
17-Jun-23	23.19	332.51
12-Jul-23	23.23	332.47
27-Aug-23	23.24	332.46
15-Sep-23	23.23	332.47
15-Oct-23	23.27	332.43
17-Nov-23	23.29	332.41
29-Dec-23	23.33	332.37
30-Jan-24	23.33	332.37
25-Feb-24	23.32	332.38
23-Mar-24	23.36	332.34
15-Apr-24	23.38	332.32
29-May-24	23.34	332.36
15-Jun-24	23.34	332.36
15-Jul-24	23.30	332.40
15-Aug-24	23.31	332.39
29-Sep-24	23.28	332.42
16-Oct-24	23.28	332.42
15-Nov-24	23.35	332.35
13-Dec-24	23.31	332.39

MB 65		
Date	Datum = (m bgl)	356.80 (m AHD)
2-Jul-17	25.71	331.09
28-Jul-17	25.71	331.09
17-Aug-17	24.85	331.95
22-Sep-17	23.86	332.94
24-Sep-17	23.86	332.94
18-Oct-17	24.89	331.91
27-Nov-17	24.93	331.87
23-Dec-17	24.92	331.88
1-Feb-18	25.05	331.75
22-Feb-18	25.11	331.69
17-Mar-18	25.11	331.69
7-Apr-18	25.12	331.68
21-Apr-18	24.58	332.22
16-May-18	24.10	332.70
24-Jun-18	23.79	333.01
14-Jul-18	24.03	332.77
19-Jul-18	24.03	332.77
24-Aug-18	24.84	331.96
14-Oct-18	25.16	331.64
28-Oct-18	25.16	331.64
25-Nov-18	25.22	331.58
29-Dec-18	24.84	331.96
24-Jan-19	24.62	332.18
14-Feb-19	24.75	332.05
15-Feb-19	24.75	332.05
18-Mar-19	25.34	331.46
21-Apr-19	25.11	331.69
11-May-19	25.34	331.46
11-Jul-19	25.49	331.31
16-Aug-19	25.52	331.28
17-Aug-19	25.52	331.28
13-Sep-19	25.61	331.19
4-Oct-19	25.60	331.20
11-Nov-19	25.55	331.25
10-Dec-19	25.74	331.06
11-Jan-20	25.72	331.08
3-Feb-20	25.79	331.01
6-Feb-20	25.79	331.01
5-Mar-20	25.68	331.12
16-Apr-20	25.70	331.10
22-May-20	25.65	331.15
4-Jul-20	25.78	331.02
29-Aug-20	25.76	331.04
12-Sep-20	25.79	331.01
27-Sep-20	25.81	330.99
23-Oct-20	25.88	330.92
10-Nov-20	25.92	330.88
21-Nov-20	24.88	331.92
18-Jan-21	25.91	330.89
13-Feb-21	26.03	330.77
12-Mar-21	26.07	330.73
9-May-21	25.98	330.82
21-May-21	26.10	330.70
8-Jun-21	26.10	330.70
15-Jul-21	26.26	330.54
13-Aug-21	26.20	330.60
10-Sep-21	26.26	330.54
12-Oct-21	26.32	330.48
19-Nov-21	26.38	330.42
20-Nov-21	26.38	330.42
17-Dec-21	26.34	330.46
16-Jan-22	26.38	330.42
16-Feb-22	26.42	330.38
25-Mar-22	26.42	330.38
22-Apr-22	26.44	330.36
15-May-22		
21-Jun-22	26.52	330.28
28-Jul-22	26.54	330.26
28-Aug-22	26.52	330.28
23-Sep-22	26.55	330.25
22-Oct-22	26.61	330.19
19-Nov-22	26.70	330.10
29-Dec-22	26.64	330.16
15-Jan-23	26.73	330.07
15-Feb-23	36.76	320.04
13-Mar-23	26.76	330.04
20-Apr-23	36.74	320.06
6-May-23	26.24	330.56
17-Jun-23	26.24	330.56
12-Jul-23	26.74	330.06
27-Aug-23	25.98	330.82
15-Sep-23	26.08	330.72
15-Oct-23	26.20	330.60
17-Nov-23	26.48	330.32
29-Dec-23	26.34	330.46
30-Jan-24	26.53	330.27
25-Feb-24	36.16	320.64
23-Mar-24	36.06	320.74
15-Apr-24	25.98	330.82
29-May-24	25.78	331.02
15-Jun-24	25.78	331.02
15-Jul-24	25.96	330.84
15-Aug-24	26.13	330.67
29-Sep-24	26.13	330.67
16-Oct-24	26.13	330.67
15-Nov-24	26.18	330.62
13-Dec-24	26.19	330.61

MB 67		
Date	Datum = (m bgl)	369.57 (m AHD)
24-Dec-17	63.89	305.68
1-Feb-18	63.98	305.59
22-Feb-18	63.99	305.58
16-Mar-18	64.14	305.43
8-Apr-18	65.12	304.45
21-Apr-18	64.14	305.43
16-May-18	65.45	304.12
24-Jun-18	64.28	305.29
14-Jul-18	64.28	305.29
19-Jul-18	64.28	305.29
21-Aug-18	64.27	305.30
14-Oct-18	64.44	305.13
28-Oct-18	64.44	305.13
24-Nov-18	64.51	305.06
29-Dec-18	64.56	305.01
22-Jan-19	64.59	304.98
14-Feb-19	64.65	304.92
21-Mar-19	64.67	304.90
19-Apr-19	64.91	304.66
11-May-19	64.93	304.64
13-Jul-19	65.08	304.49
16-Aug-19	65.05	304.52
17-Aug-19	65.05	304.52
11-Sep-19	65.09	304.48
3-Oct-19	65.11	304.46
9-Nov-19	65.28	304.29
15-Nov-19	65.23	304.34
10-Dec-19	65.32	304.25
11-Jan-20	65.43	304.14
31-Jan-20	65.51	304.06
6-Feb-20	65.51	304.06
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
21-Nov-20	No access	
1-Jan-21	66.43	303.14
16-Feb-21	66.57	303.00
13-Mar-21	66.87	302.70
20-May-21	66.89	302.68
21-Jun-21	66.72	302.85
18-Jul-21	67.05	302.52
26-Aug-21	67.10	302.47
9-Sep-21	67.65	301.92
8-Oct-21	67.96	301.61
6-Nov-21	67.33	302.24
18-Nov-21	67.33	302.24
17-Dec-21	67.48	302.09
16-Jan-22	67.55	302.02
16-Feb-22	67.70	301.87
25-Mar-22	67.82	301.75
22-Apr-22	67.95	301.62
15-May-22		
21-Jun-22	67.77	301.80
28-Jul-22	68.13	301.44
28-Aug-22	68.10	301.47
23-Sep-22	68.26	301.31
22-Oct-22	68.28	301.29
19-Nov-22	68.43	301.14
29-Dec-22	68.50	301.07
15-Jan-23	68.63	300.94
15-Feb-23	68.75	300.82
13-Mar-23	67.83	301.74
20-Apr-23	68.95	300.62
6-May-23	69.10	300.47
17-Jun-23	69.10	300.47
12-Jul-23	68.74	300.83
27-Aug-23	69.09	300.48
15-Sep-23	69.08	300.49
15-Oct-23	69.16	300.41
17-Nov-23	69.29	300.28
29-Dec-23	69.41	300.16
30-Jan-24	69.44	300.13
25-Feb-24	69.53	300.04
23-Mar-24	69.64	299.93
15-Apr-24	69.75	299.82
29-May-24	69.43	300.14
15-Jun-24	69.43	300.14
15-Jul-24	69.89	299.68
15-Aug-24	70.23	299.34
29-Sep-24	70.03	299.54
16-Oct-24	70.03	299.54
15-Nov-24	70.31	299.26
13-Dec-24	70.32	299.25

MB 68A		
Date	Datum = (m bgl)	365.56 (m AHD)
14-Jul-18	Dry	
19-Jul-18	Dry	
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	Dry	
22-Jan-19	Dry	
14-Feb-19	Dry	
21-Mar-19	Dry	
19-Apr-19	Dry	
11-May-19	Dry	
13-Jul-19	Dry	
16-Aug-19	Dry	
17-Aug-19	Dry	
11-Sep-19	Dry	
3-Oct-19	Dry	
9-Nov-19	Dry	
15-Nov-19	Dry	
10-Dec-19	Dry	
11-Jan-20	Dry	
31-Jan-20	Dry	
06-Feb-20	Dry	
19-Mar-20	Dry	
22-May-20	Dry	
04-Jul-20	Dry	
27-Aug-20	Dry	
11-Sep-20	Dry	
26-Sep-20	Dry	
23-Oct-20	Dry	
10-Nov-20	Dry	
01-Jan-21	Dry	
16-Feb-21	Dry	
13-Mar-21	Dry	
20-May-21	Dry	
21-Jun-21	Dry	
18-Jul-21	Dry	
26-Aug-21	Dry	
09-Sep-21	Dry	
08-Oct-21	Dry	
06-Nov-21	Dry	
18-Nov-21	Dry	
17-Dec-21	Dry	
16-Jan-22	Dry	
16-Feb-22	Dry	
25-Mar-22	Dry	
22-Apr-22	Dry	
15-May-22	Dry	
21-Jun-22	Dry	
18-Jul-22	Dry	
28-Aug-22	Dry	
23-Sep-22	Dry	
22-Oct-22	Dry	
19-Nov-22	Dry	
29-Dec-22	Dry	
15-Jan-23	Dry	
15-Feb-23	Dry	
13-Mar-23	Dry	
20-Apr-23	Dry	
6-May-23	Dry	
17-Jun-23	Dry	
12-Jul-23	Dry	
27-Aug-23	Dry	
15-Sep-23	Dry	
15-Oct-23	Dry	
17-Nov-23	Dry	
29-Dec-23	Dry	
30-Jan-24	Dry	
25-Feb-24	Dry	
23-Mar-24	Dry	
15-Apr-24	Dry	
29-May-24	Dry	
15-Jun-24	Dry	
15-Jul-24	Dry	
15-Aug-24	Dry	
29-Sep-24	Dry	
16-Oct-24	Dry	
15-Nov-24	Dry	
13-Dec-24	Dry	

MB 68B		
Date	Datum = (m bgl)	365.64 (m AHD)
14-Jul-18	Dry	
19-Jul-18	Dry	
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	Dry	
22-Jan-19	Dry	
14-Feb-19	Dry	
21-Mar-19	Dry	
19-Apr-19	Dry	
11-May-19	Dry	
13-Jul-19	Dry	
16-Aug-19	Dry	
17-Aug-19	Dry	
11-Sep-19	Dry	
3-Oct-19	Dry	
9-Nov-19	Dry	
15-Nov-19	Dry	
10-Dec-19	Dry	
11-Jan-20	Dry	
31-Jan-20	Dry	
6-Feb-20	Dry	
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
21-Nov-20	No access	
1-Jan-21	Dry	
16-Feb-21	Dry	
13-Mar-21	Dry	
20-May-21	Dry	
21-Jun-21	Dry	
18-Jul-21	Dry	
18-Nov-21	Dry	
17-Dec-21	Dry	
24-Mar-22	Dry	
1-Jul-22	Dry	
22-Sep-22	Dry	
2-Dec-22	Dry	

MB 68C		
Date	Datum =	365.80
	(m bgl)	(m AHD)
25-Jun-10	Not Measured	
18-Sep-10	8.27	357.53
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	Dry	
6-Mar-11	Dry	
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	Dry	
24-Jul-11	Dry	
8-Aug-11	Dry	
2-Sep-11	Dry	
15-Sep-11	Dry	
29-Oct-11	Dry	
10-Nov-11	Dry	
11-Dec-11	8.09	357.71
21-Jan-12	7.90	357.90
15-Feb-12	7.81	357.99
4-Mar-12	7.77	358.03
15-Mar-12	Dry	
14-Apr-12	7.72	358.08
16-May-12	7.79	358.01
9-Jun-12	7.93	357.87
21-Jun-12	7.75	358.05
15-Jul-12	7.80	358.00
15-Aug-12	7.82	357.98
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	Dry	
15-Feb-13	Dry	
15-Mar-13	Dry	
14-Apr-13	8.12	357.68
15-Apr-13	8.12	357.68
12-May-13	8.11	357.69
15-May-13	8.11	357.69
9-Jun-13	8.18	357.62
15-Jun-13	8.18	357.62
17-Jun-13	8.18	357.62
15-Jul-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	Dry	
31-Mar-14	Dry	
8-Apr-14	Dry	
21-May-14	Dry	
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
12-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
9-Dec-14	Dry	
15-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
23-Mar-15	Dry	
25-Apr-15	TSF 3 Lift	
9-May-15	TSF 3 Lift	
6-Jun-15	TSF3 Lift	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	Dry	
24-Sep-15	Dry	
8-Oct-15	Dry	
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
16-Apr-16	Dry	
17-Jun-16	Dry	
26-Jun-16	Dry	
29-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
2-Oct-16	Dry	
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
15-Mar-17	Dry	
6-Apr-17	Dry	
13-Apr-17	Dry	
27-May-17	Dry	
18-Jun-17	Dry	
3-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	Dry	
23-Sep-17	Dry	
19-Oct-17	Dry	
25-Nov-17	Dry	
24-Dec-17	Dry	
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	
8-Apr-18	Dry	
21-Apr-18	Dry	
16-May-18	Dry	
24-Jun-18	Dry	

MB 69		
Date	Datum =	365.08
	(m bgl)	(m AHD)
25-Jun-10	Dry	
18-Sep-10	Dry	
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	Dry	
6-Mar-11	Dry	
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	Dry	
24-Jul-11	Dry	
8-Aug-11	Dry	
2-Sep-11	Dry	
15-Sep-11	Dry	
29-Oct-11	Dry	
10-Nov-11	Dry	
11-Dec-11	Dry	
21-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	Dry	
15-Mar-12	Dry	
14-Apr-12	Dry	
16-May-12	Dry	
21-Jun-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	75.28	289.80
14-Jan-13	75.28	289.80
15-Feb-13	g tape broken	
15-Mar-13	Dry	
15-Apr-13	Dry	
15-May-13	Dry	
15-Jun-13	Dry	
15-Jul-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	Dry	
31-Mar-14	Dry	
8-Apr-14	Dry	
21-May-14	Dry	
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
12-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
9-Dec-14	Dry	
15-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
23-Mar-15	Dry	
25-Apr-15	TSF 3 Lift	
9-May-15	TSF 3 Lift	
6-Jun-15	TSF3 Lift	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	Dry	
24-Sep-15	Dry	
8-Oct-15	Dry	
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
16-Apr-16	Dry	
17-Jun-16	Dry	
26-Jun-16	Dry	
29-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
2-Oct-16	Dry	
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
15-Mar-17	Dry	
6-Apr-17	Dry	
13-Apr-17	Dry	
27-May-17	Dry	
18-Jun-17	Dry	
3-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	Dry	
23-Sep-17	Dry	
19-Oct-17	Dry	
25-Nov-17	Dry	
24-Dec-17	Dry	
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	
8-Apr-18	Dry	
21-Apr-18	Dry	
16-May-18	Dry	
24-Jun-18	Dry	

MB 70A		
Date	Datum =	365.28
	(m bgl)	(m AHD)
27-Jun-10	105.14	260.14
18-Sep-10	105.83	259.45
16-Oct-10	105.30	259.98
12-Nov-10	105.40	259.88
11-Dec-10	105.51	259.77
23-Jan-11	Dry	
6-Mar-11	105.50	259.78
17-Mar-11	105.45	259.83
13-Apr-11	105.60	259.68
11-Jun-11	105.78	259.50
21-Jun-11	105.77	259.51
24-Jul-11	105.80	259.48
8-Aug-11	105.78	259.50
2-Sep-11	106.18	259.10
15-Sep-11	106.09	259.19
29-Oct-11	106.12	259.16
10-Nov-11	106.15	259.13
11-Dec-11	106.19	259.09
21-Jan-12	106.11	259.17
15-Feb-12	106.18	259.10
4-Mar-12	106.93	258.35
15-Mar-12	Lack of Water	
14-Apr-12	106.87	258.41
16-May-12	107.46	257.82
21-Jun-12	107.40	257.88
15-Jul-12	107.42	257.86
15-Aug-12	107.40	257.88
15-Sep-12	106.89	258.39
15-Oct-12	106.84	258.44
15-Dec-12	106.00	259.28
13-Jan-13	107.29	257.99
14-Jan-13	109.29	255.99
15-Feb-13	g tape broken	
12-Mar-13	107.28	258.00
15-Mar-13	107.28	258.00
20-Mar-13	107.24	258.04
14-Apr-13	107.26	258.02
15-Apr-13	107.26	258.02
12-May-13	107.21	258.07
15-May-13	107.21	258.07
9-Jun-13	108.27	257.01
15-Jun-13	108.27	257.01
17-Jun-13	108.27	257.01
10-Jul-13	108.29	256.99
15-Jul-13	108.29	256.99
15-Aug-13	108.25	257.03
18-Aug-13	108.25	257.03
12-Sep-13	108.26	257.02
15-Sep-13	108.26	257.02
17-Dec-13	107.86	257.42
14-Mar-14	108.08	257.20
31-Mar-14	108.07	257.21
8-Apr-14	108.11	257.17
21-May-14	108.18	257.10
15-Jun-14	107.90	257.38
20-Jun-14	107.90	257.38
18-Jul-14	109.09	256.19
29-Aug-14	110.08	255.20
12-Sep-14	110.11	255.17
22-Sep-14	110.11	255.17
12-Oct-14	110.09	255.19
22-Nov-14	111.40	253.88
9-Dec-14	110.07	255.21
15-Dec-14	111.38	253.90
26-Jan-15	111.44	253.84
19-Feb-15	111.46	253.82
13-Mar-15	111.45	253.83
23-Mar-15	111.42	253.86
25-Apr-15	112.12	253.16
9-May-15	111.87	253.41
6-Jun-15	TSF3 Lift	
4-Jul-15	111.58	253.70
16-Jul-15	111.58	253.70
16-Aug-15	110.69	254.59
24-Sep-15	110.67	254.61
8-Oct-15	110.70	254.58
20-Oct-15	110.70	254.58
5-Nov-15	110.36	254.92
6-Dec-15	110.53	254.75
16-Jan-16	110.48	254.80
14-Feb-16	110.43	254.85
9-Mar-16	110.39	254.89
14-Apr-16	110.42	254.86
16-Apr-16	110.42	254.86
17-Jun-16	110.20	255.08
26-Jun-16	110.18	255.10
29-Jul-16	110.18	255.10
20-Aug-16	110.40	254.88
28-Sep-16	110.21	255.07
2-Oct-16	110.21	255.07
29-Oct-16	TSF3 Lift	
22-Jan-17	110.20	255.08
15-Mar-17	110.25	255.03
6-Apr-17	110.45	254.83
13-Apr-17	110.45	254.83
27-May-17	110.49	254.79
18-Jun-17	110.51	254.77
3-Jul-17	110.50	254.78
27-Jul-17	110.50	254.78
17-Aug-17	110.54	254.74
23-Sep-17	110.60	254.68
19-Oct-17	110.57	254.71
25-Nov-17	110.77	254.51
24-Dec-17	110.78	254.50
30-Jan-18	110.48	254.80

MB 70B		
Date	Datum =	364.96
	(m bgl)	(m AHD)
27-Jun-10	Not Measured	
18-Sep-10	Dry	
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	105.00	259.96
6-Mar-11	Dry	
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	Dry	
24-Jul-11	Dry	
8-Aug-11	Dry	
2-Sep-11	Dry	
15-Sep-11	Dry	
29-Oct-11	Dry	
10-Nov-11	Dry	
11-Dec-11	Dry	
21-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	Dry	
15-Mar-12	Dry	
14-Apr-12	Dry	
16-May-12	Dry	
9-Jun-12	Dry	
21-Jun-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	Dry	
15-Feb-13	Dry	
15-Mar-13	Dry	
15-Apr-13	Dry	
15-May-13	Dry	
15-Jun-13	Dry	
15-Jul-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	Dry	
31-Mar-14	Dry	
8-Apr-14	Dry	
21-May-14	Dry	
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
12-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
9-Dec-14	Dry	
15-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
23-Mar-15	Dry	
25-Apr-15	Dry	
9-May-15	Dry	
6-Jun-15	TSF3 Lift	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	Dry	
24-Sep-15	Dry	
8-Oct-15	Dry	
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
14-Apr-16	Dry	
16-Apr-16	Dry	
17-Jun-16	Dry	
26-Jun-16	Dry	
29-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
2-Oct-16	Dry	
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
15-Mar-17	Dry	
6-Apr-17	Dry	
13-Apr-17	Dry	
27-May-17	Dry	
18-Jun-17	Dry	
3-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	Dry	
23-Sep-17	Dry	
19-Oct-17	Dry	
25-Nov-17	Dry	
24-Dec-17	Dry	
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	
8-Apr-18	Dry	
21-Apr-18	Dry	
16-May-18	Dry	

MB 71A		
Date	Datum =	365.35
	(m bgl)	(m AHD)
27-Jun-10	62.13	303.22
18-Sep-10	62.49	302.86
16-Oct-10	62.47	302.88
12-Nov-10	62.52	302.83
11-Dec-10	62.57	302.78
23-Jan-11	62.85	302.50
6-Mar-11	63.00	302.35
17-Mar-11	62.98	302.37
13-Apr-11	63.09	302.26
11-Jun-11	63.27	302.08
21-Jun-11	63.27	302.08
24-Jul-11	73.34	292.01
8-Aug-11	63.37	301.98
2-Sep-11	63.52	301.83
15-Sep-11	63.45	301.90
29-Oct-11	63.63	301.72
10-Nov-11	63.64	301.71
11-Dec-11	63.68	301.67
21-Jan-12	63.68	301.67
15-Feb-12	63.74	301.61
4-Mar-12	63.89	301.46
15-Mar-12	63.87	301.48
16-May-12	64.09	301.26
21-Jun-12	64.19	301.16
15-Jul-12	64.11	301.24
15-Aug-12	64.10	301.25
15-Sep-12	64.30	301.05
15-Oct-12	64.25	301.10
15-Dec-12	65.09	300.26
13-Jan-13	65.09	300.26
14-Jan-13	65.09	300.26
15-Feb-13	g tape broken	
12-Mar-13	64.82	300.53
15-Mar-13	64.82	300.53
21-Mar-13	64.82	300.53
14-Apr-13	64.84	300.51
15-Apr-13	64.84	300.51
12-May-13	64.86	300.49
15-May-13	64.86	300.49
9-Jun-13	64.79	300.56
15-Jun-13	64.79	300.56
17-Jun-13	64.79	300.56
10-Jul-13	64.96	300.39
15-Jul-13	64.96	300.39
15-Aug-13	64.98	300.37
18-Aug-13	64.98	300.37
12-Sep-13	65.14	300.21
15-Sep-13	65.14	300.21
17-Dec-13	65.16	300.19
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	65.45	299.90
31-Mar-14	65.47	299.88
8-Apr-14	65.47	299.88
21-May-14	65.55	299.80
15-Jun-14	65.65	299.70
20-Jun-14	65.65	299.70
18-Jul-14	65.71	299.64
29-Aug-14	65.75	299.60
11-Sep-14	65.85	299.50
22-Sep-14	65.85	299.50
12-Oct-14	65.86	299.49
22-Nov-14	65.96	299.39
9-Dec-14	66.03	299.32
15-Dec-14	66.03	299.32
26-Jan-15	66.18	299.17
19-Feb-15	66.20	299.15
13-Mar-15	66.21	299.14
24-Mar-15	66.46	298.89
25-Apr-15	66.52	298.83
9-May-15	66.55	298.80
6-Jun-15	TSF3 Lift	
4-Jul-15	66.68	298.67
16-Jul-15	66.68	298.67
16-Aug-15	66.64	298.71
24-Sep-15	66.65	298.70
8-Oct-15	66.75	298.60
20-Oct-15	66.75	298.60
5-Nov-15	66.70	298.65
6-Dec-15	66.83	298.52
16-Jan-16	66.98	298.37
14-Feb-16	67.02	298.33
9-Mar-16	67.01	298.34
14-Apr-16	67.14	298.21
17-Jun-16	67.23	298.12
26-Jun-16	67.23	298.12
29-Jul-16	67.38	297.97
20-Aug-16	67.29	298.06
28-Sep-16	67.42	297.93
2-Oct-16	67.42	297.93
12-Jan-17	67.50	297.85
22-Jan-17	67.50	297.85
12-Feb-17	67.50	297.85
15-Mar-17	67.66	297.69
6-Apr-17	67.66	297.69
13-Apr-17	67.66	297.69
27-May-17	67.80	297.55
18-Jun-17	67.84	297.51
1-Jul-17	67.77	297.58
27-Jul-17	67.77	297.58
17-Aug-17	67.90	297.45
21-Sep-17	67.90	297.45
23-Sep-17	67.90	297.45
19-Oct-17	68.00	297.35

MB 71B		
Date	Datum =	365.31
	(m bgl)	(m AHD)
25-Jun-10	Dry	
18-Sep-10	Dry	
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	Dry	
6-Mar-11	Dry	
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	Dry	
24-Jul-11	Dry	
8-Aug-11	Dry	
2-Sep-11	Dry	
15-Sep-11	Dry	
29-Oct-11	Dry	
10-Nov-11	Dry	
11-Dec-11	Dry	
21-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	Dry	
15-Mar-12	Dry	
14-Apr-12	Dry	
16-May-12	Dry	
9-Jun-12	Dry	
21-Jun-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	Dry	
15-Feb-13	Dry	
15-Mar-13	Dry	
15-Apr-13	Dry	
15-May-13	Dry	
15-Jun-13	Dry	
15-Jul-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	Dry	
31-Mar-14	Dry	
8-Apr-14	Dry	
21-May-14	Dry	
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
11-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
9-Dec-14	Dry	
15-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
24-Mar-15	Dry	
25-Apr-15	Dry	
9-May-15	Dry	
6-Jun-15	TSF3 Lift	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	Dry	
24-Sep-15	Dry	
8-Oct-15	Dry	
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
14-Apr-16	Dry	
17-Jun-16	Dry	
26-Jun-16	Dry	
29-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
2-Oct-16	Dry	
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
12-Feb-17	Dry	
15-Mar-17	Dry	
6-Apr-17	Dry	
13-Apr-17	Dry	
27-May-17	Dry	
18-Jun-17	Dry	
1-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	Dry	
23-Sep-17	Dry	
19-Oct-17	Dry	
25-Nov-17	Dry	
24-Dec-17	Dry	
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	
8-Apr-18	Dry	
19-Apr-18	Dry	
16-May-18	Dry	

MB 68C		
Date	Datum =	365.80
	(m bgl)	(m AHD)
8-Apr-18	Dry	
21-Apr-18	Dry	
16-May-18	Dry	
24-Jun-18	Dry	
14-Jul-18	Dry	
19-Jul-18	Dry	
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	Dry	
22-Jan-19	Dry	
14-Feb-19	Dry	
5-Mar-19	Dry	
21-Mar-19	Dry	
19-Apr-19	Dry	
11-May-19	Dry	
13-Jul-19	Dry	
16-Aug-19	Dry	
17-Aug-19	Dry	
11-Sep-19	Dry	
3-Oct-19	Dry	
9-Nov-19	Dry	
15-Nov-19	Dry	
10-Dec-19	Dry	
11-Jan-20	Dry	
31-Jan-20	Dry	
6-Feb-20	Dry	
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
1-Jan-21	Dry	
16-Feb-21	Dry	
13-Mar-21	Dry	
20-May-21	Dry	
21-Jun-21	Dry	
18-Jul-21	Dry	
18-Nov-21	Dry	
17-Dec-21	Dry	
24-Mar-22	Dry	
1-Jul-22	Dry	
22-Sep-22	Dry	
2-Dec-22	Dry	

MB 69		
Date	Datum =	365.08
	(m bgl)	(m AHD)
14-Jul-18	Dry	
19-Jul-18	Dry	
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	Dry	
22-Jan-19	Dry	
14-Feb-19	Dry	
21-Mar-19	Dry	
19-Apr-19	Dry	
11-May-19	Dry	
13-Jul-19	Dry	
16-Aug-19	Dry	
17-Aug-19	Dry	
11-Sep-19	Dry	
3-Oct-19	Dry	
9-Nov-19	Dry	
15-Nov-19	Dry	
10-Dec-19	Dry	
11-Jan-20	Dry	
31-Jan-20	Dry	
6-Feb-20	Dry	
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
1-Jan-21	Dry	
16-Feb-21	Dry	
13-Mar-21	Dry	
20-May-21	Dry	
21-Jun-21	NA	
18-Jul-21	Dry	
26-Aug-21	Dry	
9-Sep-21	Dry	
8-Oct-21	Dry	
6-Nov-21	Dry	
18-Nov-21	Dry	
17-Dec-21	Dry	
16-Jan-22	Dry	
16-Feb-22	Dry	
25-Mar-22	Dry	
22-Apr-22	Dry	
15-May-22	Dry	
21-Jun-22	Dry	
28-Jul-22	Dry	
28-Aug-22	Dry	
23-Sep-22	Dry	
22-Oct-22	Dry	
19-Nov-22	Dry	
29-Dec-22	Dry	
15-Jan-23	Dry	
15-Feb-23	Dry	
13-Mar-23	Dry	
20-Apr-23	Dry	
6-May-23	Dry	
17-Jun-23	Dry	
12-Jul-23	Dry	
27-Aug-23	Dry	
15-Sep-23	Dry	
15-Oct-23	Dry	
17-Nov-23	Dry	
29-Dec-23	Dry	
30-Jan-24	Dry	
25-Feb-24	Dry	
23-Mar-24	Dry	
15-Apr-24	Dry	
29-May-24	Dry	
15-Jun-24	Dry	
15-Jul-24	Dry	
15-Aug-24	Dry	
29-Sep-24	Dry	
16-Oct-24	Dry	
15-Nov-24	Dry	
13-Dec-24	Dry	

MB 70A		
Date	Datum =	365.28
	(m bgl)	(m AHD)
22-Feb-18	110.48	254.80
16-Mar-18	110.63	254.65
8-Apr-18	110.60	254.68
21-Apr-18	110.60	254.68
16-May-18	110.58	254.70
24-Jun-18	110.80	254.48
14-Jul-18	110.63	254.65
20-Jul-18	110.63	254.65
21-Aug-18	110.77	254.51
14-Oct-18	110.64	254.64
28-Oct-18	110.67	254.61
24-Nov-18	110.75	254.53
29-Dec-18	110.29	254.99
22-Jan-19	111.39	253.89
14-Feb-19	111.35	253.93
21-Mar-19	111.38	253.90
19-Apr-19	111.83	253.45
11-May-19	112.06	253.22
13-Jul-19	112.63	252.65
16-Aug-19	112.81	252.47
17-Aug-19	112.81	252.47
11-Sep-19	113.00	252.28
3-Oct-19	113.03	252.25
9-Nov-19	113.39	251.89
15-Nov-19	113.14	252.14
10-Dec-19	113.86	251.42
11-Jan-20	113.88	251.40
31-Jan-20	114.72	250.56
6-Feb-20	114.72	250.56
19-Mar-20	No access	
22-May-20	115.35	249.93
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	114.73	250.55
23-Oct-20	No access	
10-Nov-20	114.79	250.49
20-Nov-20	114.79	250.49
1-Jan-21	115.40	249.88
16-Feb-21	116.04	249.24
11-Mar-21	115.90	249.38
20-May-21	115.70	249.58
21-Jun-21	115.55	249.73
18-Jul-21	115.41	249.87
26-Aug-21	115.27	250.01
9-Sep-21	115.28	250.00
8-Oct-21	115.92	249.36
6-Nov-21	115.92	249.36
18-Nov-21	116.14	249.14
17-Dec-21	116.09	249.19
16-Jan-22	116.12	249.16
16-Feb-22	Dry	
25-Mar-22	Dry	
22-Apr-22	116.48	248.80
15-May-22		
21-Jun-22	115.92	249.36
28-Jul-22	N/A	
28-Aug-22	115.04	250.24
23-Sep-22	116.17	249.11
22-Oct-22	116.19	249.09
19-Nov-22	117.36	247.92
29-Dec-22	117.27	248.01
15-Jan-23	118.29	246.99
15-Feb-23	118.68	246.60
13-Mar-23	118.77	246.51
20-Apr-23	118.65	246.63
6-May-23	117.74	247.54
17-Jun-23	117.74	247.54
12-Jul-23	117.25	248.03
27-Aug-23	117.03	248.25
15-Sep-23	117.67	247.61
15-Oct-23	118.08	247.20
17-Nov-23	118.74	246.54
29-Dec-23	119.25	246.03
30-Jan-24	119.31	245.97
25-Feb-24	119.71	245.57
23-Mar-24	119.73	245.55
15-Apr-24	119.79	245.49
29-May-24	119.62	245.66
15-Jun-24	119.62	245.66
15-Jul-24	119.84	245.44
15-Aug-24	119.98	245.30
29-Sep-24	119.95	245.33
16-Oct-24	119.95	245.33
15-Nov-24	Dry	
13-Dec-24	Dry	

MB 70B		
Date	Datum =	364.96
	(m bgl)	(m AHD)
24-Jun-18	Dry	
14-Jul-18	Dry	
20-Jul-18	Dry	
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	Dry	
22-Jan-19	Dry	
14-Feb-19	Dry	
21-Mar-19	Dry	
19-Apr-19	Dry	
11-May-19	Dry	
13-Jul-19	Dry	
16-Aug-19	Dry	
17-Aug-19	Dry	
11-Sep-19	Dry	
3-Oct-19	Dry	
9-Nov-19	Dry	
15-Nov-19	Dry	
10-Dec-19	Dry	
11-Jan-20	Dry	
31-Jan-20	Dry	
6-Feb-20	Dry	
19-Mar-20	No access	
22-May-20	Dry	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	Dry	
1-Jan-21	Dry	
16-Feb-21	Dry	
11-Mar-21	Dry	
20-May-21	Dry	
21-Jun-21	NA	
18-Jul-21	Dry	
18-Nov-21	Dry	
17-Dec-21	Dry	
24-Mar-22	Dry	
1-Jul-22	Dry	
22-Sep-22	Dry	
2-Dec-22	Dry	

MB 71A		
Date	Datum =	365.35
	(m bgl)	(m AHD)
25-Nov-17	68.08	297.27
24-Dec-17	68.07	297.28
30-Jan-18	68.20	297.15
22-Feb-18	68.70	296.65
16-Mar-18	68.30	297.05
8-Apr-18	68.21	297.14
19-Apr-18	68.23	297.12
16-May-18	68.45	296.90
24-Jun-18	68.52	296.83
14-Jul-18	68.47	296.88
17-Jul-18	68.47	296.88
21-Aug-18	68.62	296.73
14-Oct-18	68.62	296.73
25-Oct-18	68.62	296.73
24-Nov-18	68.73	296.62
29-Dec-18	68.79	296.56
22-Jan-19	68.87	296.48
12-Feb-19	68.90	296.45
14-Feb-19	68.90	296.45
21-Mar-19	68.98	296.37
19-Apr-19	69.12	296.23
8-May-19	69.13	296.22
13-Jul-19	69.23	296.12
14-Aug-19	69.18	296.17
17-Aug-19	69.18	296.17
11-Sep-19	69.34	296.01
3-Oct-19	69.30	296.05
9-Nov-19	69.43	295.92
15-Nov-19	69.41	295.94
16-Dec-19	69.53	295.82
11-Jan-20	69.56	295.79
1-Feb-20	69.71	295.64
6-Feb-20	69.71	295.64
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
1-Jan-21	70.34	295.01
16-Feb-21	70.42	294.93
11-Mar-21	70.54	294.81
20-May-21	70.69	294.66
21-Jun-21	70.62	294.73
18-Jul-21	70.80	294.55
26-Aug-21	70.81	294.54
9-Sep-21	No access	
8-Oct-21	70.93	294.42
6-Nov-21	No access	
18-Nov-21	Dry	
17-Dec-21	No access	
16-Jan-22	71.17	294.18
16-Feb-22	71.25	294.10
25-Mar-22	71.32	294.03
22-Apr-22	71.42	293.93
15-May-22		
21-Jun-22	71.48	293.87
28-Jul-22	71.45	293.90
28-Aug-22	71.47	293.88
23-Sep-22	71.33	294.02
22-Oct-22	71.31	294.04
19-Nov-22	71.21	294.14
29-Dec-22	71.25	294.10
15-Jan-23	71.14	294.21
15-Feb-23	71.03	294.32
13-Mar-23	70.98	294.37
20-Apr-23	80.93	284.42
6-May-23	70.60	294.75
17-Jun-23	70.60	294.75
12-Jul-23	70.33	295.02
27-Aug-23	70.18	295.17
15-Sep-23	70.01	295.34
15-Oct-23	70.03	295.32
17-Nov-23	69.93	295.42
29-Dec-23	69.97	295.38
30-Jan-24	70.01	295.34
25-Feb-24	69.95	295.40
23-Mar-24	70.06	295.29
15-Apr-24	70.14	295.21
29-May-24	69.87	295.48
15-Jun-24	69.87	295.48
15-Jul-24	70.26	295.09
15-Aug-24	70.34	295.01
29-Sep-24	70.31	295.04
16-Oct-24	70.31	295.04
15-Nov-24	70.42	294.93
13-Dec-24	70.43	294.92

MB 71B		
Date	Datum =	365.31
	(m bgl)	(m AHD)
24-Jun-18	Dry	
14-Jul-18	Dry	
17-Jul-18	Dry	
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	Dry	
22/01/2019	Dry	
12/02/2019	Dry	
14/02/2019	Dry	
21/03/2019	Dry	
19/04/2019	Dry	
8/05/2019	Dry	
13/07/2019	Dry	
14/08/2019	Dry	
17/08/2019	Dry	
11/09/2019	Dry	
3/10/2019	Dry	
9/11/2019	Dry	
15/11/2019	Dry	
16/12/2019	Dry	
11/01/2020	Dry	
1/02/2020	Dry	
6/02/2020	Dry	
19/03/2020	No access	
22/05/2020	No access	
4/07/2020	No access	
27/08/2020	No access	
11/09/2020	No access	
26/09/2020	No access	
23/10/2020	No access	
11/11/2020	No access	
1/01/2021	Dry	
16/02/2021	Dry	
11/03/2021	Dry	
20/05/2021	Dry	
21/06/2021	N/A	
18/07/2021	Dry	
18/11/2021	Dry	
17-Dec-21	Dry	
24-Mar-22	Dry	
1-Jul-22	Dry	
22-Sep-22	Dry	
2-Dec-22	Dry	

MB 71C		
Date	Datum = (m bgl)	365.30 (m AHD)
25-Jun-10	Dry	
18-Sep-10	4.30	361.00
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	Dry	
6-Mar-11	4.27	361.03
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	4.28	361.02
24-Jul-11	3.56	361.74
8-Aug-11	4.28	361.02
2-Sep-11	4.28	361.02
15-Sep-11	4.27	361.03
29-Oct-11	4.27	361.03
10-Nov-11	4.28	361.02
11-Dec-11	Dry	
21-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	4.28	361.02
15-Mar-12	4.28	361.02
16-May-12	Dry	
9-Jun-12	1.50	363.80
21-Jun-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	3.80	361.50
14-Jan-13	3.80	361.50
15-Feb-13	Dry	
12-Mar-13	3.80	361.50
15-Mar-13	3.80	361.50
21-Mar-13	3.83	361.47
14-Apr-13	3.82	361.48
15-Apr-13	3.82	361.48
12-May-13	3.79	361.51
15-May-13	3.79	361.51
15-Jun-13	Dry	
15-Jul-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	3.76	361.54
31-Mar-14	Dry	
21-May-14	3.78	361.52
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
11-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
9-Dec-14	Dry	
15-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
24-Mar-15	Dry	
25-Apr-15	4.13	361.17
9-May-15	4.29	361.01
6-Jun-15	TSF3 Lift	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	3.36	361.94
24-Sep-15	3.35	361.95
8-Oct-15	3.24	362.06
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
14-Apr-16	4.96	360.34
17-Jun-16	3.92	361.38
26-Jun-16	3.92	361.38
29-Jul-16	4.29	361.01
20-Aug-16	4.29	361.01
28-Sep-16	4.31	360.99
2-Oct-16	4.31	360.99
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
12-Feb-17	Dry	
15-Mar-17	Dry	
6-Apr-17	4.27	361.03
13-Apr-17	4.27	361.03
27-May-17	Dry	
18-Jun-17	Dry	
1-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	1.23	364.07
23-Sep-17	1.23	364.07
19-Oct-17	4.27	361.03
25-Nov-17	3.56	361.74
24-Dec-17	4.29	361.01
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	

MB 72A		
Date	Datum = (m bgl)	361.00 (m AHD)
25-Jun-10	Dry	
20-Sep-10	Dry	
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	Dry	
6-Mar-11	Dry	
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	Dry	
24-Jul-11	Dry	
8-Aug-11	Dry	
2-Sep-11	Dry	
15-Sep-11	Dry	
29-Oct-11	Dry	
10-Nov-11	Dry	
11-Dec-11	Dry	
21-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	Dry	
15-Mar-12	Dry	
14-Apr-12	Dry	
16-May-12	Dry	
9-Jun-12	Dry	
21-Jun-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	Dry	
14-Jan-13	Dry	
15-Feb-13	Dry	
15-Mar-13	Dry	
15-Apr-13	Dry	
15-May-13	Dry	
15-Jun-13	Dry	
15-Jul-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	Dry	
30-Mar-14	Dry	
8-Apr-14	Dry	
21-May-14	Dry	
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
11-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
9-Dec-14	Dry	
15-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
24-Mar-15	Dry	
25-Apr-15	Dry	
9-May-15	Dry	
6-Jun-15	Dry	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	Dry	
24-Sep-15	Dry	
8-Oct-15	Dry	
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
14-Apr-16	Dry	
17-Jun-16	Dry	
26-Jun-16	Dry	
29-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
2-Oct-16	Dry	
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
12-Feb-17	Dry	
15-Mar-17	Dry	
6-Apr-17	Dry	
13-Apr-17	Dry	
27-May-17	Dry	
18-Jun-17	Dry	
2-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	Dry	
23-Sep-17	Dry	
19-Oct-17	Dry	
25-Nov-17	Dry	
24-Dec-17	Dry	
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	
8-Apr-18	Dry	
19-Apr-18	Dry	
16-May-18	Dry	

MB 72B		
Date	Datum = (m bgl)	361.19 (m AHD)
25-Jun-10	Dry	
20-Sep-10	Dry	
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	Dry	
6-Mar-11	Dry	
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	Dry	
24-Jul-11	4.40	356.79
8-Aug-11	4.49	356.70
2-Sep-11	5.20	355.99
15-Sep-11	5.45	355.74
29-Oct-11	Dry	
10-Nov-11	Dry	
11-Dec-11	Dry	
21-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	Dry	
15-Mar-12	Dry	
14-Apr-12	Dry	
16-May-12	Dry	
9-Jun-12	Dry	
21-Jun-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	Dry	
14-Jan-13	Dry	
15-Feb-13	Dry	
15-Mar-13	Dry	
15-Apr-13	Dry	
15-May-13	Dry	
15-Jun-13	Dry	
15-Jul-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	Dry	
30-Mar-14	Dry	
8-Apr-14	Dry	
21-May-14	Dry	
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
11-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
9-Dec-14	Dry	
15-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
24-Mar-15	Dry	
25-Apr-15	Dry	
9-May-15	Dry	
6-Jun-15	Dry	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	Dry	
24-Sep-15	Dry	
8-Oct-15	Dry	
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
14-Apr-16	Dry	
17-Jun-16	Dry	
26-Jun-16	Dry	
29-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
2-Oct-16	Dry	
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
12-Feb-17	Dry	
15-Mar-17	Dry	
6-Apr-17	Dry	
13-Apr-17	Dry	
27-May-17	Dry	
18-Jun-17	Dry	
2-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	Dry	
23-Sep-17	Dry	
19-Oct-17	Dry	
25-Nov-17	Dry	
24-Dec-17	Dry	
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	
8-Apr-18	Dry	
19-Apr-18	Dry	
16-May-18	Dry	

MB 73A		
Date	Datum = (m bgl)	363.46 (m AHD)
25-Jun-10	49.37	314.09
18-Sep-10	49.59	313.87
16-Oct-10	49.55	313.91
12-Nov-10	49.58	313.88
11-Dec-10	49.73	313.73
23-Jan-11	50.83	312.63
6-Mar-11	49.90	313.56
17-Mar-11	49.82	313.64
13-Apr-11	49.97	313.49
11-Jun-11	50.01	313.45
21-Jun-11	50.16	313.30
24-Jul-11	50.13	313.33
8-Aug-11	50.33	313.13
2-Sep-11	50.35	313.11
14-Sep-11	50.23	313.23
29-Oct-11	50.40	313.06
10-Nov-11	50.41	313.05
11-Dec-11	50.54	312.92
21-Jan-12	50.57	312.89
15-Feb-12	50.56	312.90
4-Mar-12	50.67	312.79
15-Mar-12	50.65	312.81
14-Apr-12	50.73	312.73
16-May-12	50.79	312.67
21-Jun-12	50.96	312.50
15-Jul-12	50.83	312.63
15-Aug-12	50.81	312.65
15-Sep-12	51.31	312.15
15-Oct-12	56.64	306.82
15-Dec-12	51.62	311.84
13-Jan-13	52.02	311.44
14-Jan-13	52.02	311.44
15-Feb-13	Long tape broken	
12-Mar-13	51.54	311.92
15-Mar-13	51.54	311.92
20-Mar-13	51.54	311.92
14-Apr-13	50.52	312.94
15-Apr-13	50.57	312.89
12-May-13	51.64	311.82
15-May-13	51.64	311.82
9-Jun-13	51.66	311.80
15-Jun-13	51.66	311.80
17-Jun-13	51.66	311.80
10-Jul-13	51.80	311.66
15-Jul-13	51.80	311.66
15-Aug-13	51.86	311.60
18-Aug-13	51.86	311.60
12-Sep-13	51.70	311.76
15-Sep-13	51.70	311.76
17-Dec-13	51.97	311.49
14-Mar-14	52.19	311.27
30-Mar-14	52.22	311.24
8-Apr-14	52.22	311.24
21-May-14	52.33	311.13
15-Jun-14	52.42	311.04
20-Jun-14	52.42	311.04
18-Jul-14	52.78	310.68
29-Aug-14	53.50	309.96
12-Sep-14	52.63	310.83
22-Sep-14	52.63	310.83
12-Oct-14	52.61	310.85
22-Nov-14	52.73	310.73
6-Dec-14	51.81	311.65
15-Dec-14	51.81	311.65
26-Jan-15	52.90	310.56
19-Feb-15	52.93	310.53
13-Mar-15	52.93	310.53
23-Mar-15	53.12	310.34
25-Apr-15	53.21	310.25
9-May-15	53.20	310.26
6-Jun-15	53.27	310.19
4-Jul-15	53.32	310.14
16-Jul-15	53.32	310.14
16-Aug-15	53.38	310.08
24-Sep-15	53.39	310.07
8-Oct-15	53.43	310.03
20-Oct-15	53.43	310.03
5-Nov-15	53.41	310.05
6-Dec-15	53.52	309.94
16-Jan-16	53.69	309.77
14-Feb-16	53.75	309.71
9-Mar-16	52.74	310.72
13-Apr-16	53.83	309.63
17-Jun-16	53.96	309.50
26-Jun-16	53.96	309.50
29-Jul-16	53.98	309.48
20-Aug-16	53.97	309.49
28-Sep-16	54.11	309.35
2-Oct-16	54.11	309.35
29-Oct-16	TSF3 Lift	
12-Jan-17	54.22	309.24
22-Jan-17	54.22	309.24
12-Feb-17	54.25	309.21
15-Mar-17	54.31	309.15
6-Apr-17	54.31	309.15
13-Apr-17	54.31	309.15
27-May-17	54.57	308.89
18-Jun-17	54.60	308.86
2-Jul-17	55.48	307.98
27-Jul-17	55.48	307.98
17-Aug-17	54.64	308.82
21-Sep-17	54.48	308.98
23-Sep-17	54.48	308.98
19-Oct-17	54.62	308.84
25-Nov-17	54.64	308.82

MB 73B		
Date	Datum = (m bgl)	363.47 (m AHD)
25-Jun-10	Dry	
18-Sep-10	Dry	
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	Dry	
6-Mar-11	Dry	
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	Dry	
24-Jul-11	Dry	
8-Aug-11	Dry	
2-Sep-11	Dry	
14-Sep-11	Dry	
29-Oct-11	Dry	
10-Nov-11	Dry	
11-Dec-11	Dry	
21-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	Dry	
15-Mar-12	Dry	
14-Apr-12	Dry	
16-May-12	Dry	
9-Jun-12	Dry	
21-Jun-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	Dry	
14-Jan-13	Dry	
15-Feb-13	Dry	
15-Mar-13	Dry	
15-Apr-13	Dry	
15-May-13	Dry	
15-Jun-13	Dry	
15-Jul-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	Dry	
30-Mar-14	Dry	
8-Apr-14	Dry	
21-May-14	Dry	
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
12-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
6-Dec-14	Dry	
15-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
23-Mar-15	Dry	
25-Apr-15	Dry	
9-May-15	Dry	
6-Jun-15	Dry	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	Dry	
24-Sep-15	Dry	
8-Oct-15	Dry	
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
13-Apr-16	Dry	
17-Jun-16	Dry	
26-Jun-16	Dry	
29-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
2-Oct-16	Dry	
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
12-Feb-17	Dry	
15-Mar-17	Dry	
6-Apr-17	Dry	
13-Apr-17	Dry	
27-May-17	Dry	
18-Jun-17	Dry	
2-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	Dry	
23-Sep-17	Dry	
19-Oct-17	Dry	
25-Nov-17	Dry	
24-Dec-17	Dry	
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	
8-Apr-18	Dry	
19-Apr-18	Dry	
16-May-18	Dry	

MB 71C		
Date	Datum = (m bgl)	365.30 (m AHD)
8-Apr-18	Dry	
19-Apr-18	Dry	
16-May-18	Dry	
24-Jun-18	3.62	361.68
14-Jul-18	Dry	
17-Jul-18	3.68	361.62
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	3.12	362.18
22-Jan-19	Dry	
12-Feb-19	Dry	
14-Feb-19	Dry	
21-Mar-19	3.54	361.76
19-Apr-19	2.27	363.03
8-May-19	Dry	
13-Jul-19	2.72	362.58
14-Aug-19	Dry	
17-Aug-19	Dry	
11-Sep-19	Dry	
3-Oct-19	Dry	
9-Nov-19	Dry	
15-Nov-19	Dry	
16-Dec-19	Dry	
11-Jan-20	Dry	
1-Feb-20	Dry	
6-Feb-20	Dry	
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
1-Jan-21	Dry	
16-Feb-21	Dry	
11-Mar-21	Dry	
20-May-21	Dry	
21-Jun-21	Dry	
18-Jul-21	Dry	
18-Nov-21	Dry	
17-Dec-21	Dry	
24-Mar-22	Dry	
1-Jul-22	Dry	
22-Sep-22	Dry	
2-Dec-22	Dry	

MB 72A		
Date	Datum = (m bgl)	361.00 (m AHD)
24-Jun-18	Dry	
14-Jul-18	Dry	
17-Jul-18	Dry	
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	Dry	
22-Jan-19	Dry	
12-Feb-19	Dry	
14-Feb-19	Dry	
21-Mar-19	Dry	
19-Apr-19	Dry	
8-May-19	Dry	
13-Jul-19	Dry	
14-Aug-19	Dry	
17-Aug-19	Dry	
11-Sep-19	Dry	
3-Oct-19	Dry	
9-Nov-19	Dry	
15-Nov-19	Dry	
10-Dec-19	Dry	
11-Jan-20	Dry	
1-Feb-20	Dry	
6-Feb-20	Dry	
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
11-Mar-21	Dry	
20-May-21	No access	
21-Jun-21	Dry	
18-Jul-21	Dry	
18-Nov-21	Dry	
17-Dec-21	Dry	
24-Mar-22	Dry	
1-Jul-22	Dry	
22-Sep-22	Dry	
2-Dec-22	Dry	

MB 72B		
Date	Datum = (m bgl)	361.19 (m AHD)
24-Jun-18	Dry	
14-Jul-18	Dry	
17-Jul-18	Dry	
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	Dry	
22-Jan-19	Dry	
12-Feb-19	Dry	
14-Feb-19	Dry	
21-Mar-19	Dry	
19-Apr-19	Dry	
8-May-19	Dry	
13-Jul-19	Dry	
14-Aug-19	Dry	
17-Aug-19	Dry	
11-Sep-19	Dry	
3-Oct-19	Dry	
9-Nov-19	Dry	
15-Nov-19	Dry	
10-Dec-19	Dry	
11-Jan-20	Dry	
1-Feb-20	Dry	
6-Feb-20	Dry	
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
1-Jan-21	Dry	
16-Feb-21	Dry	
11-Mar-21	No access	
20-May-21	Dry	
21-Jun-21	Dry	
18-Jul-21	Dry	
18-Nov-21	Dry	
17-Dec-21	Dry	
24-Mar-22	Dry	
1-Jul-22	Dry	
22-Sep-22	Dry	
2-Dec-22	Dry	

MB 73A		
Date	Datum = (m bgl)	363.46 (m AHD)
24-Dec-17	54.65	308.81
30-Jan-18	54.85	308.61
22-Feb-18	54.77	308.69
16-Mar-18	54.89	308.57
8-Apr-18	54.94	308.52
19-Apr-18	54.93	308.53
16-May-18	55.03	308.43
24-Jun-18	55.07	308.39
14-Jul-18	55.03	308.43
16-Jul-18	55.03	308.43
21-Aug-18	55.06	308.40
14-Oct-18	55.74	307.72
24-Oct-18	55.74	307.72
24-Nov-18	55.29	308.17
29-Dec-18	55.37	308.09
22-Jan-19	55.39	308.07
12-Feb-19	55.49	307.97
14-Feb-19	55.49	307.97
21-Mar-19	55.66	307.80
19-Apr-19	55.67	307.79
8-May-19	55.68	307.78
13-Jul-19	55.82	307.64
14-Aug-19	55.70	307.76
17-Aug-19	55.70	307.76
11-Sep-19	55.80	307.66
3-Oct-19	55.38	308.08
9-Nov-19	56.04	307.42
15-Nov-19	56.06	307.40
10-Dec-19	56.14	307.32
11-Jan-20	56.23	307.23
31-Jan-20	56.24	307.22
6-Feb-20	56.24	307.22
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
1-Jan-21	57.02	306.44
16-Feb-21	57.13	306.33
11-Mar-21	57.24	306.22
20-May-21	57.42	306.04
21-Jun-21	57.37	306.09
18-Jul-21	57.58	305.88
26-Aug-21	57.60	305.86
9-Sep-21	57.65	305.81
8-Oct-21	57.73	305.73
6-Nov-21	57.79	305.67
18-Nov-21	57.69	305.77
17-Dec-21	57.88	305.58
16-Jan-22	57.81	305.65
16-Feb-22	58.07	305.39
25-Mar-22	58.17	305.29
22-Apr-22	58.30	305.16
15-May-22		
21-Jun-22	58.35	305.11
28-Jul-22	58.44	305.02
28-Aug-22	58.42	305.04
23-Sep-22	58.59	304.87
22-Oct-22	58.62	304.84
19-Nov-22	58.66	304.80
29-Dec-22	58.68	304.78
15-Jan-23	59.79	303.67
15-Feb-23	58.86	304.60
13-Mar-23	58.93	304.53
20-Apr-23	59.04	304.42
6-May-23	59.16	304.30
17-Jun-23	59.16	304.30
12-Jul-23	58.92	304.54
27-Aug-23	59.09	304.37
15-Sep-23	59.09	304.37
15-Oct-23	59.16	304.30
17-Nov-23	59.24	304.22
29-Dec-23	59.31	304.15
30-Jan-24	59.33	304.13
25-Feb-24	59.38	304.08
23-Mar-24	59.53	303.93
15-Apr-24	59.52	303.94
29-May-24	59.32	304.14
15-Jun-24	59.32	304.14
15-Jul-24	59.67	303.79
15-Aug-24	59.70	303.76
29-Sep-24	59.72	303.74
16-Oct-24	59.72	303.74
15-Nov-24	59.78	303.68
13-Dec-24	59.79	303.67

MB 73B		
Date	Datum = (m bgl)	363.47 (m AHD)
24-Jun-18	Dry	
14-Jul-18	Dry	
16-Jul-18	Dry	
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	Dry	
22-Jan-19	Dry	
12-Feb-19	Dry	
14-Feb-19	Dry	
21-Mar-19	Dry	
19-Apr-19	Dry	
8-May-19	Dry	
13-Jul-19	Dry	
14-Aug-19	Dry	
17-Aug-19	Dry	
11-Sep-19	Dry	
3-Oct-19	Dry	
9-Nov-19	Dry	
15-Nov-19	Dry	
10-Dec-19	Dry	
11-Jan-20	Dry	
31-Jan-20	Dry	
6-Feb-20	Dry	
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
1-Jan-21	Dry	
16-Feb-21	Dry	
11-Mar-21	Dry	
20-May-21	Dry	
21-Jun-21	Dry	
18-Jul-21	Dry	
18-Nov-21	Dry	
17-Dec-21	Dry	
24-Mar-22	Dry	
1-Jul-22	Dry	
22-Sep-22	Dry	
2-Dec-22	Dry	

MB 73C		
Date	Datum =	363.31
	(m bgl)	(m AHD)
25-Jun-10	Dry	
18-Sep-10	Dry	
16-Oct-10	Dry	
12-Nov-10	Dry	
11-Dec-10	Dry	
23-Jan-11	Dry	
6-Mar-11	Dry	
17-Mar-11	Dry	
13-Apr-11	Dry	
11-Jun-11	Dry	
21-Jun-11	Dry	
24-Jul-11	Dry	
8-Aug-11	Dry	
2-Sep-11	Dry	
14-Sep-11	Dry	
29-Oct-11	Dry	
10-Nov-11	Dry	
11-Dec-11	Dry	
21-Jan-12	Dry	
15-Feb-12	Dry	
4-Mar-12	Dry	
15-Mar-12	Dry	
14-Apr-12	Dry	
16-May-12	Dry	
9-Jun-12	Dry	
21-Jun-12	Dry	
15-Jul-12	Dry	
15-Aug-12	Dry	
15-Sep-12	Dry	
15-Oct-12	Dry	
15-Dec-12	Dry	
13-Jan-13	Dry	
15-Feb-13	Dry	
15-Mar-13	Dry	
15-Apr-13	Dry	
15-May-13	Dry	
15-Jun-13	Dry	
15-Jul-13	Dry	
15-Aug-13	Dry	
15-Sep-13	Dry	
12-Oct-13	No Tape	
12-Nov-13	No Tape	
17-Dec-13	Dry	
14-Mar-14	Dry	
30-Mar-14	Dry	
8-Apr-14	Dry	
21-May-14	Dry	
15-Jun-14	Dry	
20-Jun-14	Dry	
18-Jul-14	Dry	
29-Aug-14	Dry	
12-Sep-14	Dry	
22-Sep-14	Dry	
12-Oct-14	Dry	
22-Nov-14	Dry	
6-Dec-14	Dry	
15-Dec-14	Dry	
26-Jan-15	Dry	
19-Feb-15	Dry	
13-Mar-15	Dry	
23-Mar-15	Dry	
25-Apr-15	Dry	
9-May-15	Dry	
6-Jun-15	Dry	
4-Jul-15	Dry	
16-Jul-15	Dry	
16-Aug-15	Dry	
24-Sep-15	Dry	
8-Oct-15	Dry	
20-Oct-15	Dry	
5-Nov-15	Dry	
6-Dec-15	Dry	
16-Jan-16	Dry	
14-Feb-16	Dry	
9-Mar-16	Dry	
13-Apr-16	Dry	
17-Jun-16	Dry	
26-Jun-16	Dry	
29-Jul-16	Dry	
20-Aug-16	Dry	
28-Sep-16	Dry	
2-Oct-16	Dry	
29-Oct-16	Dry	
14-Jan-17	Dry	
22-Jan-17	Dry	
12-Feb-17	Dry	
15-Mar-17	Dry	
6-Apr-17	Dry	
13-Apr-17	Dry	
27-May-17	Dry	
18-Jun-17	Dry	
2-Jul-17	Dry	
27-Jul-17	Dry	
17-Aug-17	Dry	
21-Sep-17	Dry	
23-Sep-17	Dry	
19-Oct-17	Dry	
25-Nov-17	Dry	
24-Dec-17	Dry	
30-Jan-18	Dry	
22-Feb-18	Dry	
16-Mar-18	Dry	
8-Apr-18	Dry	
19-Apr-18	Dry	
16-May-18	Dry	

MB 74		
Date	Datum =	369.81
	(m bgl)	(m AHD)
25-Jun-10	49.75	320.06
18-Sep-10	50.00	319.81
16-Oct-10	50.09	319.72
12-Nov-10	50.19	319.62
11-Dec-10	50.25	319.56
23-Jan-11	50.62	319.19
6-Mar-11	50.69	319.12
17-Mar-11	50.59	319.22
13-Apr-11	50.69	319.12
11-Jun-11	50.78	319.03
21-Jun-11	50.83	318.98
24-Jul-11	50.82	318.99
8-Aug-11	50.87	318.94
2-Sep-11	50.96	318.85
14-Sep-11	50.83	318.98
29-Oct-11	51.10	318.71
10-Nov-11	51.10	318.71
11-Dec-11	51.03	318.78
21-Jan-12	51.50	318.31
15-Feb-12	51.09	318.72
4-Mar-12	51.19	318.62
15-Mar-12	51.25	318.56
14-Apr-12	51.29	318.52
16-May-12	51.30	318.51
21-Jun-12	51.47	318.34
15-Jul-12	51.40	318.41
15-Aug-12	51.44	318.37
15-Sep-12	51.60	318.21
15-Oct-12	51.70	318.11
15-Dec-12	51.65	318.16
13-Jan-13	51.82	317.99
14-Jan-13	51.82	317.99
15-Feb-13	Long tape broken	
12-Mar-13	51.97	317.84
15-Mar-13	51.97	317.84
20-Mar-13	51.97	317.84
14-Apr-13	50.79	319.02
15-Apr-13	50.79	319.02
12-May-13	52.08	317.73
15-May-13	52.08	317.73
9-Jun-13	52.10	317.71
15-Jun-13	52.10	317.71
17-Jun-13	52.10	317.71
10-Jul-13	52.35	317.46
15-Jul-13	52.35	317.46
15-Aug-13	52.38	317.43
18-Aug-13	52.38	317.43
12-Sep-13	52.07	317.74
15-Sep-13	52.07	317.74
17-Dec-13	52.47	317.34
14-Mar-14	52.71	317.10
29-Mar-14	52.70	317.11
8-Apr-14	52.70	317.11
21-May-14	52.94	316.87
15-Jun-14	53.03	316.78
20-Jun-14	53.03	316.78
18-Jul-14	53.07	316.74
29-Aug-14	53.11	316.70
12-Sep-14	53.22	316.59
22-Sep-14	53.22	316.59
12-Oct-14	53.23	316.58
22-Nov-14	53.32	316.49
6-Dec-14	53.37	316.44
15-Dec-14	53.37	316.44
26-Jan-15	53.55	316.26
19-Feb-15	53.64	316.17
13-Mar-15	54.65	315.16
23-Mar-15	53.85	315.96
25-Apr-15	55.97	313.84
9-May-15	53.98	315.83
6-Jun-15	54.05	315.76
3-Jul-15	54.06	315.75
16-Jul-15	56.06	313.75
16-Aug-15	54.15	315.66
24-Sep-15	54.15	315.66
8-Oct-15	54.15	315.66
20-Oct-15	54.15	315.66
5-Nov-15	54.12	315.69
6-Dec-15	54.25	315.56
16-Jan-16	54.35	315.46
14-Feb-16	54.40	315.41
9-Mar-16	54.40	315.41
13-Apr-16	54.45	315.36
17-Jun-16	54.58	315.23
26-Jun-16	54.58	315.23
29-Jul-16	54.57	315.24
20-Aug-16	54.58	315.23
28-Sep-16	54.69	315.12
2-Oct-16	54.69	315.12
12-Jan-17	54.83	314.98
22-Jan-17	54.83	314.98
12-Feb-17	54.81	315.00
15-Mar-17	54.97	314.84
6-Apr-17	54.97	314.84
13-Apr-17	54.97	314.84
27-May-17	55.15	314.66
18-Jun-17	55.18	314.63
2-Jul-17	56.02	313.79
27-Jul-17	56.02	313.79
17-Aug-17	55.23	314.58
21-Sep-17	55.10	314.71
23-Sep-17	55.10	314.71
19-Oct-17	55.19	314.62
25-Nov-17	55.20	314.61
24-Dec-17	55.21	314.60

MB 75		
Date	Datum =	357.65
	(m bgl)	(m AHD)
23-Mar-13	47.45	310.20
7-Jun-13	47.66	309.99
28-Sep-13	48.89	308.76
1-Apr-14	48.34	309.31
21-Jun-14	48.38	309.27
13-Sep-14	48.60	309.05
10-Dec-14	48.84	308.81
28-Mar-15	49.16	308.49
1-Jul-15	49.31	308.34
10-Oct-15	49.49	308.16
17-Jan-16	50.69	306.96
13-Apr-16	49.91	307.74
18-Jun-16	50.00	307.65
2-Oct-16	50.17	307.48
14-Jan-17	50.39	307.26
9-Apr-17	50.61	307.04
3-Jul-17	50.67	306.98
24-Sep-17	50.62	307.03
2-Feb-18	51.90	305.75
22-Apr-18	51.08	306.57
19-Jul-18	51.30	306.35
29-Oct-18	51.43	306.22
15-Feb-19	51.67	305.98
11-May-19	51.90	305.75
16-Aug-19	51.99	305.66
7-Nov-19	52.21	305.44
4-Feb-20	51.15	306.50
21-May-20	51.60	306.05
24-Sep-20	51.53	306.12
20-Nov-20	51.69	305.96
13-Mar-21	52.01	305.64
19-May-21	52.05	305.60
24-Mar-22	52.63	305.02
22-Sep-22	52.83	304.82
31-May-24	49.11	308.54
24-Aug-24		
16-Nov-24		

MB 87		
Date	Datum =	344.88
	(m bgl)	(m AHD)
29-Apr-23	12.16	332.72
1-May-23	12.14	332.74
5-Dec-24	12.09	332.79

MB 89		
Date	Datum =	354.55
	(m bgl)	(m AHD)
28-Apr-23	23.13	331.42
2-May-23	23.14	331.41
5-Dec-24	24.07	330.48

MB 90		
Date	Datum =	348.13
	(m bgl)	(m AHD)
29-Apr-23	15.88	332.25
1-May-23	15.87	332.27
5-Dec-24	16.31	331.82

MB 91		
Date	Datum =	361.48
	(m bgl)	(m AHD)
29-Apr-23	28.34	333.14
2-May-23	28.31	333.17
5-Dec-24	30.43	331.05

MB 73C		
Date	Datum =	363.31
	(m bgl)	(m AHD)
24-Jun-18	Dry	
14-Jul-18	Dry	
16-Jul-18	Dry	
21-Aug-18	Dry	
14-Oct-18	Dry	
24-Nov-18	Dry	
29-Dec-18	Dry	
22-Jan-19	Dry	
12-Feb-19	Dry	
14-Feb-19	Dry	
21-Mar-19	Dry	
19-Apr-19	Dry	
8-May-19	Dry	
13-Jul-19	Dry	
14-Aug-19	Dry	
17-Aug-19	Dry	
11-Sep-19	Dry	
3-Oct-19	Dry	
9-Nov-19	Dry	
15-Nov-19	Dry	
10-Dec-19	Dry	
11-Jan-20	Dry	
31-Jan-20	Dry	
6-Feb-20	Dry	
19-Mar-20	-	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
1-Jan-21	Dry	
16-Feb-21	Dry	
11-Mar-21	6.44	356.87
20-May-21	Dry	
21-Jun-21	N/A	
18-Jul-21	Dry	
18-Nov-21	Dry	
17-Dec-21	Dry	
24-Mar-22	Dry	
1-Jul-22	Dry	
22-Sep-22	Dry	
2-Dec-22	Dry	

MB 74		
Date	Datum =	369.81
	(m bgl)	(m AHD)
30-Jan-18	55.41	314.40
22-Feb-18	55.31	314.50
16-Mar-18	55.52	314.29
8-Apr-18	55.56	314.25
19-Apr-18	55.54	314.27
16-May-18	55.58	314.23
24-Jun-18	55.63	314.18
14-Jul-18	55.63	314.18
16-Jul-18	55.63	314.18
21-Aug-18	55.67	314.14
14-Oct-18	55.72	314.09
24-Oct-18	55.72	314.09
24-Nov-18	55.89	313.92
29-Dec-18	56.01	313.80
22-Jan-19	55.97	313.84
12-Feb-19	56.07	313.74
14-Feb-19	56.07	313.74
21-Mar-19	56.23	313.58
19-Apr-19	56.36	313.45
8-May-19	56.40	313.41
13-Jul-19	56.56	313.25
14-Aug-19	56.45	313.36
17-Aug-19	56.45	313.36
11-Sep-19	56.54	313.27
3-Oct-19	56.73	313.08
9-Nov-19	56.69	313.12
15-Nov-19	56.72	313.09
10-Dec-19	56.81	313.00
11-Jan-20	56.84	312.97
31-Jan-20	57.03	312.78
6-Feb-20	57.03	312.78
19-Mar-20	No access	
22-May-20	No access	
4-Jul-20	No access	
27-Aug-20	No access	
11-Sep-20	No access	
26-Sep-20	No access	
23-Oct-20	No access	
10-Nov-20	No access	
11-Mar-21	No access	
20-May-21	58.19	311.62
21-Jun-21	58.11	311.70
18-Jul-21	58.67	311.14
26-Aug-21	58.73	311.08
9-Sep-21	58.75	311.06
8-Oct-21	58.98	310.83
6-Nov-21	58.95	310.86
18-Nov-21	58.95	310.86
17-Dec-21	59.09	310.72
16-Jan-22	59.12	310.69
16-Feb-22	59.41	310.40
25-Mar-22	59.52	310.29
22-Apr-22	58.71	311.10
15-May-22		
21-Jun-22	58.77	311.04
28-Jul-22	59.92	309.89
28-Aug-22	59.91	309.90
23-Sep-22	60.00	309.81
22-Oct-22	30.03	339.78
19-Nov-22	60.23	309.58
29-Dec-22	60.21	309.60
15-Jan-23	60.48	309.33
15-Feb-23	60.59	309.22
13-Mar-23	60.70	309.11
20-Apr-23	60.80	309.01
6-May-23	61.02	308.79
17-Jun-23	61.02	308.79
12-Jul-23	60.88	308.93
27-Aug-23	61.11	308.70
15-Sep-23	61.10	308.71
15-Oct-23	61.17	308.64
17-Nov-23	61.28	308.53
29-Dec-23	61.52	308.29
30-Jan-24	61.55	308.26
25-Feb-24	61.54	308.27
23-Mar-24	61.58	308.23
15-Apr-24	61.64	308.17
29-May-24	61.39	308.42
15-Jun-24	61.39	308.42
15-Jul-24	60.05	309.76
15-Aug-24	42.55	327.26
29-Sep-24	45.58	324.23
16-Oct-24	45.58	324.23
15-Nov-24	Broken	
13-Dec-24	Broken	

MB 75		
Date	Datum =	357.65
	(m bgl)	(m AHD)

MB 87		
Date	Datum =	344.88
	(m bgl)	(m AHD)

MB 89		
Date	Datum =	354.55
	(m bgl)	(m AHD)

MB 90		
Date	Datum =	348.13
	(m bgl)	(m AHD)

MB 91		
Date	Datum =	361.48
	(m bgl)	(m AHD)

MB 92		
Date	Datum =	356.54
	(m bgl)	(m AHD)
29-Apr-23	23.51	333.03
2-May-23	23.36	333.18
5-Dec-24	23.51	333.03

BH5		
Date	Datum =	TBD
	(m bgl)	(m AHD)
4-Dec-24	Dry	

RB6		
Date	Datum =	TBD
	(m bgl)	(m AHD)
14-Dec-24	Dry	

BH10/RB7		
Date	Datum =	TBD
	(m bgl)	(m AHD)
14-Dec-24	Dry	

TP01		
Date	Datum =	TBD
	(m bgl)	(m AHD)
5-Dec-24	Dry	

ROM 2		
Date	Datum =	359.00
	Dip =	90
	(m bgl)	(m AHD)
01-Apr-11	9.12	349.88
13-Jan-13	8.95	350.05
14-Jan-13	8.95	350.05
10-Feb-13	9.13	349.87
15-Feb-13	9.13	349.87
14-Apr-13	9.15	349.85
15-Apr-13	9.15	349.85
12-May-13	9.15	349.85
15-May-13	9.15	349.85
15-Jun-13	9.15	349.85
17-Jun-13	9.15	349.85
10-Jul-13	9.13	349.87
15-Jul-13	9.13	349.87
15-Aug-13	9.13	349.87
18-Aug-13	9.13	349.87
12-Sep-13	9.16	349.84
15-Sep-13	9.16	349.84
31-Jan-16	Dry	
22-Apr-16	Dry	
13-Jul-16	Dry	
06-Oct-16	Dry	
14-Jan-17	Dry	
29-Apr-17	Dry	
22-Jul-17	Dry	
30-Sep-17	Dry	
18-Feb-18	Dry	
29-Apr-18	Dry	
06-Aug-18	Dry	
04-Mar-19	Dry	
22-Jun-19	Dry	
04-Sep-19	Dry	
11-Nov-19	Dry	
06-Feb-20	Dry	
27-May-20	Dry	
13-Oct-20	Dry	
15-Mar-21	Dry	
09-May-23	Unsafe dip	

ROM 9		
Date	Datum =	359.90
	Dip =	90
	(m bgl)	(m AHD)
12-Dec-11	6.81	353.09
10-Feb-13	4.64	355.26
12-May-13	5.29	354.61
15-May-13	5.29	354.61
15-Jun-13	5.40	354.50
17-Jun-13	5.40	354.50
10-Jul-13	5.54	354.36
15-Jul-13	5.54	354.36
15-Aug-13	5.68	354.22
18-Aug-13	5.68	354.22
12-Sep-13	5.67	354.23
15-Sep-13	5.67	354.23
09-Apr-14	5.46	354.44
05-Nov-14	6.54	353.36
13-Dec-14	6.12	353.78
31-Jan-16	6.42	353.48
22-Apr-16	5.97	353.93
13-Jul-16	6.00	353.90
06-Oct-16	5.93	353.97
05-Feb-17	6.76	353.14
29-Apr-17	6.52	353.38
22-Jul-17	6.98	352.92
30-Sep-17	7.12	352.78
18-Feb-18	6.54	353.36
29-Apr-18	6.77	353.13
06-Aug-18	7.35	352.55
03-Nov-18	6.01	353.89
04-Mar-19	7.16	352.74
22-Jun-19	5.93	353.97
04-Sep-19	6.38	353.52
11-Nov-19	7.20	352.70
06-Feb-20	6.52	353.38
27-May-20	6.88	353.02
13-Oct-20	6.61	353.29
06-Dec-20	6.61	353.29
15-Mar-21	6.62	353.28
31-Mar-23	6.88	353.02
09-May-23	6.62	353.28
29-Aug-23	7.06	352.84
05-Dec-23	7.14	352.76
27-Feb-24	7.11	352.79

ROM 11		
Date	Datum =	TBD
	Dip =	90
	(m bgl)	(m AHD)
09-May-24	Dry	

ROM 12		
Date	Datum =	TBD
	Dip =	90
	(m bgl)	(m AHD)
08-May-24	Dry	

ROM 13		
Date	Datum =	TBD
	Dip =	90
	(m bgl)	(m AHD)
08-May-24	Dry	

ROM 14		
Date	Datum =	TBD
	Dip =	90
	(m bgl)	(m AHD)
08-May-24	Dry	

ROM 15		
Date	Datum =	TBD
	Dip =	90
	(m bgl)	(m AHD)
07-May-24	Dry	

ROM 16		
Date	Datum =	TBD
	Dip =	90
	(m bgl)	(m AHD)
07-May-24	Dry	

Appendix G

Golden Grove Operations Salinities

Appendix G - Groundwater Salinity Data

DATE	GGW53P	GGW54P	GGW67P	GGW69P	GGW93P	RMB4	GHDEC44P	SCUDDLES U/G	GOSS. HILL U/G	Lake Wownaminya	GVW007P
	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS
May-89	840	360									
Jun-93			935	700							
Jul-93											
Oct-93	1,800	980	1,080	870							
Nov-93	1,560	960	500	880							
Dec-93	1,600	880	960	680							
Jan-94	1,500	895	885	580							
Mar-94	1,060	870	950	710							
Apr-94	1,600	980	1,000	640							
Jun-94	1,180	1,000	970	720							
Sep-94							1,110				
Oct-94	960	840	980	580							
Nov-94	1,040	860	870	580							
Dec-94	980	840	840	625							
Jan-95	1,130	860	820	620							
Feb-95	1,000	840	880	620				4,350			
Mar-95	1,050	865	910	600				3,800			
Mar-95	1,150	860	930	620				4,000			
Apr-95	900	800	980	900				3,600			
Jun-95	1,100	860	980	610				3,600			
Jul-95	1,200	1,000	960	700				2,900			
Aug-95	1,120	860	900	640				3,800			
Aug-95	1,210	869	940	671				4,400			
Sep-95									1,900		
Sep-95									1,600		
Sep-95	1,200	1,000	960	770				3,500	1,700		
Oct-95									2,100		
Oct-95	1,075	890	940	680							
Nov-95									2,400		
Dec-95	1,450	920	920	590					5,000		
Dec-95									5,450		
Dec-95									5,220		
Dec-95									5,100		
Dec-95									4,950		
Dec-95									5,450		
Dec-95									4,895		
Dec-95									5,225		
Dec-95									5,060		
Dec-95											
Dec-95									5,900		
Dec-95									5,100		
Dec-95									5,900		
Dec-95		665		900					5,225		
Dec-95									6,150		
Dec-95									5,900		
Dec-95									5,900		
Dec-95									5,700		
Dec-95									6,150		
Dec-95									5,600		
Dec-95											
Dec-95									5,800		
Dec-95									5,400		
Jan-96									5,600		
Jan-96									5,200		
Jan-96							680		5,300		
Jan-96	930	660		946							
Feb-96									4,300		
Feb-96									3,900		
Feb-96									3,700		
Feb-96									3,600		
Mar-96	1,600	850	870	600			950		3,600		
Mar-96									3,500		
Mar-96									3,300		
Mar-96							1,100				
Mar-96									3,200		
Mar-96							950	4,100			
Apr-96	1,750	960	860	630							
Apr-96									3,200		
Apr-96									3,100		
Apr-96									3,300		
May-96									3,400		
May-96	1,600	1,000	830	590					3,100		

Appendix G - Groundwater Salinity Data

DATE	GGW53P	GGW54P	GGW67P	GGW69P	GGW93P	RMB4	GHDEC44P	SCUDDLES U/G	GOSS. HILL U/G	Lake Wownaminya	GVW007P
	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS
May-96							1,000		3,100		
May-96									3,400		
May-96									3,400		
Jun-96							950				
Jun-96									3,100		
Jun-96		980	830	620					3,300		
Jun-96							950				
Jun-96									2,600		
Jun-96								4,400	2,800		
Jul-96	1,700	1,000	830	630							
Jul-96									3,300		
Jul-96									3,000		
Jul-96									3,000		
Aug-96									3,400		
Aug-96									3,500		
Aug-96									3,400		
Aug-96									3,300		
Sep-96	1,700	1,100							3,300		
Sep-96									3,300		
Sep-96									3,000		
Sep-96								3,800			
Oct-96	1,700	1,100	760	630			940				
Oct-96									3,300		
Oct-96							1,000		3,400		
Oct-96									3,300		
Oct-96									3,400		
Nov-96							1,000				
Nov-96									3,800		
Nov-96									3,600		
Nov-96							1,000				
Nov-96	1,700	1,300	nr	690			990		3,400		
Dec-96									3,400		
Dec-96									3,100		
Dec-96	1,800	1,400	830	650				3,700	3,300		
Jan-97	1,900	1,400	790	640					3,400		
Feb-97									3,500		
Mar-97	2,100	1,900		745			1,250		3,500		
Apr-97	2,100			855			1,250	3,830	3,400		
May-97							1,150		3,600		
Jun-97	2,000	1,950		757					3,600		
Jul-97	bore	2,050	755	460			880	3,950	4,200		
Aug-97	decomm	bore								2,750	
Sep-97		on	795	770						3,400	
Oct-97		standby						3,000	3,170	3,720	
Nov-97				725						4,450	
Dec-97		1,800	835	705				4,350	4,300	4,100	
Jan-98		standby		735						4,850	
Feb-98										3,800	
Mar-98				710						4,150	
Apr-98										3,800	
May-98			840	600						3,800	
Jun-98			770	670						3,500	
Jul-98			908	900				2,800	3,000	3,700	
Aug-98				770				3,270	3,030	3,500	
Sep-98			810	810				3,030	3,220	3,100	
Oct-98			780					2,740	3,700	4,400	
Nov-98			734	640				3,000	2,160	3,500	
Dec-98			710					3,500	3,490	3,100	
Jan-99			950	660				3,350	4,010	4,100	
Feb-99								3,760	3,740	4,600	
Mar-99			758	670				3,400	3,290	6,100	
Apr-99								2,830	4,500	5,500	
May-99			828	639				2,960	5,160	4,440	
Jun-99			808	593				3,680	4,450		
Jul-99			720	605				2,870	2,630	4,230	
Aug-99		960	638	554				3,060	3,840	3,880	
Sep-99		841	625	574				3,540	3,840	3,780	
Oct-99		825	651	591			1,122	4,380	3,720	3,760	
Nov-99		792	653	590			1,148	4,060	3,560	4,100	
Dec-99		816	652	598				3,030	3,760		

Appendix G - Groundwater Salinity Data

DATE	GGW53P	GGW54P	GGW67P	GGW69P	GGW93P	RMB4	GHDEC44P	SCUDDLES U/G	GOSS. HILL U/G	Lake Wownaminya	GVW007P
	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS
Jan-00		966	641	586				3,020	3,280	3,400	
Feb-00		856	646	584			1,134	2,320	3,120	3,300	
Mar-00		870	652	597			1,014	3,150	3,440	2,780	
Apr-00		1,038	652	598			1,243	2,600	3,710	3,780	
May-00		997	687	616			677	4,500	3,780	4,110	
Jun-00		994	668	588			649	2,960	4,490	3,830	
Jul-00		953	668	612			1,196	4,910	3,370	4,020	
Aug-00		933	651	596			1,171	3,320	2,930	3,260	
Sep-00		912	648	585			1,074	3,010	2,950	3,450	
Oct-00		842	606	551			1,122	2,900	2,810	3,390	
Nov-00		898	637	582			1,133	3,250	3,480	3,200	
Dec-00		890	622	569			1,146	2,910	2,930	3,410	
Jan-01								2,820	2,650	2,650	
Feb-01		821	584	524			1,069	3,560	3,070	2,430	
Mar-01		874	587	558			1,137	2,270	2,670	2,750	
Apr-01		867	626	573			1,206	3,150	1,980	2,560	
May-01		870	617	569			1,209	3,650	2,910	2,800	
Jun-01		827	606	560			1,200	2,850	3,300	2,990	
Jul-01		850	625	580			1,220	4,720	3,590	2,950	
Aug-01		854	642	582			1,243	2,390	3,490	3,200	
Sep-01		814	645	554			1,301	2,850	4,100	3,210	
Oct-01		947	650	593			1,319	4,770	4,530	4,970	
Nov-01		873	635	584			1,334	2,870	4,240	4,210	
Dec-01		837	633	576			1,357	2,710	3,870	3,820	
Jan-02		832	625	565			1,301	2,210	3,660	3,670	
Feb-02		624	664	603			1,367	3,700	3,920	3,170	
Mar-02		585	642	575			1,339	2,840	3,670	2,960	
Apr-02		615	646	598				2,070	3,550	2,650	
May-02		511	598	544				1,830	3,150	2,250	
Jun-02			682	530			1,270	3,330	3,050	2,260	
Jul-02			569	517			1,215	1,980	2,930	2,240	
Aug-02			543	514			1,394	2,700	3,640	3,030	
Sep-02			673	552			1,315	2,532	4,440	2,700	
Oct-02		595	573	480			1,080	1,860	3,850	2,820	
Nov-02				592			1,510	4,410	5,660	4,980	
Dec-02		800		573			1,530	4,280	4,490	4,630	
Jan-03		761	621	558				2,770	4,770	4,720	
Feb-03		782	679	553				2,800	5,040		
Mar-03			706	614				2,950	4,920		
Apr-03			747	598				3,060	4,940		
May-03			711	600				3,500	4,390	4,410	
Jun-03			582	601				3,600	5,300	4,900	
Jul-03			613	577				3,480	4,430	4,590	
Aug-03			647	621				3,080	4,710	4,800	
Sep-03			734	612				3,260	4,520	4,560	
Oct-03			719	614				4,100	4,670	4,370	
Nov-03			742	624				4,020	4,920	4,730	
Dec-03			727	614				3,070	5,100	5,250	
Jan-04			734	586				3,090	5,590	5,160	
Feb-04			603	644				3,620	4,990	4,780	
Mar-04			670					3,140	5,110		
Apr-04			666	619				3,090	4,670	4,460	
May-04			684	604				3,330	4,710	4,280	
Jun-04		638	638	575				3,010	4,360		
Jul-04				550				2,930	4,580	3,930	
Aug-04								2,470	3,100	4,230	
Sep-04											
Oct-04											
Nov-04											
Dec-04			640	560				2,140	3,820	5,600	
Jan-05			660	550			1,630	2,170	3,440		
Feb-05			620	570				2,440	3,630		
Mar-05			650					2,920	3,480		
Apr-05			690					2,890	3,930		
May-05		820	650	610			3,990		4,350	3,510	
Jun-05		650	610				3,610	2,350	4,120		
Jul-05		749	686	728			5,490	3,100	5,870	5,620	
Aug-05		809	761	810			5,550	2,980	5,900	5,520	
Sep-05		1,037	731	782			5,550	3,610	6,040	4,990	
Oct-05		1,014	777	709			27	6,040	5,300	5,500	
4-Dec-05		1,029	783	717			2,590	4,340	5,840	5,790	

Appendix G - Groundwater Salinity Data

DATE	GGW53P	GGW54P	GGW67P	GGW69P	GGW93P	RMB4	GHDEC44P	SCUDDLES U/G	GOSS. HILL U/G	Lake Wownaminya	GVW007P
	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS
3-Jan-06		1,009	792	610			2,590	5,820	5,520	5,740	
31-Jan-06		989	768	780			2,500	3,280	6,000		
11-Mar-06		1,005	736	721			2,650	2,970	6,040	5,600	
3-Apr-06		819	750	789			2,600	6,970	5,860	5,700	
7-May-06			777	818			5,470	3,780	5,990	5,900	
3-Jun-06			810	810			2,890	4,860		5,700	
1-Jul-06			807	800			740	7,280	2,430	5,500	
30-Jul-06			781	797				6,630	4,000	5,400	
8-Sep-06			951	786				6,400	6,420	6,000	
4-Oct-06			847	830			2,860	6,920	3,460	1,900	
30-Oct-06			991	870			2,670	6,760	3,530	6,200	
3-Nov-06										5,700	
2-Dec-06										5,800	
8-Jan-07			782	828			2,750	5,000	5,710	5,770	
Feb-07			894	880			2,750	7,690	3,720	6,220	
Mar-07			794	900			765	7,370	3,790	6,140	
Apr-07			940	910			3,500	6,270	3,400	5,983	
May-07			841	878			4,030	5,940	3,310	5,786	
Jun-07			784	950			4,200	8,000	3,200	5,920	
Jul-07			830	980			3,650	7,400	3,400	5,500	
Aug-07				970			3,580	6,110		5,800	
Sep-07			931	990			2,910	6,240	4,320	5,615	
Oct-07				1,000			2,820	4,900	3,840	6,300	
Nov-07			956	956			2,960	4,360	6,040	6,180	
Dec-07			903	957			5,530			6,330	
Jan-08			900	1,100			3,140	4,665	6,685	6,195	
Feb-08			752	1,000				5,700	8,100	7,000	
Mar-08			822	981			300	5,510	7,660	6,075	
Apr-08			793	1,030			3,400	4,665	8,310	6,035	
May-08			811	1,056				5,100	7,800	6,700	
Jun-08			856	1,100				5,395	8,310	6,160	
Jul-08			876	1,066				4,555	6,415	6,195	
Aug-08			870	1,058				6,513		6,305	
Sep-08			850	1,082				4,900		6,025	
Oct-08			858	1,111				6,470	8,045	6,570	
Nov-08			845	1,095				5,350	7,260	5,746	
Dec-08			855	1,052				8,950	6,890	4,891	
Jan-09			847	1,072				5,000	6,930	6,450	
Feb-09			826	1,040				4,570	6,380	6,130	
Mar-09				1,064				4,980	7,510	5,930	
Apr-09			856	1,052				4,690	7,570	5,770	
May-09			850	1,091				3,920	6,360	5,240	
Jun-09			810	1,104				4,800		5,800	
Jul-09				1,200							
Aug-09			888					5,680	6,850	5,640	
Sep-09										5,640	
Oct-09			910	1,146							
Nov-09										6,500	
Dec-09			1,150	1,150						5,350	
Jan-10			1,200	1,200				5,900	7,500	6,700	
Feb-10											
Mar-10								5,700	7,400	6,500	
Apr-10											
May-10											
Jun-10								6,310		5,980	
Jul-10								6,500	8,200	5,900	
Aug-10											
Sep-10				1,400				5,600	6,500	5,900	
Oct-10				1,500				6,120	6,550	6,060	
Nov-10				1,470				5,480	6,060	6,090	
Dec-10				1,560				6,230		5,960	

Appendix G - Groundwater Salinity Data

DATE	GGW53P	GGW54P	GGW67P	GGW69P	GGW93P	RMB4	GHDEC44P	SCUDDLES U/G	GOSS. HILL U/G	Lake Wownaminya	GVW007P
	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS
Jan-11				1,460			4,380	6,500	8,350	6,180	
Feb-11				1,520			4,120	6,520	6,170	6,020	
Mar-11				1,480		Not Working		6,360	7,440	6,410	
Apr-11				1,510		New meter not working yet	4,470	6,720	7,130	7,300	
May-11				1,450			3,740	5,550	7,530	5,940	
Jun-11				1,690			3,690	5,520	6,850	6,030	
Jul-11				1,460			3,880	6,140	8,080	6,210	
Aug-11			1,170	1,360		No power to pum	3,870	6,030	8,060	6,010	
Sep-11				1,420			4,030	7,020	7,050	6,040	
Oct-11				1,480		Not working	3,650	5,660	7,380	5,910	
Nov-11			1,250	1,440			3,940	6,330	7,000	6,070	
Dec-11				1,430		No power to pum	4,210	6,430	8,450	6,080	
Jan-12			1,340	1,620			3,950	6,140	6,990		
Feb-12			1,310	1,430			4,090	6,720	8,030		
Mar-12			1,160	1,290			3,790	6,330	8,660		
Apr-12			1,320	1,600			4,240	6,370	7,560	6,110	
May-12			1,240	1,330			3,800	5,690	6,390	5,720	
Jun-12			1,440	1,520			4,380	5,690	5,890	5,850	
Jul-12				1,290			3,930	5,540	6,740	6,270	
Aug-12			1,390	1,290			4,050	5,940	6,690	6,020	
Sep-12			1,390	2,590			4,460	6,040	6,800	7,230	
Oct-12			1,460	1,570		459	4,800	5,710	7,220	6,490	
Nov-12			1,450	1,350		508	4,320	6,010	7,390	7,050	
Dec-12			1,450	1,420		483	4,190	6,200	7,240	7,260	
Jan-13			1,440	1,440		408	4,220	5,907	6,477	6,380	
Feb-13			1,410	1,410		460	4,300	5,143	7,030	6,940	
Mar-13			1,450	1,380			4,690	5,723	6,910	7,350	
Apr-13			1,470	1,410		438	4,340	5,653	6,807	6,830	
May-13			1,450	1,460		400	4,220	5,493	7,200	6,340	
Jun-13			1,460			372	4,337	6,433	7,727	8,010	
Jul-13			1,670	1,540		407	4,420	5,955	7,710	6,450	
Aug-13			1,590	1,430		Not pumping	4,450	6,220	7,620	6,190	
Sep-13			1,650	1,620		Not pumping	4,540	6,160	7,410	6,650	
Oct-13			1,610	1,570		Not pumping	4,427	5,740	7,710	6,140	
Nov-13			1,630	1,500		Not pumping	4,085	5,755	7,870	6,470	
Dec-13			1,570	1,420		Not pumping	4,580	5,350	6,770	6,010	
Jan-14				1,540		395	4,270	6,100	7,420		
Feb-14											
Mar-14				1,510		405	4,200	6,450	7,710	6,380	
Apr-14			2,070	1,520		399	4,040	6,170	7,280		
May-14			1,680	1,520		392	4,400	6,250	7,240	6,100	
Jun-14			1,510	1,650		434	4,680	5,570	6,420		
Jul-14			1,540	1,580		422	4,370	6,080	7,160	6,290	
Aug-14			1,480	1,600		415	4,560	5,720	6,850	6,020	
Sep-14			1,500	1,520		404	4,620	6,040	7,500	6,340	
Oct-14			1,150	1,480		422	3,990	4,890	7,350		
Nov-14			1,260	1,510		438	4,120	5,610	7,240	6,560	
Dec-14			1,320	1,510		378	4,050	5,200	6,500		
Jan-15			1,320	1,570		381	4,040	6,080	6,910		
Feb-15			1,380	1,510		368	4,380	5,800	7,110		
Mar-15			1,560	1,550		Not pumping	4,680	6,050	6,840	6,240	
Apr-15			1,600	1,500		410	4,300	7,160	7,460	8,320	
May-15			1,600	1,430		378	4,310	5,950	7,400	7,700	
Jun-15			2,020	1,410		392	4,210	6,140	7,400	5,990	
Jul-15			2,190	1,210		382	4,160	6,760	7,340	6,510	
Aug-15			2,150	1,500		407	Not pumping	6,930	8,290	8,280	
Sep-15			2,100	1,390		390	Not pumping	8,040	8,220	6,760	
Oct-15			2,100	1,500		420	Not pumping	8,320	11,100		
Nov-15			1,830	1,470		423	Not working	8,340	9,340	8,320	
Dec-15			2,000	1,410		411	Not working	8,420	9,260	8,640	
Jan-16			1,760	1,390		408	6,750	9,260	11,200		
Feb-16			1,740	1,510		425	4,240	7,880	11,200	8,920	
Mar-16			1,840	1,780		392	3,990	6,260	9,600	8,760	
Apr-16			2,280	1,490		416	4,120	7,290	9,850	8,620	
May-16			1,680	1,430		391	3,640	7,000	10,000	7,880	
Jun-16			1,730	1,320		391	3,930	7,000	10,000	8,360	
Jul-16			1,790	1,310		397	4,370	7,010	9,330	7,500	
Aug-16			1,700	1,320		404	4,060	6,170	9,120	7,280	
Sep-16			2,280	1,390		411	4,740	6,360	8,920	7,780	
Oct-16			2,170	1,280		386	5,110	6,920	8,480	8,400	
Nov-16			1,590	1,350				6,800	8,080	8,980	
Dec-16			1,700	1,300			4,360	7,300	8,480	7,140	

Appendix G - Groundwater Salinity Data

DATE	GGW53P	GGW54P	GGW67P	GGW69P	GGW93P	RMB4	GHDEC44P	SCUDDLES U/G	GOSS. HILL U/G	Lake Wownaminya	GVW007P
	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS
Jan-17			2,200	1,400		402	5,610	6,960	8,840	7,400	
Feb-17			2,160	1,400			4,930	7,440	9,420	9,020	
Mar-17				1,340			6,700	6,760	10,600	9,200	
Apr-17				1,380			4,960	6,780	9,780	8,320	
May-17				1,350			5,430	7,760	7,630	7,210	
Jun-17				1,300			5,110	5,340	7,390	6,790	
Jul-17			2,300	1,310			5,190	6,240	6,860	7,480	
Aug-17			1,430	1,240			5,210	6,900	6,860	7,240	
Sep-17				1,350				5,770	6,390	7,540	
Oct-17			2,070	1,320			6,240	7,230	8,160	7,510	
Nov-17			2,380	1,530		398		6,770	6,930	9,040	
Dec-17			2,030	1,160			5,920	6,700	6,970	7,690	
Jan-18			1,780	1,280			5,070	5,030	5,690	6,470	
Feb-18			1,760	1,300			5,080	5,370	7,070	6,930	
Mar-18			1,930	1,400		424	5,220	5,950	7,500	6,540	
Apr-18			2,360	1,250		384	5,280	6,350	7,430	7,160	
May-18				1,330		436	5,020	5,970	7,030	6,460	
Jun-18				1,300				6,680	6,560	7,060	
Jul-18			2,000	1,260		415		5,950	7,620	7,080	
Aug-18			1,740	1,290		365		6,800	7,270	7,550	
Sep-18			1,820	1,430		433		6,680	7,970	7,430	
Oct-18			1,980	1,420		409		7,480	8,350	8,350	
Nov-18			2,000	1,430		382		7,340	8,150	7,950	
Dec-18			1,660	1,320		370		6,480	7,820	7,200	
Jan-19			2,000	1,500	1,500	402		5,160	6,710	8,290	
Feb-19			2,040	1,550	1,550	408		5,910	6,630	8,590	
Mar-19			2,010	1,500	1,500	368		4,880	6,830	8,100	
Apr-19				1,400	1,400	380		4,240	7,980	8,460	
May-19				1,420	1,420			5,020	8,070	8,000	
Jun-19			1,810	1,370	1,370	286		3,800	8,010	6,240	
Jul-19	696		2,020		1,520	412		4,900	8,370	8,600	
Aug-19	718		1,950	1,520							
Sep-19	708			1,440	1,440	394		4,720	9,050	9,000	
Oct-19	724			1,430	1,430			7,280	8,620	8,090	
Nov-19	750		1,680	1,440	1,440	384		7,010	7,210	7,560	
Dec-19				1,550	1,550			7,500	6,950	8,610	
Jan-20			1,660	1,530	1,530	412		7,200	7,120	8,020	
Feb-20			1,590	1,650	1,650	432		7,010	7,190	7,330	
Mar-20				1,440	1,440		6,610	7,800	7,650	8,250	
Apr-20				1,390	1,390	356		7,390	6,950	7,680	
May-20	741		2,070	1,360	1,360	348	5,620	7,910	7,950	7,670	
Jun-20	766		1,610	1,440	1,440	369	6,090	8,070	6,700	7,390	
Jul-20	768		1,610	1,550	1,550	384	5,660	6,910	8,120	8,630	
Aug-20	784		1,430	1,470	1,470		6,450	7,880	8,050	8,000	
Sep-20	775		1,970	1,540	1,540	410	6,370	8,580	8,050	6,400	
Oct-20	768		1,870	1,430	1,430	380	6,660	7,330	10,900	7,080	
Nov-20	799		2,110	1,600	1,600	414	6,760	7,860	8,890	7,140	
Dec-20	860		2,090	1,500	1,500	406	6,490	7,790	7,570	6,880	
Jan-21	806		1,590	1,390	1,390	389	6,160	5,980	7,080	6,830	
Feb-21				1,560							
Mar-21	798				1,560	424	6,460		8,530	9,520	
Apr-21				1,510				8,050	7,900	8,690	
May-21			2,540		1,510	399	6,960	8,670	6,960	8,980	
Jun-21			1,570	1,360	1,360			7,590	8,360	9,680	
Jul-21			1,560	1,460	1,460			8,710		8,580	
Aug-21			2,160	1,380	1,380			8,550	7,990	9,040	
Sep-21			2,190	1,380	1,380			9,090	12,200	8,620	
Oct-21			1,710	1,340	1,340	382		7,690	7,810	8,380	
Nov-21			1,740	1,440	1,440			8,010	10,200	7,820	
Dec-21			1,680	1,540	1,540			8,640	8,440	7,410	
Jan-22			1,660	1,510	358				8,140	8,250	
Feb-22			2,700	1,460	372				7,260	9,530	
Mar-22			2,240	1,360	350	1,720				8,710	
Apr-22				1,400	376				8,910	9,540	
May-22					379						
Jun-22								9,250	8,440	9,980	
Jul-22	655		1,920	1,320					9,350	9,100	
Aug-22			1,300	1,390							
Sep-22										8,750	
Oct-22	594		1,970	1,010	347	346			6,840	7,420	
Nov-22											
Dec-22			1,490	1,170	360					7,790	

Appendix G - Groundwater Salinity Data

DATE	GGW53P	GGW54P	GGW67P	GGW69P	GGW93P	RMB4	GHDEC44P	SCUDDLES U/G	GOSS. HILL U/G	Lake Wownaminya	GVW007P
	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS	(mg/L) TDS
Jan-23											
Feb-23											
Mar-23	608		1,260	914		354			7,130	8,870	
Apr-23	570		1,530	1,170	363				7,060	7,620	
May-23	558		1,700	1,200	371	1,580			8,350	8,220	
Jun-23	576			1,250						8,580	
Jul-23	638		3,110	914	384				7,390	7,800	
Aug-23	713		2,750	1,170	380	1,450			7,870		
Sep-23	603		1,990	1,200	366				8,340	8,680	
Oct-23	682		1,680	1,250	361				7,200	8,340	
Nov-23	704		1,670	1,360	378	1,590			7,940	8,280	
Dec-23	636		1,480	1,290	358				6,110	8,720	
Jan-24			1,540	1,340	392				8,530	7,690	
Feb-24	674		1,670	1,470	395	1,590				7,470	
Mar-24	97		1,550	1,400	388				13,500		1,650
Apr-24	638		1,540	1,470	367				7,390	9,210	1,680
May-24											
Jun-24			1,640	1,480					13,700	9,340	1,690
Jul-24					420						1,740
Aug-24			1,550	1,450	380	1,480			6,730		1,590
Sep-24			1,540		382				7,300	9,320	1,620
Oct-24				1,570	387				8,380		1,520
Nov-24			1,500		372				7,260		1,560
Dec-24											

Appendix H

Potable Bore Water Quality

Appendix H - Golden Grove Mine Groundwater Quality Monitoring Results

		pH Unit	Electrical Conductivity @ 25°C	Dissolved Solids (TDS)	Suspended Solids (SS)	Total Alkalinity as CaCO3	Acidity as CaCO3	Calcium	Magnesium	Sodium	Potassium	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron	Mercury	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Total Phosphorus as P	Sulfate as SO4
Unit		pH Un	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR					<5	<1	<1	<1	<1	<1	<1	<0.01	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.05	<0.0001	<0.01	<0.01	<0.01	<0.1	<0.1		
date	site																													
18/07/2022	**GGW53P**	7.57	----	655	----	----	4	----	----	----	----	----	LOR	LOR	0.176	0.009	0.002	----	----	LOR	0.022	----	LOR	LOR	4.58	4.58	0.8	5.4	----	79
20/10/2022	**GGW53P**	7.80	1,110	594	----	----	3	22	23	162	14	0.04	LOR	LOR	0.007	0.014	LOR	0.269	0.05	LOR	0.042	0.43	LOR	LOR	2.71	2.71	0.5	3.2	----	73
31/03/2023	**GGW53P**	7.70	1,250	608	----	----	3	24	25	176	14	0.18	0.002	0.0001	0.491	0.034	0.003	0.047	0.198	LOR	0.062	2.19	LOR	LOR	4.61	4.61	0.7	5.3	----	84
24/04/2023	**GGW53P**	7.82	1,080	570	----	----	3	21	21	155	13	0.1	LOR	LOR	0.128	0.016	0.001	0.112	0.143	LOR	0.032	1.09	LOR	0.02	3.73	3.75	0.6	4.4	----	74
22/05/2023	**GGW53P**	7.64	999	558	----	----	3	22	20	151	13	0.03	LOR	0.0001	0.013	0.011	0.001	0.192	0.15	LOR	0.054	0.41	LOR	LOR	2.91	2.91	0.6	3.5	----	62
17/06/2023	**GGW53P**	7.56	1,000	576	----	----	4	21	20	149	14	0.03	LOR	0.0001	0.008	0.011	LOR	0.145	0.098	LOR	0.04	0.19	LOR	LOR	3.24	3.24	0.5	3.7	----	64
19/06/2023	**GGW53P**	7.37	691	357	----	----	3	15	21	94	7	LOR	LOR	LOR	LOR	0.002	LOR	0.123	0.004	LOR	0.014	LOR	LOR	LOR	1.05	1.05	0.2	1.2	----	50
30/07/2023	**GGW53P**	7.53	1,240	638	----	----	5	26	25	173	16	0.23	0.001	LOR	0.124	0.028	0.002	0.053	0.076	LOR	0.035	1.08	LOR	0.04	4.26	4.3	0.5	4.8	----	60
30/07/2023	**GGW53P**	7.53	1,240	638	----	----	5	26	25	173	16	0.23	0.001	LOR	0.124	0.028	0.002	0.053	0.076	LOR	0.035	1.08	LOR	0.04	4.26	4.3	0.5	4.8	----	60
15/08/2023	**GGW53P**	7.79	1,270	713	----	----	6	24	24	175	15	0.06	LOR	LOR	0.087	0.009	LOR	0.007	0.074	LOR	0.024	0.61	LOR	LOR	4.86	4.86	0.6	5.5	----	84
24/09/2023	**GGW53P**	7.69	1,070	603	----	----	3	21	20	150	14	0.08	LOR	LOR	0.054	0.01	0.001	0.046	0.055	LOR	0.046	0.38	LOR	0.04	4.19	4.23	0.6	4.8	----	68
06/10/2023	**GGW53P**	7.72	1,160	682	----	----	3	24	26	181	16	0.1	LOR	LOR	0.16	0.009	LOR	0.007	0.119	LOR	0.02	0.91	LOR	LOR	5.21	5.21	0.5	5.7	----	76
16/11/2023	**GGW53P**	7.89	1,230	704	----	----	2	25	24	166	14	0.02	LOR	LOR	0.12	0.011	0.001	0.008	0.234	LOR	0.034	0.99	LOR	5.04	LOR	5.04	0.6	5.6	----	80
18/12/2023	**GGW53P**	7.62	1,190	636	----	----	5	25	26	174	15	0.05	LOR	LOR	0.146	0.012	LOR	0.021	0.212	LOR	0.031	1.27	LOR	4.67	LOR	4.67	0.6	5.3	----	84
24/02/2024	**GGW53P**	7.70	1,190	674	----	----	4	27	26	181	16	0.32	0.001	LOR	0.501	0.056	0.001	0.09	0.217	LOR	0.02	2.57	LOR	3.1	0.28	3.38	0.6	4	----	83
10/03/2024	**GGW53P**	6.90	151	97	----	----	5	8	8	54	6	1.04	LOR	LOR	0.113	0.016	0.003	0.144	0.067	LOR	0.051	1.47	LOR	0.41	0.01	0.42	0.4	0.8	----	9
17/04/2024	**GGW53P**	7.83	1,180	638	----	----	4	24	24	172	16	0.03	LOR	LOR	0.014	0.002	LOR	0.004	0.044	LOR	0.017	0.13	LOR	3.59	LOR	3.59	0.6	4.2	----	72
13/01/2022	**GGW67P**	8.04	----	1,660	----	----	3	----	----	----	----	----	0.002	LOR	LOR	LOR	LOR	----	----	LOR	1.7	----	LOR	LOR	LOR	LOR	LOR	LOR	----	337
15/02/2022	**GGW67P**	7.72	----	2,700	----	----	4	----	----	----	----	----	LOR	LOR	LOR	LOR	LOR	----	----	LOR	0.421	----	LOR	LOR	LOR	LOR	LOR	LOR	----	533
15/03/2022	**GGW67P**	7.78	----	2,240	----	----	4	----	----	----	----	----	LOR	LOR	LOR	LOR	LOR	----	----	LOR	1.63	----	LOR	LOR	LOR	LOR	0.1	0.1	----	505
18/07/2022	**GGW67P**	7.82	----	1,920	----	----	3	----	----	----	----	----	LOR	LOR	LOR	LOR	LOR	----	----	LOR	0.296	----	LOR	LOR	0.01	0.01	0.1	0.1	----	444
30/08/2022	**GGW67P**	8.06	2,210	1,300	----	----	2	70	85	256	16	0.05	0.002	0.0003	0.015	0.016	0.003	0.948	0.012	LOR	1.48	6.1	LOR	LOR	LOR	LOR	0.1	0.1	----	268
20/10/2022	**GGW67P**	7.93	3,290	1,970	----	----	6	114	153	346	17	LOR	0.003	LOR	LOR	LOR	LOR	2.46	0.002	LOR	0.182	1.8	LOR	LOR	LOR	LOR	0.3	0.3	----	480
15/12/2022	**GGW67P**	7.73	2,420	1,490	----	----	4	86	107	286	16	0.02	0.001	LOR	LOR	0.004	0.001	1.72	0.003	LOR	0.198	0.88	LOR	LOR	LOR	LOR	0.3	0.3	----	317
31/03/2023	**GGW67P**	7.80	2,190	1,260	----	----	2	71	87	253	15	LOR	0.002	0.0002	LOR	0.003	0.001	1.64	0.012	LOR	1.55	3.57	LOR	LOR	LOR	LOR	0.2	0.2	----	319
24/04/2023	**GGW67P**	8.03	2,600	1,530	----	----	LOR	76	107	285	15	0.02	0.002	LOR	LOR	0.004	0.001	1.86	0.003	LOR	0.239	1.01	LOR	LOR	0.04	0.04	0.1	0.1	----	341
22/05/2023	**GGW67P**	7.81	2,840	1,700	----	----	5	94	127	305	17	LOR	0.002	0.0001	LOR	0.003	LOR	1.62	0.003	LOR	1.76	1.24	LOR	LOR	LOR	LOR	0.1	0.1	----	395
31/07/2023	**GGW67P**	7.60	4,680	3,110	----	----	7	166	237	453	22	LOR	LOR	LOR	LOR	LOR	LOR	0.291	0.005	LOR	1.2	0.57	LOR	LOR	0.02	0.02	0.1	0.1	----	762
31/07/2023	**GGW67P**	7.60	4,680	3,110	----	----	7	166	237	453	22	LOR	LOR	LOR	LOR	LOR	LOR	0.291	0.005	LOR	1.2	0.57	LOR	LOR	0.02	0.02	0.1	0.1	----	762
15/08/2023	**GGW67P**	7.82	4,080	2,750	----	----	7	132	193	414	20	LOR	0.002	LOR	LOR	0.002	LOR	3.15	0.003	LOR	0.405	2.13	LOR	LOR	0.01	0.01	0.2	0.2	----	631
24/09/2023	**GGW67P**	7.96	3,110	1,990	----	----	3	100	142	318	18	LOR	0.002	LOR	LOR	0.004	LOR	2.42	0.003	LOR	0.655	1.25	LOR	LOR	LOR	LOR	LOR	LOR	----	450
06/10/2023	**GGW67P**	7.93	2,680	1,680	----	----	3	87	123	311	16	LOR	0.001	LOR	LOR	LOR	LOR	2.11	0.003	LOR	0.295	0.97	LOR	LOR	LOR	LOR	LOR	LOR	----	390
07/11/2023	**GGW67P**	7.97	2,430	1,670	----	----	4	72	97	270	14	0.02	LOR	LOR	LOR	0.003	0.001	1.73	0.003	LOR	0.214	0.42	LOR	0.01	LOR	0.01	0.1	0.1	----	316
18/12/2023	**GGW67P**	7.87	2,470	1,480	----	----	4	82	114	275	15	LOR	0.001	LOR	LOR	LOR	LOR	1.8	0.003	LOR	0.283	0.88	LOR	0.01	0.01	0.02	LOR	LOR	----	335
31/01/2024	**GGW67P**	7.88	2,600	1,540	----	----	4	42	28	78	3	LOR	0.001	LOR	LOR	LOR	LOR	1.87	0.003	LOR	0.237	0.52	LOR	0.04	LOR	0.04	LOR	LOR	----	358
24/02/2024	**GGW67P**	7.82	2,410	1,670	----	----	5	82	106	268	16	LOR	0.001	LOR	LOR	0.001	LOR	1.71	0.003	LOR	0.242	0.51	LOR	0.01	LOR	0.01	0.1	0.1	----	334
10/03/2024	**GGW67P**	7.89	2,480	1,550	----	----	6	78	103	269	16	0.02	LOR	LOR	0.001	LOR	LOR	1.78	0.004	LOR	0.23	0.48	LOR	LOR	LOR	LOR	LOR	LOR	----	325
17/04/2024	**GGW67P**	7.88	2,600	1,540	----	----	6	84	109	282	17	LOR	LOR	LOR	LOR	0.001	LOR	1.7	0.003	LOR	0.446	1.35	LOR	LOR	LOR	LOR	0.2	0.2	----	340
4/06/2024	**GGW67P**	7.55	2,530	1,640	----	----	10	79	108	272	16	0.01	0.001	LOR	LOR	0.003	LOR	1.87	0.003	LOR	0.348	0.9	LOR	LOR	LOR	LOR	0.2	0.2	----	329
25/08/2024	**GGW67P**	7.83	2,290	1,550	----	----	1	75	103	264	15	LOR	0.001	LOR	LOR	0.003	LOR	1.83	0.002	LOR	0.274	0.58	LOR	LOR	LOR	LOR	0.1	0.1	----	343
23/09/2024	**GGW67P**	7.88	2,250	1,540	----	----	3	76	102	264	16	0.02	0.001	LOR	LOR	0.006	0.001	1.8	0.005	LOR	0.266	0.84	LOR	LOR	LOR	LOR	0.2	0.2	----	336
29/11/2024	**GGW67P**	7.88	2,590	1,500	----	----	4	82	102	270	16	0.01	0.002	LOR	LOR	0.002	0.001	1.82	0.003	LOR	0.263	0.82	LOR	LOR	LOR	LOR	0.2	0.2	----	340

Appendix H - Golden Grove Mine Groundwater Quality Monitoring Results

		pH Unit	Electrical Conductivity @ 25°C	Dissolved Solids (TDS)	Suspended Solids (SS)	Total Alkalinity as CaCO3	Acidity as CaCO3	Calcium	Magnesium	Sodium	Potassium	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron	Mercury	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Total Phosphorus as P	Sulfate as SO4
Unit		pH Un	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR					<5	<1	<1	<1	<1	<1	<1	<0.01	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.05	<0.0001	<0.01	<0.01	<0.01	<0.1	<0.1		
date	site																													
13/01/2022	**GGW69P**	8.13	----	1,510	----	----	3	----	----	----	----	----	LOR	0.0009	LOR	LOR	LOR	----	----	LOR	0.147	----	LOR	LOR	3.87	3.87	0.5	4.4	----	287
15/02/2022	**GGW69P**	7.90	----	1,460	----	----	3	----	----	----	----	----	LOR	0.0008	LOR	LOR	LOR	----	----	LOR	0.143	----	LOR	LOR	3.46	3.46	0.5	4	----	284
15/03/2022	**GGW69P**	7.85	----	1,360	----	----	3	----	----	----	----	----	LOR	0.0008	LOR	LOR	LOR	----	----	LOR	0.145	----	LOR	LOR	3.62	3.62	0.5	4.1	----	277
11/04/2022	**GGW69P**	7.92	----	1,400	----	----	3	----	----	----	----	----	LOR	0.0008	LOR	LOR	LOR	----	----	LOR	0.144	----	LOR	LOR	3.63	3.63	0.6	4.2	----	270
18/07/2022	**GGW69P**	7.97	----	1,320	----	----	2	----	----	----	----	----	LOR	0.0008	LOR	LOR	LOR	----	----	LOR	0.138	----	LOR	LOR	3.29	3.29	0.6	3.9	----	258
30/08/2022	**GGW69P**	8.09	2,310	1,390	----	----	3	75	91	284	15	LOR	LOR	0.0008	0.001	LOR	LOR	0.549	LOR	LOR	0.143	0.14	LOR	LOR	3.59	3.59	0.4	4	----	268
20/10/2022	**GGW69P**	7.97	1,830	1,010	----	----	3	52	62	226	13	LOR	LOR	0.0010	LOR	0.001	LOR	0.685	LOR	LOR	0.12	0.26	LOR	0.02	3.43	3.45	0.5	4	----	184
15/12/2022	**GGW69P**	7.80	1,890	1,170	----	----	3	64	73	253	15	LOR	LOR	0.0009	LOR	0.002	LOR	0.316	LOR	LOR	0.102	0.39	LOR	0.02	3.58	3.6	0.3	3.9	----	210
31/03/2023	**GGW69P**	7.96	1,840	914	----	----	2	60	64	221	12	0.02	LOR	0.0008	0.001	0.003	0.002	0.219	LOR	LOR	0.125	0.2	LOR	LOR	2.99	2.99	0.5	3.5	----	190
24/04/2023	**GGW69P**	7.97	2,180	1,170	----	----	LOR	61	73	255	14	LOR	LOR	0.0009	0.002	0.002	LOR	0.305	LOR	LOR	0.143	0.59	LOR	LOR	3.7	3.7	0.6	4.3	----	238
22/05/2023	**GGW69P**	7.94	2,050	1,200	----	----	2	63	74	249	14	0.01	LOR	0.0009	LOR	0.006	LOR	0.252	LOR	LOR	0.128	LOR	LOR	LOR	3.49	3.49	0.6	4.1	----	232
17/06/2023	**GGW69P**	6.19	2,020	1,250	----	----	5	67	74	253	15	LOR	LOR	0.0010	LOR	0.003	LOR	0.261	0.002	LOR	0.117	0.06	LOR	0.02	3.82	3.84	0.4	4.2	----	229
19/06/2023	**GGW69P**	7.76	4,360	2,910	----	----	4	166	239	470	22	LOR	LOR	0.0001	LOR	LOR	LOR	3.4	0.005	LOR	0.607	1.4	LOR	LOR	LOR	LOR	0.1	0.1	----	708
31/07/2023	**GGW69P**	7.87	2,120	1,200	----	----	2	63	72	243	15	LOR	LOR	0.0007	LOR	LOR	LOR	0.263	LOR	LOR	0.116	LOR	LOR	0.02	3.95	3.97	0.5	4.5	----	209
31/07/2023	**GGW69P**	7.87	2,120	1,200	----	----	2	63	72	243	15	LOR	LOR	0.0007	LOR	LOR	LOR	0.263	LOR	LOR	0.116	LOR	LOR	0.02	3.95	3.97	0.5	4.5	----	209
15/08/2023	**GGW69P**	7.98	2,120	1,290	----	----	3	64	73	251	14	LOR	LOR	0.0008	LOR	LOR	LOR	0.289	LOR	LOR	0.116	LOR	LOR	0.01	3.59	3.6	0.4	4	----	224
24/09/2023	**GGW69P**	8.02	2,050	1,240	----	----	3	59	75	244	15	LOR	LOR	0.0008	LOR	LOR	LOR	0.291	LOR	LOR	0.114	LOR	LOR	0.01	3.76	3.77	0.3	4.1	----	212
06/10/2023	**GGW69P**	7.83	2,060	1,240	----	----	4	65	79	265	15	LOR	LOR	0.0010	LOR	LOR	LOR	0.316	LOR	LOR	0.138	0.06	LOR	0.02	3.74	3.76	0.5	4.3	----	249
07/11/2023	**GGW69P**	8.03	2,100	1,360	----	----	3	62	73	255	13	LOR	LOR	0.0009	LOR	0.002	LOR	0.292	LOR	LOR	0.133	LOR	LOR	0.02	3.7	3.72	0.4	4.1	----	227
18/12/2023	**GGW69P**	7.88	2,200	1,290	----	----	4	67	84	255	14	0.01	LOR	0.0010	LOR	0.002	LOR	0.295	0.001	LOR	0.156	0.06	LOR	3.67	0.01	3.68	0.5	4.2	----	258
31/01/2024	**GGW69P**	8.05	2,350	1,340	----	----	3	70	85	264	15	LOR	LOR	0.0010	LOR	0.002	LOR	0.306	LOR	LOR	0.139	LOR	LOR	3.76	LOR	3.76	0.6	4.4	----	284
24/02/2024	**GGW69P**	7.94	2,220	1,470	----	----	4	72	86	261	16	LOR	LOR	0.0011	LOR	0.001	LOR	0.318	LOR	LOR	0.149	LOR	LOR	3.49	LOR	3.49	0.6	4.1	----	270
10/03/2024	**GGW69P**	7.96	2,280	1,400	----	----	5	70	81	255	14	0.02	LOR	0.0013	LOR	0.013	0.002	0.335	LOR	LOR	0.369	0.07	LOR	3.43	0.01	3.44	0.4	3.8	----	260
17/04/2024	**GGW69P**	8.00	2,480	1,470	----	----	4	81	96	292	17	0.01	LOR	0.0012	LOR	0.004	0.001	0.441	0.001	LOR	0.187	1.66	LOR	2.97	0.09	3.06	0.6	3.7	----	286
4/06/2024	**GGW69P**	7.94	2,380	1,480	----	----	4	77	94	280	16	LOR	LOR	0.0012	LOR	0.001	LOR	0.373	LOR	LOR	0.161	0.11	LOR	3.32	0.02	3.34	0.5	3.8	----	252
25/08/2024	**GGW69P**	7.95	2,300	1,450	----	----	3	71	89	274	14	0.03	LOR	0.0010	LOR	0.011	0.002	0.362	LOR	LOR	0.185	0.1	LOR	3.5	0.02	3.52	0.5	4	----	290
16/10/2024	**GGW69P**	8.06	2,460	1,570	----	----	5	85	115	270	16	LOR	0.001	LOR	LOR	LOR	LOR	1.68	0.002	LOR	0.312	0.76	LOR	LOR	LOR	LOR	LOR	LOR	LOR	358
20/10/2022	**RMB4**	7.16	631	346	----	----	4	9	19	79	7	LOR	0.068	LOR	LOR	LOR	LOR	0.002	0.012	LOR	0.007	LOR	LOR	LOR	3.75	3.75	0.6	4.4	----	41
31/03/2023	**RMB4**	7.41	703	354	----	----	4	12	19	87	7	LOR	0.071	LOR	LOR	0.002	LOR	0.222	0.018	LOR	0.022	0.23	LOR	LOR	1.2	1.2	0.4	1.6	----	49

Appendix H - Golden Grove Mine Groundwater Quality Monitoring Results

		pH Unit	Electrical Conductivity @ 25°C	Dissolved Solids (TDS)	Suspended Solids (SS)	Total Alkalinity as CaCO3	Acidity as CaCO3	Calcium	Magnesium	Sodium	Potassium	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron	Mercury	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Total Phosphorus as P	Sulfate as SO4
Unit		pH Un	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR					<5	<1	<1	<1	<1	<1	<1	<0.01	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.05	<0.0001	<0.01	<0.01	<0.01	<0.1	<0.1		
date	site																													
13/01/2022	**GGW93P**	7.55	----	358	----	----	4	----	----	----	----	----	0.001	LOR	LOR	LOR	LOR	----	----	LOR	LOR	----	LOR	LOR	0.45	0.45	0.1	0.6	----	46
15/02/2022	**GGW93P**	7.45	----	372	----	----	5	----	----	----	----	----	LOR	LOR	LOR	LOR	LOR	----	----	LOR	0.008	----	LOR	LOR	0.48	0.48	0.1	0.6	----	45
15/03/2022	**GGW93P**	7.14	----	350	----	----	5	----	----	----	----	----	LOR	LOR	LOR	LOR	LOR	----	----	LOR	LOR	----	LOR	LOR	0.68	0.68	0.1	0.8	----	46
11/04/2022	**GGW93P**	7.23	----	376	----	----	4	----	----	----	----	----	LOR	LOR	LOR	LOR	LOR	----	----	LOR	LOR	----	LOR	LOR	0.86	0.86	0.1	1	----	46
09/05/2022	**GGW93P**	7.29	----	379	----	----	3	----	----	----	----	----	LOR	LOR	LOR	LOR	LOR	----	----	LOR	LOR	----	LOR	LOR	0.66	0.66	0.1	0.8	----	43
20/10/2022	**GGW93P**	7.37	652	347	----	----	5	12	19	86	6	LOR	LOR	LOR	LOR	LOR	LOR	0.41	0.011	LOR	0.005	0.23	LOR	LOR	0.74	0.74	0.1	0.8	----	50
15/12/2022	**GGW93P**	7.20	653	360	----	----	4	14	21	91	7	LOR	0.001	LOR	LOR	0.001	LOR	0.429	0.013	LOR	0.008	0.35	LOR	LOR	0.65	0.65	LOR	0.6	----	45
24/04/2023	**GGW93P**	7.53	709	363	----	----	6	11	19	90	6	LOR	LOR	LOR	LOR	0.001	LOR	0.217	0.003	LOR	0.017	0.08	LOR	LOR	0.49	0.49	0.2	0.7	----	55
20/05/2023	**GGW93P**	7.44	668	371	----	----	3	12	19	88	7	0.01	LOR	LOR	LOR	0.002	LOR	0.231	0.004	LOR	0.014	0.11	LOR	LOR	0.58	0.58	0.3	0.9	----	43
30/07/2023	**GGW93P**	7.21	726	384	----	----	5	14	21	91	7	0.01	LOR	LOR	LOR	0.002	LOR	0.245	0.007	LOR	0.019	0.1	LOR	0.02	0.43	0.45	0.1	0.6	----	47
30/07/2023	**GGW93P**	7.21	726	384	----	----	5	14	21	91	7	0.01	LOR	LOR	LOR	0.002	LOR	0.245	0.007	LOR	0.019	0.1	LOR	0.02	0.43	0.45	0.1	0.6	----	47
15/08/2023	**GGW93P**	7.49	687	380	----	----	LOR	12	19	88	7	LOR	LOR	LOR	LOR	0.002	LOR	0.391	0.012	LOR	0.009	0.26	LOR	LOR	0.87	0.87	0.2	1.1	----	47
24/09/2023	**GGW93P**	7.56	656	366	----	----	4	13	18	84	6	LOR	LOR	LOR	LOR	0.003	LOR	0.404	0.014	LOR	0.021	0.35	LOR	LOR	0.31	0.31	LOR	0.3	----	50
06/10/2023	**GGW93P**	7.59	645	361	----	----	3	12	20	88	7	LOR	LOR	LOR	LOR	LOR	LOR	0.413	0.013	LOR	0.008	0.3	LOR	LOR	0.97	0.97	0.2	1.2	----	48
16/11/2023	**GGW93P**	7.50	675	378	----	----	5	13	19	81	6	LOR	0.001	LOR	LOR	0.001	LOR	0.405	0.016	LOR	0.012	0.38	LOR	0.65	LOR	0.65	0.2	0.8	----	48
18/12/2023	**GGW93P**	7.29	664	358	----	----	4	11	21	85	6	LOR	0.001	LOR	LOR	0.001	LOR	0.448	0.018	LOR	0.013	0.52	LOR	0.67	LOR	0.67	0.1	0.8	----	48
31/01/2024	**GGW93P**	7.44	699	392	----	----	8	12	20	81	6	LOR	0.001	LOR	LOR	0.002	0.001	0.481	0.02	LOR	0.014	0.48	LOR	0.54	LOR	0.54	0.2	0.7	----	47
24/02/2024	**GGW93P**	7.34	660	395	----	----	4	12	20	85	7	LOR	LOR	LOR	LOR	0.003	0.001	0.458	0.02	LOR	0.029	0.54	LOR	0.44	LOR	0.44	0.3	0.7	----	46
11/03/2024	**GGW93P**	7.40	678	388	----	----	5	12	20	82	6	LOR	0.001	LOR	LOR	LOR	LOR	0.462	0.02	LOR	LOR	0.42	LOR	0.6	LOR	0.6	0.2	0.8	----	48
17/04/2024	**GGW93P**	7.60	682	367	----	----	6	12	20	89	7	LOR	LOR	LOR	LOR	LOR	LOR	0.431	0.017	LOR	LOR	0.26	LOR	0.62	LOR	0.62	0.2	0.8	----	44
24/07/2024	**GGW93P**	7.48	694	420	----	----	9	13	21	88	8	LOR	LOR	LOR	LOR	0.001	LOR	0.193	0.003	LOR	0.013	0.21	LOR	0.41	LOR	0.41	0.2	0.6	----	62
25/08/2024	**GGW93P**	7.05	650	380	----	----	2	12	20	87	6	LOR	LOR	LOR	0.001	LOR	LOR	0.236	0.007	LOR	0.015	0.06	LOR	1	LOR	1	0.2	1.2	----	41
23/09/2024	**GGW93P**	7.24	615	382	----	----	2	13	19	84	7	LOR	LOR	LOR	LOR	0.002	LOR	0.376	0.012	LOR	0.017	0.34	LOR	0.67	LOR	0.67	0.4	1.1	----	63
16/10/2024	**GGW93P**	7.63	693	387	----	----	5	13	20	80	7	LOR	LOR	LOR	LOR	0.003	0.001	0.384	0.013	LOR	0.024	0.32	LOR	0.32	LOR	0.32	0.7	1	----	52
29/11/2024	**GGW93P**	7.30	674	372	----	----	5	12	18	84	6	LOR	0.003	LOR	0.002	0.004	LOR	0.375	0.014	LOR	0.016	1.93	LOR	0.76	LOR	0.76	0.2	1	----	50
25/03/2024	**GVW007P**	7.99	2,890	1,650	----	----	7	26	39	494	28	0.06	LOR	0.0005	LOR	0.01	0.004	0.028	LOR	LOR	0.078	1.05	LOR	5.86	0.01	5.87	1.1	7	----	160
20/04/2024	**GVW007P**	7.92	2,990	1,680	----	----	6	24	37	525	31	0.01	LOR	0.0005	LOR	0.007	LOR	0.034	LOR	LOR	0.04	1.32	0.0001	5.92	0.02	5.94	0.5	6.4	----	156
4/06/2024	**GVW007P**	7.87	3,010	1,690	----	----	3	30	40	512	29	LOR	0.001	0.0013	0.001	0.012	LOR	0.07	0.001	LOR	0.127	11.8	0.0002	4.44	0.09	4.53	0.3	4.8	----	140
24/07/2024	**GVW007P**	8.07	2,970	1,740	----	----	3	28	40	506	32	0.02	LOR	0.0004	LOR	0.006	0.001	0.031	0.001	LOR	0.062	0.36	LOR	5.36	0.02	5.38	0.7	6.1	----	177
25/08/2024	**GVW007P**	8.06	2,820	1,590	----	----	LOR	22	36	503	28	0.02	LOR	0.0007	0.001	0.008	0.002	0.122	LOR	LOR	0.052	13.1	LOR	0.56	0.12	0.68	0.3	1	----	185
23/09/2024	**GVW007P**	7.92	2,680	1,620	----	----	LOR	25	36	490	26	LOR	LOR	0.0003	0.001	0.002	LOR	0.01	LOR	LOR	0.031	LOR	LOR	6.29	LOR	6.29	0.6	6.9	----	162
16/10/2024	**GVW007P**	7.98	2,740	1,520	----	----	5	25	37	460	27	LOR	LOR	0.0003	LOR	0.002	LOR	0.008	LOR	LOR	0.032	LOR	LOR	5.81	LOR	5.81	0.6	6.4	----	153
28/11/2024	**GVW007P**	7.96	2,910	1,560	----	----	3	24	36	508	27	LOR	LOR	0.0005	LOR	0.002	LOR	0.008	LOR	LOR	0.033	LOR	0.0001	6.26	LOR	6.26	0.5	6.8	----	151

Appendix H - Golden Grove Mine Groundwater Quality Monitoring Results

		pH Unit	Electrical Conductivity @ 25°C	Dissolved Solids (TDS)	Suspended Solids (SS)	Total Alkalinity as CaCO3	Acidity as CaCO3	Calcium	Magnesium	Sodium	Potassium	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron	Mercury	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Total Phosphorus as P	Sulfate as SO4
Unit		pH Un	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR					<5	<1	<1	<1	<1	<1	<1	<0.01	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.05	<0.0001	<0.01	<0.01	<0.01	<0.1	<0.1		
date	site																													
27/03/2022	**GGW6A**	7.29	----	791	----	----	4	----	----	----	----	----	LOR	LOR	LOR	0.002	LOR	----	----	LOR	0.05	----	LOR	LOR	6.14	6.14	1	7.1	----	68
03/07/2022	**GGW6A**	7.37	----	739	----	----	5	----	----	----	----	----	LOR	0.0002	0.001	0.001	0.002	----	----	LOR	0.049	----	LOR	LOR	5.48	5.48	0.5	6	----	66
25/09/2022	**GGW6A**	7.15	1,260	789	----	----	11	43	52	455	14	0.03	LOR	LOR	LOR	0.002	LOR	0.004	0.001	LOR	0.017	LOR	LOR	LOR	5.76	5.76	0.6	6.4	----	70
04/12/2022	**GGW6A**	7.90	1,280	785	----	----	6	----	----	----	----	0.03	LOR	LOR	LOR	0.001	LOR	0.002	LOR	LOR	0.011	0.05	LOR	LOR	6.5	6.5	0.9	7.4	----	69
11/03/2023	**GGW6A**	7.73	1,460	846	----	----	7	26	44	195	5	0.04	LOR	0.0001	LOR	0.002	LOR	0.006	LOR	LOR	0.031	0.05	LOR	LOR	6.24	6.24	0.6	6.8	----	68
06/05/2023	**GGW6A**	7.18	1,360	873	----	----	6	25	45	202	5	0.02	LOR	LOR	LOR	LOR	LOR	0.003	LOR	LOR	0.01	LOR	LOR	LOR	5.99	5.99	0.7	6.7	----	73
27/08/2023	**GGW6A**	7.29	1,550	800	----	----	12	26	45	196	6	0.03	LOR	0.0003	LOR	0.002	LOR	0.031	LOR	LOR	0.039	0.05	LOR	LOR	6.34	6.34	0.4	6.7	----	70
21/09/2023	**GGW6A**	7.29	1,440	903	----	----	6	26	46	190	6	LOR	LOR	LOR	LOR	LOR	LOR	0.002	LOR	LOR	LOR	LOR	LOR	0.14	6.28	6.42	0.4	6.8	----	72
24/02/2024	**GGW6A**	7.41	1,470	904	----	----	6	28	47	199	6	0.04	LOR	LOR	LOR	0.002	LOR	0.003	LOR	LOR	0.015	LOR	LOR	6.32	LOR	6.32	0.6	6.9	----	80
1/06/2024	**GGW6A**	7.12	1,540	907	----	----	9	26	46	192	5	0.02	LOR	LOR	LOR	LOR	0.004	0.004	LOR	LOR	0.009	LOR	LOR	6.41	0.11	6.52	0.8	7.3	----	76
24/08/2024	**GGW6A**	7.45	1,500	926	----	----	5	24	49	199	5	0.07	LOR	LOR	LOR	0.005	0.004	0.002	LOR	LOR	0.025	0.12	LOR	6.43	0.01	6.44	0.6	7	----	76
18/11/2024	**GGW6A**	7.00	1,520	852	----	----	13	28	49	197	6	0.04	LOR	LOR	LOR	0.003	0.004	0.003	LOR	LOR	0.014	0.16	LOR	6.58	LOR	6.58	0.6	7.2	----	79
27/03/2022	**GGW80**	7.68	----	776	----	----	3	----	----	----	----	----	LOR	LOR	LOR	0.001	LOR	----	----	LOR	0.021	----	LOR	LOR	7.74	7.74	0.9	8.6	----	70
03/07/2022	**GGW80**	7.65	----	720	----	----	3	----	----	----	----	----	LOR	0.0002	0.002	LOR	LOR	----	----	LOR	0.02	----	LOR	LOR	7.07	7.07	0.7	7.8	----	68
25/09/2022	**GGW80**	7.57	1,170	778	----	----	6	178	192	692	18	LOR	LOR	LOR	LOR	0.001	LOR	0.007	LOR	LOR	0.007	LOR	LOR	LOR	7.16	7.16	0.7	7.9	----	72
04/12/2022	**GGW80**	7.61	1,230	772	----	----	3	----	----	----	----	LOR	LOR	LOR	LOR	0.001	LOR	LOR	LOR	LOR	0.007	LOR	LOR	LOR	6.18	6.18	0.9	7.1	----	68
08/03/2023	**GGW80**	7.97	1,340	767	----	----	10	48	32	179	14	0.26	LOR	LOR	0.001	0.005	0.003	0.015	0.002	LOR	0.035	0.39	LOR	LOR	7.39	7.39	0.7	8.1	----	70
03/05/2023	**GGW80**	7.47	1,340	722	----	----	4	43	32	175	12	0.05	LOR	LOR	0.001	0.006	0.001	0.006	0.001	LOR	0.057	0.12	LOR	7.09	7.09	0.7	7.8	----	----	63
27/08/2023	**GGW80**	7.58	1,400	776	----	----	7	40	30	174	12	0.04	LOR	0.0003	0.001	0.003	0.002	0.023	LOR	LOR	0.096	0.08	LOR	LOR	7.04	7.04	0.6	7.6	----	69
25/02/2024	**GGW80**	7.54	1,360	839	----	----	3	46	32	168	13	0.06	LOR	LOR	LOR	0.003	0.002	0.007	LOR	LOR	0.012	0.15	LOR	7.15	LOR	7.15	0.7	7.8	----	68
1/06/2024	**GGW80**	7.46	1,480	885	----	----	10	46	35	183	13	0.04	LOR	LOR	LOR	LOR	0.001	0.002	0.001	LOR	0.006	0.11	LOR	7.3	0.01	7.31	0.6	7.9	----	77
24/08/2024	**GGW80**	7.55	1,410	875	----	----	9	44	34	176	13	0.02	LOR	LOR	LOR	LOR	0.001	0.002	LOR	LOR	0.011	0.07	LOR	6.86	0.01	6.87	0.6	7.5	----	81
15/11/2024	**GGW80**	7.31	1,400	838	----	----	5	48	34	176	13	0.05	LOR	LOR	LOR	0.002	0.003	0.003	LOR	LOR	0.014	0.16	LOR	6.69	LOR	6.69	0.5	7.2	----	74
27/03/2022	**GGW81**	7.80	----	3,400	----	----	8	----	----	----	----	----	0.002	0.0002	LOR	0.003	LOR	----	----	LOR	0.028	----	LOR	LOR	3.57	3.57	0.4	4	----	371
03/07/2022	**GGW81**	7.67	----	3,530	----	----	9	----	----	----	----	----	0.001	0.0005	0.001	0.002	LOR	----	----	LOR	0.026	----	LOR	LOR	3.11	3.11	0.3	3.4	----	399
25/09/2022	**GGW81**	7.70	5,690	3,680	----	----	16	50	44	281	19	0.06	0.002	0.0003	LOR	0.003	LOR	0.127	0.002	LOR	0.013	0.11	LOR	LOR	3.05	3.05	0.2	3.2	----	405
04/12/2022	**GGW81**	7.68	5,440	3,420	----	----	4	----	----	----	----	0.09	0.002	0.0003	LOR	0.004	LOR	0.11	0.001	LOR	0.012	LOR	LOR	LOR	2.86	2.86	0.2	3.1	----	389
08/03/2023	**GGW81**	8.23	6,230	3,640	----	----	14	100	116	1,070	70	2.1	0.002	0.0004	0.006	0.022	0.006	0.151	0.007	LOR	0.061	2.5	LOR	LOR	3.16	3.16	0.3	3.5	----	389
03/05/2023	**GGW81**	7.74	6,260	3,520	----	----	7	94	121	1,120	70	0.11	0.002	0.0004	LOR	0.012	0.001	0.141	0.002	LOR	0.046	0.17	LOR	2.97	2.97	0.4	3.4	----	----	402
27/08/2023	**GGW81**	8.18	7,160	3,900	----	----	2	96	118	1,150	73	0.53	0.002	0.0004	0.002	0.014	0.002	0.188	0.003	LOR	0.031	0.86	LOR	LOR	2.82	2.82	LOR	2.8	----	420
25/02/2024	**GGW81**	7.76	6,230	3,740	----	----	8	96	116	1,030	66	0.09	0.002	0.0004	LOR	0.007	0.002	0.144	0.003	LOR	0.02	0.14	LOR	3.05	LOR	3.05	0.3	3.4	----	381
1/06/2024	**GGW81**	7.60	6,670	4,130	----	----	15	98	118	1,140	73	0.24	0.002	0.0005	0.001	0.011	0.003	0.27	0.005	LOR	0.042	0.46	LOR	2.4	0.1	2.5	0.3	2.8	----	437
24/08/2024	**GGW81**	7.88	6,890	3,960	----	----	10	94	125	1,170	73	0.04	0.002	0.0005	LOR	0.005	LOR	0.206	0.002	LOR	0.019	0.1	LOR	2.27	0.1	2.37	0.2	2.6	----	419
14/11/2024	**GGW81**	7.70	6,350	3,750	----	----	7	98	121	1,200	75	0.11	0.002	0.0004	LOR	0.008	0.001	0.215	0.002	LOR	0.028	0.21	LOR	2.64	LOR	2.64	0.1	2.7	----	409

Appendix H - Golden Grove Mine Groundwater Quality Monitoring Results

		pH Unit	Electrical Conductivity @ 25°C	Dissolved Solids (TDS)	Suspended Solids (SS)	Total Alkalinity as CaCO3	Acidity as CaCO3	Calcium	Magnesium	Sodium	Potassium	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron	Mercury	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Total Phosphorus as P	Sulfate as SO4
Unit		pH Un	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR					<5	<1	<1	<1	<1	<1	<1	<0.01	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.05	<0.0001	<0.01	<0.01	<0.01	<0.1	<0.1		
date	site																													
27/03/2022	**SC080**	7.76	----	5,820	----	----	7	----	----	----	----	----	LOR	LOR	LOR	0.002	LOR	----	----	LOR	0.04	----	LOR	LOR	LOR	LOR	0.1	0.1	----	1,480
3/07/2022	**SC080**	7.71	----	5,390	----	----	6	----	----	----	----	----	LOR	LOR	LOR	LOR	LOR	----	----	LOR	0.032	----	LOR	LOR	LOR	LOR	0.2	0.2	----	1,430
24/09/2022	**SC080**	7.64	7,420	5,450	----	----	9	38	37	206	12	0.01	LOR	0.0001	0.001	0.002	LOR	0.803	0.001	LOR	0.025	0.05	LOR	LOR	0.01	0.01	0.2	0.2	----	1,400
2/12/2022	**SC080**	7.87	7,550	5,510	----	----	4	----	----	----	----	LOR	LOR	LOR	LOR	0.003	LOR	0.834	LOR	LOR	0.025	0.05	LOR	LOR	LOR	LOR	0.2	0.2	----	1,360
11/03/2023	**SC080**	8.09	7,960	5,560	----	----	5	343	323	1,040	22	0.18	LOR	0.0004	0.004	0.019	0.004	0.605	0.004	LOR	0.098	0.81	LOR	LOR	LOR	LOR	0.3	0.3	----	1,310
3/05/2023	**SC080**	7.92	7,860	5,350	----	----	3	316	333	1,060	23	0.51	0.001	0.0002	0.009	0.026	0.014	0.883	0.006	LOR	0.156	1.54	LOR	0.07	0.07	0.9	1	----	----	1,380
27/08/2023	**SC080**	8.00	7,120	4,390	----	----	4	233	276	842	23	0.45	0.001	0.0006	0.008	0.017	0.01	0.623	0.005	LOR	0.064	1.17	LOR	LOR	0.77	0.77	0.5	1.3	----	1,210
12/09/2023	**SC080**	7.77	6,620	4,100	----	----	12	251	243	835	22	0.4	LOR	0.0004	0.009	0.014	0.012	0.957	0.005	LOR	0.07	1.12	LOR	LOR	0.03	0.03	0.3	0.3	----	1,150
24/02/2024	**SC080**	7.77	6,480	4,700	----	----	8	263	250	818	21	LOR	LOR	LOR	LOR	LOR	LOR	0.903	LOR	LOR	0.011	LOR	LOR	LOR	LOR	LOR	0.2	0.2	----	1,090
1/06/2024	**SC080**	7.59	7,720	5,570	----	----	10	300	340	964	22	0.43	LOR	LOR	0.002	0.002	0.004	1.01	0.001	LOR	0.044	0.83	LOR	LOR	LOR	LOR	0.3	0.3	----	1,370
24/08/2024	**SC080**	8.05	7,760	5,200	----	----	3	304	336	940	22	0.16	LOR	LOR	LOR	0.002	0.003	0.989	LOR	LOR	0.034	0.26	LOR	LOR	LOR	LOR	0.4	0.4	----	1,470
18/11/2024	**SC080**	7.50	7,800	5,270	----	----	18	311	322	910	22	0.19	LOR	LOR	0.001	0.002	0.002	0.895	LOR	LOR	0.033	0.39	LOR	LOR	LOR	LOR	0.1	0.1	----	1,400
09/05/2023	**MB34**	7.23	11,400	8,410	----	----	21	847	93	1,660	49	0.09	LOR	0.0010	0.004	0.01	0.005	2.84	0.016	LOR	0.37	6.07	LOR	LOR	1.26	1.26	0.7	2	----	2,200
09/05/2023	**MB34**	7.23	11,400	8,410	----	----	21	847	93	1,660	49	0.09	LOR	0.0010	0.004	0.01	0.005	2.84	0.016	LOR	0.37	6.07	LOR	LOR	1.26	1.26	0.7	2	----	2,200
22/05/2023	**MB34**	7.12	11,900	8,600	----	----	21	833	93	1,690	49	0.05	LOR	0.0007	LOR	0.014	0.003	2.96	0.017	LOR	0.151	1.94	LOR	LOR	1.08	1.08	0.5	1.6	----	1,830
17/06/2023	**MB34**	6.97	11,800	8,430	----	----	24	833	91	1,690	48	0.07	0.002	0.0002	0.002	0.019	0.005	2.85	0.016	LOR	0.084	18.2	LOR	LOR	0.53	0.53	1	1.5	----	1,820
28/08/2023	**MB34**	6.70	13,000	9,220	----	----	29	929	148	1,860	58	0.07	0.002	0.0011	LOR	0.005	0.002	4.31	0.071	LOR	0.152	2.24	LOR	LOR	0.02	0.02	0.9	0.9	----	1,820
24/09/2023	**MB34**	7.02	12,500	9,140	----	----	22	916	132	1,680	56	0.02	0.001	0.0004	LOR	0.018	0.003	4.15	0.048	LOR	0.086	3.55	LOR	LOR	0.01	0.01	1.1	1.1	----	1,920
07/10/2023	**MB34**	6.98	12,300	9,190	----	----	13	821	138	1,750	52	0.07	0.002	0.0010	LOR	0.011	0.004	4.01	0.062	LOR	0.138	5.1	LOR	LOR	0.02	0.02	1.2	1.2	----	1,810
16/11/2023	**MB34**	7.69	12,000	9,270	----	----	12	879	105	1,600	47	LOR	LOR	LOR	0.004	0.009	0.003	3.25	0.016	LOR	0.066	4.97	LOR	LOR	LOR	LOR	1.7	1.7	----	1,860
18/12/2023	**MB34**	6.39	12,600	8,790	----	----	44	847	196	1,710	63	0.01	0.002	0.0012	LOR	0.005	0.002	5.04	0.105	LOR	0.233	2.55	LOR	0.08	LOR	0.08	1	1.1	----	1,880
31/01/2024	**MB34**	6.15	13,200	8,900	----	----	55	772	231	1,670	72	0.02	0.003	0.0015	LOR	0.012	0.002	5.72	0.16	LOR	0.331	0.54	LOR	0.11	LOR	0.11	0.6	0.7	----	1,910
27/02/2024	**MB34**	6.04	12,700	8,970	----	----	48	770	208	1,690	69	0.01	0.003	0.0015	0.001	0.005	LOR	5.44	0.132	LOR	0.263	1.5	LOR	0.14	LOR	0.14	0.6	0.7	----	1,790
9/03/2024	**MB34**	7.13	11,700	8,850	----	----	45	843	99	1,600	48	0.07	0.003	LOR	0.002	0.009	0.002	3.38	0.017	LOR	0.035	18.1	LOR	LOR	LOR	LOR	1.6	1.6	----	1,810
22/04/2024	**MB34**	7.13	11,900	8,840	----	----	36	714	100	1,720	49	0.02	0.001	LOR	LOR	0.018	0.003	3.24	0.016	LOR	0.045	10.8	LOR	LOR	LOR	LOR	1.5	1.5	----	1,640
22/08/2024	**MB34**	7.11	12,400	8,490	----	----	30	845	183	1,730	49	0.05	0.001	0.0076	LOR	0.021	0.004	6.76	0.033	LOR	1.65	7.8	LOR	0.01	LOR	0.01	1.5	1.5	----	1,760
23/09/2024	**MB34**	7.05	12,100	8,650	----	----	18	854	155	1,780	48	0.11	LOR	0.0051	LOR	0.008	0.002	5.81	0.024	LOR	1.34	6.29	LOR	0.02	LOR	0.02	1.5	1.5	----	1,750
29/03/2022	**MB40**	6.94	----	2,770	----	----	8	----	----	----	----	----	LOR	LOR	0.002	LOR	LOR	----	----	LOR	LOR	----	LOR	LOR	5.45	5.45	0.8	6.2	----	683
31/03/2023	**MB40**	7.12	4,210	2,740	----	----	10	123	208	453	17	LOR	LOR	LOR	0.003	0.003	LOR	LOR	LOR	LOR	0.008	LOR	LOR	LOR	5.28	5.28	0.5	5.8	----	744
09/05/2023	**MB40**	7.33	4,290	2,740	----	----	12	119	223	480	18	LOR	LOR	0.0001	0.002	LOR	LOR	0.003	LOR	LOR	0.024	LOR	LOR	LOR	5.53	5.53	0.7	6.2	----	775
09/05/2023	**MB40**	7.33	4,290	2,740	----	----	12	119	223	480	18	LOR	LOR	0.0001	0.002	LOR	LOR	0.003	LOR	LOR	0.024	LOR	LOR	LOR	5.53	5.53	0.7	6.2	----	775
26/08/2023	**MB40**	7.28	4,480	2,710	----	----	11	125	219	466	18	LOR	LOR	LOR	0.002	LOR	LOR	LOR	LOR	LOR	0.006	LOR	LOR	LOR	5.36	5.36	0.3	5.7	----	671
09/05/2023	**MB41**	7.61	3,560	1,970	----	----	7	80	109	510	17	0.02	LOR	0.0003	LOR	0.002	0.002	0.004	0.002	LOR	0.035	0.1	LOR	LOR	7.56	7.56	0.9	8.5	----	405
09/05/2023	**MB41**	7.61	3,560	1,970	----	----	7	80	109	510	17	0.02	LOR	0.0003	LOR	0.002	0.002	0.004	0.002	LOR	0.035	0.1	LOR	LOR	7.56	7.56	0.9	8.5	----	405
29/11/2023	**MB41**	7.83	3,740	2,230	----	----	4	96	120	530	19	LOR	LOR	LOR	LOR	0.004	LOR	0.002	0.002	LOR	0.021	0.1	LOR	7.83	LOR	7.83	0.4	8.2	----	408
1/06/2024	**MB41**	7.65	3,730	2,280	----	----	5	91	122	548	18	LOR	LOR	LOR	LOR	LOR	LOR	0.002	LOR	LOR	0.014	LOR	LOR	7.63	LOR	7.63	0.6	8.2	----	395

Appendix H - Golden Grove Mine Groundwater Quality Monitoring Results

		pH Unit	Electrical Conductivity @ 25°C	Dissolved Solids (TDS)	Suspended Solids (SS)	Total Alkalinity as CaCO3	Acidity as CaCO3	Calcium	Magnesium	Sodium	Potassium	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron	Mercury	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Total Phosphorus as P	Sulfate as SO4
Unit		pH Un	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR					<5	<1	<1	<1	<1	<1	<1	<0.01	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.05	<0.0001	<0.01	<0.01	<0.01	<0.1	<0.1		
date	site																													
25/03/2022	**MB57**	7.25	----	7,270	----	----	11	----	----	----	----	----	LOR	0.0095	LOR	0.005	LOR	----	----	LOR	0.503	----	LOR	LOR	2.33	2.33	0.4	2.7	----	1,720
02/07/2022	**MB57**	7.82	----	7,450	----	----	4	----	----	----	----	----	0.002	0.0074	0.003	0.002	0.003	----	----	LOR	0.254	----	LOR	LOR	2.32	2.32	0.3	2.6	----	1,790
23/09/2022	**MB57**	7.66	8,500	6,570	----	----	7	356	523	1,030	32	0.02	LOR	0.0097	0.003	0.003	0.002	0.029	0.002	LOR	0.498	0.09	LOR	LOR	2.33	2.33	0.2	2.5	----	1,560
03/12/2022	**MB57**	7.69	8,260	6,870	----	----	5	----	----	----	----	0.02	LOR	0.0093	0.002	0.005	0.002	0.049	0.001	LOR	0.426	0.1	LOR	LOR	2.24	2.24	0.3	2.5	----	1,700
13/03/2023	**MB57**	7.98	9,660	6,730	----	----	5	382	532	1,080	34	0.05	LOR	0.0083	0.001	0.007	0.002	0.037	0.001	LOR	0.339	0.15	LOR	LOR	2.3	2.3	0.4	2.7	----	1,700
06/05/2023	**MB57**	7.08	9,220	6,860	----	----	16	366	510	1,080	32	0.02	LOR	0.0091	LOR	0.006	LOR	0.017	LOR	LOR	0.519	0.05	LOR	LOR	2.21	2.21	0.3	2.5	----	1,830
27/08/2023	**MB57**	7.29	10,100	6,670	----	----	14	366	500	1,040	33	LOR	LOR	0.0092	LOR	0.006	LOR	0.016	0.001	LOR	0.506	LOR	LOR	LOR	2.35	2.35	LOR	2.4	----	1,860
4/12/2023	**MB57**	7.52	9,810	7,260	----	----	4	392	559	1,010	35	0.02	LOR	0.0093	0.002	0.015	0.004	0.016	0.002	LOR	0.52	LOR	LOR	LOR	2.39	LOR	2.39	0.4	2.8	----	1,700
24/02/2024	**MB57**	7.69	9,430	7,230	----	----	7	369	540	1,080	32	LOR	LOR	0.0088	LOR	0.005	LOR	0.018	LOR	LOR	0.392	0.07	LOR	2.29	LOR	2.29	0.3	2.6	----	1,680
29/05/2024	**MB57**	7.42	9,650	7,250	----	----	15	396	529	1,060	34	0.04	LOR	0.0101	0.002	0.006	0.004	0.04	0.001	LOR	0.547	0.1	0.0001	1.94	0.11	2.05	0.2	2.2	----	1,680
20/08/2024	**MB57**	7.21	9,430	6,860	----	----	14	370	529	1,040	32	0.36	0.001	0.0108	0.012	0.028	0.032	0.505	0.008	LOR	0.597	1.42	0.0004	2.22	LOR	2.22	0.2	2.4	----	1,560
15/11/2024	**MB57**	7.13	9,310	6,580	----	----	12	401	521	1,050	35	0.39	0.001	0.0098	0.012	0.03	0.038	0.272	0.006	LOR	0.6	1.49	0.0005	2.36	LOR	2.36	0.3	2.7	----	1,650
15/11/2024	**IB17B**	6.52	10,900	7,420	----	----	16	706	181	1,670	68	0.07	0.002	0.0015	0.002	0.034	0.004	4.56	0.114	LOR	0.519	0.22	LOR	0.34	LOR	0.34	0.2	0.5	----	1,540
29/11/2023	**IB17B**	6.97	10,900	7,470	----	----	12	609	171	1,580	66	0.06	0.001	0.0009	LOR	0.016	0.005	4.78	0.121	LOR	0.341	0.26	LOR	0.4	LOR	0.4	0.5	0.9	----	1,590
23/08/2024	**IB17B**	6.92	10,700	6,910	----	----	24	588	171	1,520	62	0.2	0.002	0.0023	0.001	0.024	0.005	4.56	0.112	LOR	0.544	0.47	LOR	0.42	LOR	0.42	0.3	0.7	----	1,440
30/03/2023	**IB17B**	6.31	10200	7120	----	----	11	601	166	1530	64	0.05	0.002	0.0005	0.001	0.011	0.003	4.46	0.113	LOR	0.23	0.14	LOR	LOR	0.3	0.3	0.4	0.7	----	1650
9/05/2023	**IB17B**	6.7	10900	7260	----	----	15	592	172	1620	65	0.22	0.002	0.004	0.004	0.018	0.01	5.37	0.138	LOR	0.53	1.53	LOR	LOR	0.33	0.33	0.5	0.8	----	1610
9/05/2023	**IB17B**	6.7	10900	7260	----	----	15	592	172	1620	65	0.22	0.002	0.004	0.004	0.018	0.01	5.37	0.138	LOR	0.53	1.53	LOR	LOR	0.33	0.33	0.5	0.8	----	1610
28/08/2023	**IB17B**	6.7	11200	7670			8	638	165	1610	65	0.07	0.002	0.001	LOR	0.014	0.003	4.58	0.116	LOR	0.288	0.22	LOR	LOR	0.37	0.37	0.3	0.7		1430
7/11/2022	**SB17B**	6.34	11,500	9,260	----	----	22	762	208	1,790	70	0.13	0.002	0.0036	LOR	0.01	0.004	5.23	0.132	LOR	0.231	1.65	LOR	LOR	0.1	0.1	0.4	0.5	----	1,810
9/05/2023	**SB17B**	6.04	12,000	8,500	----	----	49	723	203	1,720	69	0.18	0.002	0.0011	0.002	0.018	0.006	4.27	0.11	LOR	0.317	0.41	LOR	LOR	0.5	0.5	0.7	1.2	----	1,990
9/05/2023	**SB17B**	6.04	12,000	8,500	----	----	49	723	203	1,720	69	0.18	0.002	0.0011	0.002	0.018	0.006	4.27	0.11	LOR	0.317	0.41	LOR	LOR	0.5	0.5	0.7	1.2	----	1,990
22/05/2023	**SB17B**	6.08	12,500	8,640	----	----	38	756	177	1,690	66	0.1	0.002	0.0045	0.002	0.028	0.01	5.1	0.127	LOR	0.438	0.65	LOR	LOR	0.14	0.14	0.5	0.6	----	1,830
17/06/2023	**SB17B**	5.87	12,400	8,690	----	----	41	833	176	1,780	68	0.02	0.003	0.0026	LOR	0.014	0.003	4.64	0.108	LOR	0.283	0.08	LOR	LOR	0.03	0.03	1	1	----	1,980
28/08/2023	**SB17B**	6.14	13,000	9,540	----	----	30	865	193	1,840	69	0.02	0.004	0.0023	LOR	0.009	0.002	5.24	0.125	LOR	0.25	0.28	LOR	LOR	0.03	0.03	0.6	0.6	----	1,770
24/09/2023	**SB17b**	6.57	12,400	9,090	----	----	36	884	142	1,660	57	0.06	0.002	0.0010	0.002	0.012	0.006	4.18	0.07	LOR	0.135	1.03	LOR	LOR	0.02	0.02	0.7	0.7	----	1,890
6/10/2023	**SB17b**	6.62	12,600	9,300	----	----	24	834	146	1,800	54	0.05	0.001	0.0011	LOR	0.007	0.002	3.91	0.067	LOR	0.158	0.72	LOR	LOR	0.03	0.03	0.7	0.7	----	1,800
16/11/2023	**SB17B**	6.16	12,400	9,290	----	----	52	784	176	1,600	61	0.02	0.003	0.0012	0.008	0.012	0.004	4.21	0.11	LOR	0.241	0.46	LOR	0.13	0.02	0.15	0.7	0.8	----	1,820
2/12/2023	**SB17B**	6.49	12,900	9,000	----	----	37	765	197	1,500	62	LOR	0.003	0.0021	LOR	0.02	0.004	5.18	0.132	LOR	0.307	0.07	LOR	0.1	LOR	0.1	0.5	0.6	----	1,770
18/12/2023	**SB17B**	5.94	13,100	8,630	----	----	42	783	234	1,740	69	0.02	0.003	0.0018	LOR	0.012	0.003	5.72	0.143	LOR	0.37	0.14	LOR	0.11	LOR	0.11	0.5	0.6	----	1,850
31/01/2024	**SB17B**	6.12	13,200	8,920	----	----	52	767	230	1,660	72	0.02	0.003	0.0016	LOR	0.024	0.004	5.73	0.155	LOR	0.338	0.14	LOR	0.11	LOR	0.11	0.7	0.8	----	1,910
27/02/2024	**SB17B**	5.82	12,600	8,830	----	----	51	790	215	1,730	71	0.09	0.003	0.0014	0.006	0.006	LOR	5.32	0.128	LOR	0.25	2.88	LOR	0.14	LOR	0.14	0.6	0.7	----	1,830
9/03/2024	**SB17B**	7.35	10,800	8,040	----	----	16	833	101	1,610	48	0.62	0.008	0.0010	0.028	0.017	0.009	3.51	0.02	LOR	0.104	38.8	LOR	LOR	LOR	LOR	1.8	1.8	----	1,560
22/04/2024	**SB 17B**	6.99	12,400	8,920	----	----	28	706	117	1,760	51	0.02	LOR	0.0013	0.001	0.008	0.002	3.58	0.027	LOR	0.122	3.77	LOR	0.01	LOR	0.01	1.1	1.1	----	1,650
3/06/2024	**SB17B**	5.87	12,500	8,740	----	----	54	760	186	1,740	67	0.02	0.004	0.0016	0.006	0.012	LOR	4.94	0.125	LOR	0.313	0.21	LOR	0.14	LOR	0.14	0.7	0.8	----	1,860
24/07/2024	**SB17B**	6.42	13,000	9,510	----	----	38	703	211	1,740	72	0.08	0.003	0.0022	LOR	0.007	LOR	5.21	0.137	LOR	0.566	0.15	0.0002	0.1	LOR	0.1	0.4	0.5	----	1,820
30/11/2024	**SB17B**	6.52	14,000	8,720	----	----	22	854	199	1,870	58	0.15	0.005	0.0042	0.007	0.021	0.003	6.31	0.071	LOR	0.647	1.64	LOR	0.18	LOR	0.18	0.6	0.8	----	1,880

Appendix H - Golden Grove Mine Groundwater Quality Monitoring Results

		pH Unit	Electrical Conductivity @ 25°C	Dissolved Solids (TDS)	Suspended Solids (SS)	Total Alkalinity as CaCO3	Acidity as CaCO3	Calcium	Magnesium	Sodium	Potassium	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron	Mercury	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Total Phosphorus as P	Sulfate as SO4
Unit		pH Un	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR					<5	<1	<1	<1	<1	<1	<1	<0.01	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.05	<0.0001	<0.01	<0.01	<0.01	<0.1	<0.1		
date	site																													
27/02/2024	**SB31B**	6.36	12,100	8,820	----	----	54	827	167	1,660	54	0.03	0.002	0.0066	LOR	0.002	LOR	11.2	0.056	LOR	2.69	25	LOR	0.25	0.02	0.27	1.3	1.6	----	2,110
30/03/2023	**SB31B**	6.41	13,300	9,420	----	----	26	929	165	1,870	47	0.32	0.002	0.0272	0.005	0.014	0.009	4.54	0.022	LOR	2.23	4.44	LOR	0.02	0.9	0.92	1.5	2.4	----	2,130
9/05/2023	**SB31B**	5.87	16,800	12,500	----	----	54	1,110	244	2,580	55	0.29	LOR	0.0333	0.006	0.026	0.01	4.71	0.052	LOR	2.44	0.77	LOR	0.09	0.11	0.2	1.1	1.3	----	2,210
9/05/2023	**SB31B**	5.87	16,800	12,500	----	----	54	1,110	244	2,580	55	0.29	LOR	0.0333	0.006	0.026	0.01	4.71	0.052	LOR	2.44	0.77	LOR	0.09	0.11	0.2	1.1	1.3	----	2,210
5/11/2022	**SB31B**	5.41	11,800	9,640	----	----	95	954	145	1,920	44	0.62	0.003	0.0068	0.016	0.006	0.012	3.4	0.032	LOR	1.15	12.1	LOR	LOR	0.01	0.01	0.6	0.6	----	1,910
30/03/2023	**SB33B**	6.66	11,200	7,610	----	----	33	484	320	1,550	79	0.18	0.003	0.0006	0.003	0.01	0.005	8.25	0.221	LOR	0.125	18.6	LOR	LOR	0.06	0.06	0.6	0.7	----	1,650
9/05/2023	**SB33B**	6.37	11,100	7,380	----	----	59	402	337	1,530	81	0.51	0.004	0.0008	0.008	0.046	0.014	7.99	0.25	LOR	0.298	30.7	LOR	LOR	0.04	0.04	0.9	0.9	----	1,600
9/05/2023	**SB33B**	6.37	11,100	7,380	----	----	59	402	337	1,530	81	0.51	0.004	0.0008	0.008	0.046	0.014	7.99	0.25	LOR	0.298	30.7	LOR	LOR	0.04	0.04	0.9	0.9	----	1,600
29/08/2023	**SB33B**	6.32	11,400	7,990	----	----	50	536	254	1,480	64	0.09	0.002	0.0006	LOR	0.002	LOR	7.41	0.167	LOR	0.2	9.31	LOR	0.04	0.06	0.1	0.8	0.9	----	1,440
5/11/2022	**SB33B**	6.23	10,700	8,280	----	----	124	751	160	1,690	43	0.35	0.014	0.0004	0.008	0.021	0.019	4.21	0.042	LOR	0.202	136	LOR	0.01	0.05	0.06	1.8	1.9	----	1,680
9/05/2023	**SB76**	4.92	14,500	10,900	----	----	85	1,020	220	2,200	51	10.1	0.013	0.0058	0.044	0.066	0.127	6.42	0.031	LOR	1.31	59.1	LOR	LOR	0.29	0.29	1.4	1.7	----	2,660
9/05/2023	**SB76**	4.92	14,500	10,900	----	----	85	1,020	220	2,200	51	10.1	0.013	0.0058	0.044	0.066	0.127	6.42	0.031	LOR	1.31	59.1	LOR	LOR	0.29	0.29	1.4	1.7	----	2,660
22/05/2023	**SB76**	5.12	14,600	10,100	----	----	87	979	196	2,020	48	6.44	0.008	0.0050	0.023	0.053	0.038	6.83	0.028	LOR	1.14	14.6	LOR	LOR	0.13	0.13	1	1.1	----	2,090
17/06/2023	**SB76**	5.03	14,400	10,500	----	----	71	1,010	193	2,050	44	5.38	0.008	0.0035	0.02	0.058	0.054	7.34	0.024	LOR	1.16	21.3	LOR	LOR	0.09	0.09	0.8	0.9	----	2,240
28/08/2023	**SB76**	6.37	12,800	9,280	----	----	31	945	139	1,770	57	0.15	0.002	0.0008	LOR	0.181	0.016	3.98	0.075	LOR	0.294	2.42	LOR	LOR	LOR	LOR	1.1	1.1	----	1,860
24/09/2023	**SB76a**	6.69	12,300	9,010	----	----	20	911	146	1,700	58	0.04	0.002	0.0011	LOR	0.014	0.003	4.33	0.069	LOR	0.139	0.66	LOR	0.01	0.02	0.03	0.7	0.7	----	1,880
24/09/2023	**SB76b**	7.62	13,200	9,660	----	----	12	958	162	1,830	59	0.08	0.002	0.0007	LOR	0.006	0.002	7.94	0.046	LOR	0.078	6.1	LOR	LOR	0.08	0.08	0.9	1	----	1,960
6/10/2023	**SB76**	6.55	12,600	9,610	----	----	26	941	147	1,790	53	0.05	0.001	0.0012	LOR	0.004	LOR	4.21	0.066	LOR	0.14	0.49	LOR	LOR	0.03	0.03	0.7	0.7	----	1,840
3/12/2023	**SB76**	6.21	12,900	8,710	----	----	44	798	200	1,580	65	0.05	0.003	0.0022	LOR	0.031	0.008	5.31	0.128	LOR	0.335	1.14	LOR	0.1	LOR	0.1	0.7	0.8	----	1,810
18/12/2023	**SB76**	6.02	13,200	8,790	----	----	45	811	224	1,740	67	0.04	0.003	0.0020	LOR	0.009	0.002	5.53	0.125	LOR	0.322	0.66	LOR	0.11	LOR	0.11	0.5	0.6	----	1,870
31/01/2024	**SB76**	5.86	13,300	8,870	----	----	63	775	223	1,680	70	0.27	0.003	0.0022	0.002	0.034	0.014	5.84	0.142	LOR	0.397	6.75	LOR	0.12	LOR	0.12	0.5	0.6	----	1,940
27/02/2024	**SB76**	5.72	12,800	8,950	----	----	62	792	206	1,730	69	0.04	0.003	0.0016	0.001	0.011	0.001	5.29	0.125	LOR	0.286	0.81	LOR	0.13	LOR	0.13	0.7	0.8	----	1,780
9/03/2024	**SB76**	6.81	8,500	6,240	----	----	23	829	105	1,640	49	0.19	0.005	0.0013	0.006	0.014	0.004	3.73	0.02	LOR	0.117	28.7	LOR	LOR	LOR	LOR	1.4	1.4	----	1,080
22/04/2024	**SB76**	6.54	12,800	9,300	----	----	50	711	128	1,820	52	0.14	0.002	0.0025	0.002	0.009	0.003	4.25	0.038	LOR	0.284	6.84	LOR	0.03	LOR	0.03	0.8	0.8	----	1,800
16/10/2024	**SB76**	5.49	12,100	8,940	----	----	56	774	176	1,590	44	0.84	0.004	0.0068	LOR	0.026	0.005	6.38	0.019	LOR	0.788	0.82	LOR	0.13	0.01	0.14	0.5	0.6	----	1,710
7/11/2022	**SB78**	7.38	12,100	9770	----	----	9	765	214	1840	65	0.06	0.001	0.0032	LOR	0.008	0.002	6.1	0.113	LOR	0.2	0.83	LOR	<0.01	0.81	0.81	0.5	1.3	----	1,800
3/12/2023	**SB78**	6.28	12,800	8,930	----	----	40	827	210	1,620	68	0.02	0.003	0.0022	LOR	0.011	0.001	5.32	0.129	LOR	0.315	0.17	LOR	0.09	LOR	0.09	0.8	0.9	----	1,770
7/11/2022	**SB78**	7.38	12,100	9,770	----	----	9	765	214	1,840	65	0.06	0.001	0.0032	LOR	0.008	0.002	6.1	0.113	LOR	0.2	0.83	LOR	LOR	0.81	0.81	0.5	1.3	----	1,800
9/05/2023	**SB78**	6.11	15,200	10,600	----	----	95	928	315	2,480	68	6.37	0.011	0.0035	0.013	0.061	0.056	14.4	0.025	LOR	0.477	59.8	LOR	0.02	0.32	0.34	1.5	1.8	----	2,280
9/05/2023	**SB78**	6.11	15,200	10,600	----	----	95	928	315	2,480	68	6.37	0.011	0.0035	0.013	0.061	0.056	14.4	0.025	LOR	0.477	59.8	LOR	0.02	0.32	0.34	1.5	1.8	----	2,280
22/05/2023	**SB78**	6.09	15,100	10,700	----	----	89	848	267	2,130	63	2.36	0.004	0.0030	0.002	0.044	0.021	14	0.024	LOR	0.342	8.62	LOR	LOR	0.2	0.2	1.2	1.4	----	2,100
17/06/2023	**SB78**	5.61	15,000	10,600	----	----	69	792	278	2,010	48	3.32	0.006	0.0029	0.003	0.05	0.024	12.4	0.014	LOR	0.557	5.31	LOR	LOR	0.24	0.24	1.1	1.3	----	2,350
28/08/2023	**SB78**	6.78	12,800	9,300	----	----	26	958	140	1,870	58	0.02	0.002	0.0009	LOR	0.005	0.002	4.59	0.063	LOR	0.16	2.39	LOR	LOR	0.01	0.01	1.1	1.1	----	1,810
6/10/2023	**SB78**	7.49	13,600	9,860	----	----	15	884	164	1,890	54	0.11	0.001	0.0009	LOR	0.033	0.008	7.53	0.05	LOR	0.113	1.61	LOR	LOR	0.18	0.18	0.8	1	----	1,910
18/12/2023	**SB78**	6.43	13,000	8,740	----	----	39	848	206	1,740	64	0.01	0.002	0.0012	LOR	0.005	LOR	4.81	0.102	LOR	0.265	1.39	LOR	0.09	LOR	0.09	0.8	0.9	----	1,810
31/01/2024	**SB78**	6.53	13,500	9,100	----	----	41	801	228	1,740	72	0.02	0.002	0.0015	LOR	0.008	0.001	6.6	0.146	LOR	0.287	0.31	LOR	0.14	LOR	0.14	0.6	0.7	----	1,940
27/02/2024	**SB78**	7.09	13,800	9,990	----	----	25	766	208	1,680	70	LOR	0.003	0.0015	LOR	0.006	LOR	5.18	0.127	LOR	0.286	0.29	LOR	0.19	LOR	0.19	0.6	0.8	----	1,900
9/03/2024	**SB78**	7.46	9,120	6,650	----	----	19	897	164	1,910	63	0.11	0.002	0.0006	0.002	0.015	0.003	10.2	0.041	LOR	0.078	11.7	LOR	0.11	LOR	0.11	0.8	0.9	----	1,040

Appendix H - Golden Grove Mine Groundwater Quality Monitoring Results

		pH Unit	Electrical Conductivity @ 25°C	Dissolved Solids (TDS)	Suspended Solids (SS)	Total Alkalinity as CaCO3	Acidity as CaCO3	Calcium	Magnesium	Sodium	Potassium	Aluminium	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Selenium	Zinc	Iron	Mercury	Nitrite as N	Nitrate as N	Nitrite + Nitrate as N	Total Kjeldahl Nitrogen as N	Total Nitrogen as N	Total Phosphorus as P	Sulfate as SO4
Unit		pH Un	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR					<5	<1	<1	<1	<1	<1	<1	<0.01	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.005	<0.05	<0.0001	<0.01	<0.01	<0.01	<0.1	<0.1		
date	site																													
09/05/2023	**ROM1**	7.11	23,300	16,200	----	----	58	1,220	360	4,060	157	0.14	0.003	0.2150	0.03	1.91	0.036	12.4	0.328	LOR	28.8	0.81	LOR	0.1	0.11	0.21	13.2	13.4	----	2,760
09/05/2023	**ROM1**	7.11	23,300	16,200	----	----	58	1,220	360	4,060	157	0.14	0.003	0.2150	0.03	1.91	0.036	12.4	0.328	LOR	28.8	0.81	LOR	0.1	0.11	0.21	13.2	13.4	----	2,760
17/11/2022	**ROM9**	6.88	19,700	15,500	----	----	32	----	----	----	----	1.18	0.002	0.2230	0.003	0.058	0.036	6.55	0.161	0.02	10.6	3.37	0.0002	LOR	7.67	7.67	1.2	8.9	----	2,340
31/03/2023	**ROM9**	6.54	17,600	12,700	----	----	11	983	794	2,000	120	0.67	0.001	0.1020	0.002	0.041	0.015	1.51	0.042	0.02	2.19	2.36	0.0002	LOR	7.71	7.71	1.2	8.9	----	2,220
09/05/2023	**ROM9**	6.54	19,500	15,100	----	----	24	1,020	767	2,380	128	5.66	0.004	0.2060	0.013	0.104	0.043	6.48	0.12	0.01	7.08	22.3	0.0008	LOR	5.62	5.62	1.5	7.1	----	2,320
09/05/2023	**ROM9**	6.54	19,500	15,100	----	----	24	1,020	767	2,380	128	5.66	0.004	0.2060	0.013	0.104	0.043	6.48	0.12	0.01	7.08	22.3	0.0008	LOR	5.62	5.62	1.5	7.1	----	2,320
29/08/2023	**ROM9**	6.70	21,600	18,600	----	----	29	1,200	787	2,660	128	6.36	0.006	0.2360	0.015	0.173	0.063	8.49	0.165	0.01	8.39	26.3	0.001	LOR	4.38	4.38	1.2	5.6	----	2,250
27/02/2024	**ROM9**	6.58	20,400	15,500	----	----	20	1,140	910	2,390	137	0.96	LOR	0.2850	0.002	0.146	0.007	7.87	0.172	LOR	8.34	3.27	0.0006	1.58	LOR	1.58	1.1	2.7	----	2,210
25/08/2023	**RB2**	7.35	3,340	2,110	----	----	8	87	169	330	20	LOR	LOR	LOR	0.002	LOR	LOR	LOR	0.001	LOR	LOR	LOR	LOR	LOR	4.85	4.85	0.2	5	----	485
29/11/2023	**RB2**	7.52	3,170	2,140	----	----	12	84	171	334	20	LOR	LOR	LOR	LOR	0.002	LOR	LOR	LOR	LOR	0.007	LOR	LOR	5.2	LOR	5.2	0.3	5.5	----	465
23/02/2024	**RB2**	7.32	3,040	2,240	----	----	6	85	166	322	19	LOR	LOR	LOR	0.001	LOR	LOR	LOR	0.001	LOR	LOR	LOR	LOR	4.82	LOR	4.82	0.5	5.3	----	464
15/11/2024	**RB2**	7.26	2,950	1,900	----	----	9	77	153	311	19	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	5.05	LOR	5.05	0.3	5.4	----	453
29/03/2022	**RB4**	7.48	----	1,720	----	----	4	----	----	----	----	----	0.001	LOR	LOR	LOR	LOR	----	----	LOR	LOR	----	LOR	LOR	6.6	6.6	0.8	7.4	----	247
29/03/2022	**RB4**	7.48	----	1,720	----	----	4	----	----	----	----	----	0.001	LOR	LOR	LOR	LOR	----	----	LOR	LOR	----	LOR	LOR	6.6	6.6	0.8	7.4	----	247
20/10/2022	**RB4**	7.16	631	346	----	----	4	9	19	79	7	LOR	0.068	LOR	LOR	LOR	LOR	0.002	0.012	LOR	0.007	LOR	LOR	LOR	3.75	3.75	0.6	4.4	----	41
31/03/2023	**RB4**	7.56	2,680	1,520	----	----	2	51	92	336	12	0.01	LOR	0.0002	LOR	0.004	LOR	0.003	0.002	LOR	0.018	LOR	LOR	LOR	6.52	6.52	0.7	7.2	----	267
31/03/2023	**RB4**	7.41	703	354	----	----	4	12	19	87	7	LOR	0.071	LOR	LOR	0.002	LOR	0.222	0.018	LOR	0.022	0.23	LOR	LOR	1.2	1.2	0.4	1.6	----	49
9/05/2023	**RB4**	7.73	2,660	1,580	----	----	5	50	98	370	12	0.01	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	0.02	LOR	LOR	LOR	6.52	6.52	0.9	7.4	----	248
9/05/2023	**RB4**	7.73	2,660	1,580	----	----	5	50	98	370	12	0.01	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	0.02	LOR	LOR	LOR	6.52	6.52	0.9	7.4	----	248
26/08/2023	**RB4**	7.58	2,770	1,450	----	----	8	51	94	356	12	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	6.89	6.89	0.5	7.4	----	228
29/11/2023	**RB4**	7.78	2,650	1,590	----	----	6	54	94	348	14	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	7.12	LOR	7.12	0.4	7.5	----	227
23/02/2024	**RB4**	7.50	2,430	1,590	----	----	6	52	89	336	13	LOR	LOR	LOR	0.004	LOR	LOR	LOR	LOR	LOR	LOR	LOR	LOR	6.58	LOR	6.58	0.6	7.2	----	218
21/08/2024	**RB4**	7.58	2,550	1,480	----	----	5	49	90	333	12	0.02	LOR	LOR	LOR	0.002	LOR	0.001	LOR	LOR	0.053	LOR	LOR	6.73	LOR	6.73	0.5	7.2	----	242
29/03/2022	**RB5**	6.92	----	7,860	----	----	15	----	----	----	----	----	LOR	0.0022	LOR	0.003	LOR	----	----	LOR	0.101	----	0.0002	LOR	2.87	2.87	0.4	3.3	----	1,920
29/03/2022	**RB5**	6.92	----	7,860	----	----	15	----	----	----	----	----	LOR	0.0022	LOR	0.003	LOR	----	----	LOR	0.101	----	0.0002	LOR	2.87	2.87	0.4	3.3	----	1,920
9/05/2023	**RB5**	7.37	10,200	7,270	----	----	17	283	563	1,220	35	0.08	LOR	0.0021	0.003	0.004	LOR	0.01	0.004	LOR	0.115	LOR	0.0001	LOR	2.98	2.98	0.4	3.4	----	1,980
9/05/2023	**RB5**	7.37	10,200	7,270	----	----	17	283	563	1,220	35	0.08	LOR	0.0021	0.003	0.004	LOR	0.01	0.004	LOR	0.115	LOR	0.0001	LOR	2.98	2.98	0.4	3.4	----	1,980
25/08/2023	**RB5**	7.22	10,400	7,290	----	----	20	288	541	1,150	34	LOR	LOR	0.0022	LOR	0.002	LOR	0.006	0.003	LOR	0.094	LOR	LOR	LOR	3.12	3.12	0.1	3.2	----	1,750
29/11/2023	**RB5**	7.60	10,100	5,440	----	----	17	297	573	1,190	36	0.02	LOR	0.0018	0.002	0.003	LOR	0.002	0.008	LOR	0.06	LOR	0.0012	3.95	LOR	3.95	0.3	4.2	----	1,880
23/02/2024	**RB5**	7.37	8,690	6,630	----	----	8	196	385	797	23	0.03	LOR	0.0030	0.004	0.008	LOR	0.047	0.025	LOR	0.432	LOR	0.0024	5.26	LOR	5.26	1	6.3	----	1,550

Appendix I

Monitoring Compliance 2019-2021

Appendix I. Golden Grove Monitoring Compliance Summary 2022-2024

Location	Frequency	Abstraction	SWL	pH	EC	TDS	Major Ions	Major Metals	Meter Calibration	Comments
Mine Dewatering										
Scuddles U/G	Monthly	✔							(✔)	Meter out of calibration 2022. Meter not checked in 2024.
Gossan Hill U/G	Monthly	✔							✘	Meter out of calibration 2022 and 2024.
EPA to Lake Wownaminya	Monthly	✔							(✔)	Meter out of calibration 2024
Site Water Metering										
Other WOS Sites	Monthly	✔							(✔)	
Potable Borefield										
GGW53P	Monthly	✔	(✔)						N/O	Bore equipped but not operating. Multiple SWL readings missed.
(GGW53)	Quarterly			(✔)	(✔)	(✔)	(✔)	(✔)		Some samples not taken prior to July 2022 and after April 2024. Some parameters not tested in 2022.
GGW54P	Monthly	N/O	✘						N/O	Bore not equipped. No SWLs measured.
(GGW54)	Quarterly			N/O	N/O	N/O	N/O	N/O		No samples taken (bore not equipped).
GGW67P	Monthly	✔	(✔)						✘	Meter out of calibration all years. Installation and maintenance issues. Multiple SWL readings missed.
(SC073)	Quarterly			✔	(✔)	✔	(✔)	(✔)		Some parameters not tested in 2022.
GGW69P	Monthly	✔	(✔)						✘	Meter out of calibration in 2024. Meter not accessible for audit in 2023. Air in pipeline affecting readings. Multiple SWL readings missed.
(GGW69)	Quarterly			✔	(✔)	✔	(✔)	(✔)		Some major ions and metals not tested prior to July 2022
GVW007P	Monthly	✔	(✔)						✔	No meter issues. Some SWL readings in 2023 missed.
	Quarterly			✔	✔	✔	✔	✔		No sample issues.
GGW93P	Monthly	✔	(✔)						(✔)	Meter out of calibration in 2023. Some SWL readings missing.
(GGW92)	Quarterly			✔	(✔)	✔	(✔)	(✔)		Some parameters not tested in 2022.
RMB4	Monthly	✔							(✔)	Bore not in service. No SWLs taken
	Quarterly		N/O	✔	✔	✔	(✔)	(✔)		Only two samples taken (bore issues)
GHDEC44P / 37R	Monthly	✔	(✔)						(✔)	Meter not accessible 2022. Out of calibration 2023. Multiple SWLs not taken.
(GHDEC36R)	Quarterly			✘	✘	✘	✘	✘		No samples taken
SC080	Monthly		(✔)							Several SWL readings missed
	Quarterly			(✔)	(✔)	(✔)	(✔)	(✔)		Some major ions, metals and EC not tested prior to September 2022
GGW73	Monthly		(✔)							Multiple SWL readings missed
	Quarterly			✘	✘	✘	✘	✘		No samples taken
GGW90	Monthly		(✔)							Several SWL readings missed
	Quarterly			✘	✘	✘	✘	✘		No samples taken
GGW92	Monthly		(✔)							Several SWL readings missed
	Quarterly			✘	✘	✘	✘	✘		No samples taken
Gossan Hill Dewatering										
GGW6A	Monthly		(✔)							Several SWL readings missed
	Quarterly			(✔)	(✔)	(✔)	(✔)	(✔)		Missed Dec 2023 sampling. EC and some anions and metals not tested prior to September 2022
GGW74	Monthly		(✔)							Several SWL readings missed
	Quarterly			✘	✘	✘	✘	✘		No samples taken
GGW80	Monthly		(✔)							Several SWL readings missed
	Quarterly			(✔)	(✔)	(✔)	(✔)	(✔)		Missed Dec 2023 sampling. EC and some anions and metals not tested prior to September 2022
GGW81	Monthly		(✔)							Several SWL readings missed
	Quarterly			(✔)	(✔)	(✔)	(✔)	(✔)		Missed Dec 2023 sampling. EC and some anions and metals not tested prior to September 2022
GGW91	Monthly		(✔)							Several SWL readings missed
	Quarterly			✘	✘	✘	✘	✘		No samples taken
TSF2 Seepage Recovery										
MB40	Monthly	✔							✔	Meter is a cycle counter type that is checked each month. Not operated since Aug 2019.
	Quarterly		✘	(✔)	(✔)	(✔)	(✔)	(✔)		SWL access issues (1 reading available). Multiple samples not taken. Some major ions and metals not tested in 2022.
MB41	Monthly	✔							✔	Meter is a cycle counter type that is checked each month.
	Quarterly		✘	(✔)	(✔)	(✔)	(✔)	(✔)		SWL access issues. Multiple missed sampling events. Some major ions and metals not tested in 2022.
MB43	Monthly	✔							✔	Meter is a cycle counter type that is checked each month. Bore not operating 2022-24.
	Quarterly		✘	✘	✘	✘	✘	✘		No SWLs or samples taken (dry bore).
MB57	Monthly	✔							✔	Meter is a cycle counter type that is checked each month.
	Quarterly		✔	✔	(✔)	✔	(✔)	(✔)		Some major ions and metals not tested in 2022.

Table Legend:	
✔	Compliant
✘	Not compliant
(✔)	Partially compliant
N/O	Not operating
N/R	Not required
	Not applicable

Appendix I. Golden Grove Monitoring Compliance Summary 2022-2024 (cont.)

Location	Frequency	Abstraction	SWL	pH	EC	TDS	Major Ions	Major Metals	Meter Calibration	Comments
TSF2 Seepage Recovery										
RB1	Monthly	✔							✔	Meter is a cycle counter type that is checked each month.
	Quarterly		✘	N/O	N/O	N/O	N/O	N/O		SWL access issues.
RB2	Monthly	✔							✔	Meter is a cycle counter type that is checked each month.
	Quarterly		✘	(✔)	(✔)	(✔)	(✔)	(✔)		SWL access issues. Multiple missed sampling events
RB3	Monthly	✔							✔	Meter is a cycle counter type that is checked each month. Not operated since Aug 2019.
	Quarterly		(✔)	N/O	N/O	N/O	N/O	N/O		SWL access issues (1 reading available).
RB4	Monthly	✔							✔	Meter is a cycle counter type that is checked each month.
	Quarterly		✘	(✔)	(✔)	(✔)	(✔)	(✔)		SWL access issues. Multiple missed sampling events. Some major ions and metals not tested in 2022.
RB5	Monthly	✔							✔	Meter is a cycle counter type that is checked each month.
	Quarterly		✘	(✔)	(✔)	(✔)	(✔)	(✔)		SWL access issues. Multiple missed sampling events. Some major ions and metals not tested in 2022.
ROM Seepage Recovery										
ROM1	Monthly	✔							✔	Meter is a cycle counter type that is checked each month.
	Quarterly		✘	(✔)	(✔)	(✔)	(✔)	(✔)		SWL access issues (unsafe). Multiple missed sampling events.
ROM9	Monthly	✘							✔	Meter is a cycle counter type that is checked each month.
	Quarterly		(✔)	(✔)	(✔)	(✔)	(✔)	(✔)		Multiple SWL readings missed. Multiple missed sampling events. Some major ions and metals not tested in 2022.
Evaporation Pond Seepage Recovery										
MB34	Monthly	✔	✘						✔	Meter is a cycle counter type that is checked each month. SWL access issues (Pump in bore).
	Quarterly			(✔)	(✔)	(✔)	(✔)	(✔)		No samples taken in 2022.
SB17B	Monthly	✔	(✔)						✔	Meter is a cycle counter type that is checked each month. SWL access issues (Pump in bore). One reading available.
	Quarterly			(✔)	(✔)	(✔)	(✔)	(✔)		Multiple missed sampling events in 2022.
SB76	Monthly	✔	✘						✔	Meter is a cycle counter type that is checked each month. SWL access issues (Pump in bore).
	Quarterly			(✔)	(✔)	(✔)	(✔)	(✔)		No samples taken in 2022.

Table Legend:	
✔	Compliant
✘	Not compliant
(✔)	Partially compliant
N/O	Not operating
N/R	Not required
	Not applicable

About AECOM

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