Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L8337/2009/2
Licence holder	Gensis Minerals (Leonora) Pty Ltd
ACN	667 073 681
Registered business address	Level 7, 40 The Esplanade PERTH WA 6000
DWER file number	2012/006861
Duration	09/02/2014 to 08/02/2029
Date of issue	07/02/2014
Date of amendment	25/03/2026
Premises details	Gwalia Mine LEONORA WA 6438 Legal description - Mining Tenements: G37/25, G37/26, G37/27, M37/17, M37/25, M37/55, M37/137, M37/170, M37/200, M37/247, M37/251, M37/333, M37/391, M37/689, M37/903, M37/1026, M37/1027, M37/1150, L37/33, L37/34, L37/35, L37/36, L37/56, L37/58 and L37/66. LEONORA WA 6438 as depicted in Schedule 1.

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	Assessed production / design capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore	1,600,000 tonnes per annual period
Category 6: Mine dewatering	5,500,000 tonnes per annual period
Category 52: Electric power generation	23 MW
Category 57: Used tyre storage (general)	Up to 500 tyres
Category 73: Bulk storage of chemicals, etc.	1,000 cubic meters
Category 89: Putrescible landfill	5,000 tonnes per annual period

This amended licence is granted to the licence holder, subject to the attached conditions, on 25 March 2026, by:

Christine Pustkuchen

Digitally signed by Christine Pustkuchen
Date: 2026.03.25 10:28:12 +08'00'

MANAGER, RESOURCES INDUSTRIES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

Date	Reference number	Summary of changes
03/03/1992	W777/1988/1	Works approval
07/12/1994	W1176/1988/1	Works approval
20/11/2000	L6059/1988/1	New licence issued
20/11/2001	L6059/1988/2	Licence re-issue
20/11/2002	L6059/1988/3	Licence re-issue
20/11/2003	L6059/1988/4	Licence re-issue
15/12/2004	L6059/1988/5	Licence re-issue
06/09/2007	R1952/2007/1	Concrete batching registration
09/04/2009	L8337/2009/1	New licence issued – old licence expired
25/09/2009	R2097/2009/1	On site landfill registration
11/02/2013	W5324/2012/1	TSF lift
16/09/2013	W5470/2013/1	TSF3 lift
09/02/2014	L8337/2009/2	Licence re-issue
20/02/2014	W5575/2013/1	Putrescible landfill
29/09/2014	W5703/2014/1	Paste plant stockpiles extension
24/11/2015	W5470/2013/1	Works approval amendment to extend time for TSF 3 Lift
29/04/2016	L8337/2009/2	This notice was given in accordance with section 59B(9) of the *Environmental Protection Act 1986* to the new expiry date of the licence.
08/12/2016	L8337/2009/2	Licence Holder amendment to construct and operate new landfill and TSF4 construction
19/07/2018	L8337/2009/2	Amendment Notice 1 - To increase cat.52 capacity, change the boundary of the landfill onsite, include a number of tenements to the premises boundary, modify sampling methodology and to reflect the ‘paste fill’ plant.
18/04/2019	L8337/2009/2	Amendment Notice 2 - To include 4 new generator units at the power plant to a total of 23 MW.
21/12/2023	L8337/2009/2	• TS3 rise to 392.5m • TS4 supernatant pond maximum operating height raised to 372.8 meters

		• Transfer licence from St Barbara Limited to Genesis Minerals Pty Ltd • Amendments to licence boundary to remove overlapping tenure In addition to the above applicant-initiated amendments, the CEO has incorporated amendment notices 1 and 2 into the licence document.
14/08/2024	L8337/2009/2	Amendment for category 6 dewatering from Tower Hill pit to the Harbour Lights pit and increase in dewatering capacity.
25/03/2026	L8337/2009/2	Amendment to: • Authorise maximum decant operating height of TSF4 from 372.8 to 377.8 RL (m); • Include category 57 to the licence to authorise the storage of up to 500 tyres on the premises; • Increase category 5 throughput from 1,500,000 to 1,600,000 tpa; • Authorise mine dewater discharge to Gwalia Pit; • Authorise disposal of tyres within Waste Rock Landforms.

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 licence:

(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

Premises operation

1. The Licence Holder must ensure that all pipelines containing tailings slurry, decant water, mine dewater or effluent are either:

(a) equipped with telemetry systems or pressure sensors along pipelines to allow the detection of leaks and failures;

(b) equipped with automatic cut-outs in the event of a pipe failure; or

(c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.

2. The Licence Holder must ensure that tailings, decant water, dewatering water, hypersaline water, contaminated stormwater/water are only discharged into containment cells, dams and ponds with the relevant infrastructure requirements specified Table 1.

Table 1: Containment infrastructure

Containment identification	Material	Infrastructure requirements
Tailings Storage Facility 3 (TSF3) Eastern and Western Cells	Tailings	In-situ material.
Tower Hill Pit	Dewatering water	
Harbour Lights Pit		
Gwalia Pit		
Tailings Storage Facility 4 (TSF4)	Tailings	Underlain by Grant's Patch TSF silty tailings; base permeability of 1 x10^{-9} m/s.
Pastefill facility stockpile	Tailings from TSF3	Bunded and drainage diverted into dedicated sediment pond.
Process Water Dam	Decant water, reverse osmosis reject water and hypersaline water	High-Density Polyethylene (HDPE) Lined.
Tower Hill Turkey Nest Dam	Dewatering water	HDPE Lined.
Site drainage pond	Contaminated stormwater from site- drainage	Unlined, historical site borrow pit.
Fuel Bay catch pond	Run-off catchment from fuel refill pad, processed water from light vehicle wash bay	HDPE lined pond, concrete wash bay.
VR3 East pond	Hypersaline water – formed from condensate from intersected groundwater within	HDPE Lined. Surrounded by perimeter bund.
VR3 West pond		

Containment identification	Material	Infrastructure requirements
VR6 Pond	the ventilation shaft entrained by the fan suction.	HDPE Lined.

3. The Licence Holder must manage containment cells and ponds in Table 1 such that a minimum top of embankment freeboard of 300 mm or a 1 in 100 year 72 hour duration storm event (whichever is greater) is maintained.

4. The Licence Holder must manage mine dewater discharge pits in Table 1 such that a minimum freeboard of 4 meters below crest level is maintained.

5. The Licence Holder must manage TSF3 and TSF4 such that:

   (a) maintain the seepage interceptor drain for TSF3, immediately downstream of the external toe of TSF3, except along the southern toe where it crosses TSF1 and TSF4;

   (b) maintain the seepage recovery system for TSF4 (including recovery bores RB01 to RB06); and

   (c) ensure seepage is returned to the TSFs or the process water pond for reuse in mineral processing operations.

6. The Licence Holder must undertake an annual assessment of vegetation within the zone of influence of TSF3 and TSF4. The assessment must:

   (a) photograph[1] and record the presence and condition of key vegetation features within the zone of influence on a quarterly basis;

   (b) compare the results of the assessment against previous years assessment and identify whether and deterioration in the presence and/or quality of vegetation has taken place; and

   (c) be undertaken by a person qualified in vegetation identification and sampling.

   Note 1: Site photographs required by condition 5(a) can be undertaken by the site environmental officer.

7. The Licence Holder must undertake monitoring of the water balance for TSF3 and TSF4 each monthly period; and (as a minimum) record the following information:

   (a) site rainfall[1]

   (b) evaporation[2]

   (c) decant water recovery volumes

   (d) seepage recovery volumes

   (e) volumes of tailings deposited; and

   (f) estimate of seepage losses.

   Note 1: Rainfall required by condition 7 can be provided by weather station at Leonora Airport.

   Note 2: Evaporation must be calculated by methodologies presented within Newson, T.A. and Fahey, M., 2003. Measurement of evaporation from saline tailings storages. Engineering Geology, 70, 217-233.

8. The Licence Holder must:

   (a) undertake inspections as detailed in Table 2; and

   (b) maintain a written log of all inspections undertaken, including the signature of the responsible person for each inspection.

Table 2: Inspection of infrastructure

Containment identification	Material	Infrastructure requirements
Mine dewater pipelines	Visual integrity	Daily when operating or weekly when not operating.
Tailings delivery pipelines	Visual integrity	
Tailings return water lines	Visual integrity	
Internal embankment freeboard of any active TSF	Visual to confirm required freeboard capacity is available	
Paste fill facility stockpile and sediment pond	Visual integrity of bunding	

9. The Licence Holder is authorised to construct embankment raises and operate the TSF4 and TSF3 to the heights as listed in Table 3 below:

Table 3: Embankment Raise

	Stages	Construction Height RL (m)	Supernatant Pond Maximum Operating Height RL (m)
TSF4	Stage 1	371	370.3
	Stage 2	373.5	372.8
	Stage 3	376	375.3
	Stage 4	378.5	377.8
	Stage 5	381	Not approved at this time
	Stage 6	383.5	
TSF3	Stage 1	390	389.5
	Stage 2	392.5	392

10. The Licence Holder must construct the embankment raises to the TSF4 in accordance with the documentation detailed in Table 4.

Table 4: Construction Requirements[1]

TSF Reference	Document	Parts	Date of Document
TSF4	Coffey Mining Pty Ltd – *St Barbara Limited: Gwalia Mine Works Approval Application Tailings Storage Facility 4*. TSF 4 and associated works comprise: • Upstream construction of above ground TSF4 in six lifts of 2.5 m on top of Grant's Patch TSFs (GPTSFs) using dried tailings borrowed from GPTSF western cell and mine waste for	Section 5	24 July 2015

	downstream capping sourced from existing capping layer of GPTSFs. • Downstream seepage recovery system with sump, seepage collection trench and pump on western and southern perimeters of TSF4. • Decant structure including decant well liner and filter rock surrounding decant tower and decant accessway • Tailings delivery and return pipelines and spigots at point of discharge • Six groundwater monitoring bores		

Note 1: Where the details and commitments of the documents listed in condition 7 are inconsistent with any other condition of this Licence, the conditions of this Licence shall prevail.

11. The licence holder must:

(a) construct the infrastructure;

(b) in accordance with the corresponding design and construction requirements; and

(c) at the corresponding infrastructure location.

as set out in Table 5.

Table 5: Design and construction requirements

	Infrastructure	Design and construction requirements	Infrastructure location
1	TSF3 embankment raise to RL 392.5.	• Perimeter embankment raise constructed to a maximum crest level RL 392.5 m; • Embankments to constructed with compacted tailings from the TSF beaches and protected against erosion by selected mine waste rock to be placed along the downstream batter of the embankment, and a gravel wearing base course be placed along the embankment crest to support traffic around the TSF; • Embankments constructed using upstream construction method with material of similar or lower permeability (5×10^{-8} m/s) for embankment raise • Bund along the western flank of TSF3 (along the existing seepage collection trench) to be reconstructed/maintained; • TSF3 lift constructed to accommodate inflows from 1:100 Annual Exceedance Probability (AEP) 72 hours rainfall event, atop normal operating pond, whilst maintaining 0.5 m total	Existing TSF3 location as depicted in Schedule 1, Figure 1.

		freeboard; and • Constructed in accordance with Figure 7 and Figure 8 in Schedule 1.	
2	Mine dewater pipelines from Harbour Lights Pit to the existing mine dewater pipeline corridor.	• Pipeline fitted with either: ○ telemetry systems or pressure sensors along pipelines to allow the detection of leaks and failures; ○ automatic cut-outs in the event of a pipe failure; or ○ provided with secondary containment sufficient to contain any spill for a period equal to daily route inspections. • Watercart must be available to support any earthworks to reduce visible dust liftoff during construction.	As depicted in Schedule 1, Figure 10.
3	Tower Hill Turkey Nest Dam.	• Turkey Nest Dam constructed with HDPE liner with a minimum thickness of 2 mm; • HDPE liner permeability to be less than 10-9; • Fauna egress matting installed as depicted in Schedule 1, Figure 11; and • Maximum holding capacity (excluding freeboard) of 3.4 ML.	As depicted in Schedule 1, Figure 10.
4	Seepage recovery bores: RB01, RB02, RB03, RB04, RB05 and RB06.	• Seepage recovery pumps to be installed and operational prior to operation of TSF4 supernatant pond above 372.8 RL (m); and • Pumps installed within seepage recovery bores to achieve an initial well loss of 5 m (+/- 1 m) and a pump duty cycle of about 75%.	As depicted in Schedule 1, Figure 6.

12. The Licence Holder must ensure that where wastes produced on the Premises are not taken to third party Premises for lawful use or disposal, they are managed in accordance with the requirements in Table 6. Additional trenches may be constructed and operated as required, providing they are done so in accordance with Table 6.

Table 6: Management of waste

Waste type	Management Strategy	Requirements[1]
Clean fill Inert Waste Type 1	Storage, handling and disposal of waste by landfilling.	<u>All waste types</u> • No more than 5 000 tonnes per year of all waste types cumulatively must

Putrescible waste		be disposed of by landfilling; • Disposal of waste by landfilling must only take place within the landfill areas shown on the map of emission points in Schedule 1, Figure 3 and Figure 4; • Waste must be placed in a defined trench, with the active tipping area restricted to a maximum linear length of 70 m and a width of 30 m; • The separation distance between the base of the landfill and the highest groundwater level must not be less than 3m; • Must meet the acceptance criteria for Class II landfills; and • Watercart must be available to minimise dust emissions during landfilling and covering of waste.
Inert Waste Type 2 (Tyres only)[2]	Handling and disposal of used tyres by landfilling.	• Used tyres must be placed in batches of 20 with a minimum of 1 m separation between tyres and a 10 m horizontal and 5 m vertical buffer zone between batches; and at 10 m or more from the landform outer surface; • The separation distance between the base of each tyre batch and the highest groundwater level must not be less than 3 m; and • Disposal of tyres must only take place within the Waste Rock Landform tyre disposal area as depicted in Schedule 1, Figure 12.
	Handling and storage of used tyres.	• Used tyres must only be stored within storage areas depicted in Schedule 1, Figure 12; • Total quantity of used whole tyres stored must not exceed more than 500 tyres at any one time; • Used tyre stacks must not exceed 100 m^2 in area or 3 metres in height; • Used tyres must be stacked on their side walls or if stored on their treads, area baled with a securing device made from a non-combustible material; • Firefighting equipment must be stored on site and capable of controlling and extinguishing a tyre fire; • The storage area must be hardstand (earthen or concrete) and bunded to prevent runoff of

		fire water to surrounding land; and • Following the extinguishing of a fire, the Licence Holder must ensure that fire water is removed from the Premises by a carrier licensed under the *Environmental Protection (Controlled Waste) Regulations 2004*.

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.
Note 2: Used offsite tyres must not be accepted.

13. The Licence Holder must ensure that cover is applied to waste in the tipping area in accordance with Table 7 and that sufficient stockpiles of cover are maintained on site at all times for the tipping area of the site to be covered, in accordance with this condition, at least twice.

Table 7: Cover requirements

Waste Type	Material	Depth	Timescales
Clean Fill	No cover required	N/A	N/A
Inert Waste Type 1	No cover required	N/A	N/A
Inert Waste Type 2	Inert waste type 1, soil or clay	100 mm	By the end of the month in which the waste was deposited. Plastic waste with the potential to become windblown must be covered as soon as practicable after deposit.
Putrescible waste	Inert Waste Type 1, soil or clay	150 mm	To be covered by the end of the month in which the waste was deposited with sufficient quantities of Type 1 inert waste, clean fill or other appropriate cover material to prevent the spread of fire and harbouring of disease vectors.

14. The Licence Holder must ensure that wind-blown waste is contained within the boundary of the landfills and that wind-blown waste is returned to the tipping area on at least a monthly basis.

15. The Licence Holder may use wastewater potentially contaminated by hydrocarbons for dust suppression, providing it has been treated by an oil/water separator. Treated wastewater or saline water used for dust suppression must not be discharged to native vegetation.

16. The Licence Holder must install and maintain onto power generator units number 5, 6, 7 and 8 at the Gwalia Power Plant, 'UltraQuiet Silencer' or equivalent onto each respective exhaust stack.

Emissions

Point source emissions to air

17. The Licence Holder must ensure that where waste is emitted to air from the emission points in Table 8 and identified on the map of emission points in Schedule 1, Figure 5, it is done in accordance with the conditions of this Licence.

Table 8: Emission points to air

Emission point reference as shown on map of emission points	Emission point height	Source, including any abatement
Gold room furnace stack	10 m	Gold room furnace and gold electrowinning cells via gas scrubber
Carbon regeneration kiln stack x 2	12.5 m	Kiln
Absorption chiller exhaust x 4	12 m	Power plant's waste heat recovery circuit following power generation
Dual fuel generator (KTA50-G3) exhaust x8	8.5 m	Exhaust from generator
Gas generators (C1750) x 8	8.5 m	
Gas generators (C2000) x 5	10 m	
Elution boiler exhaust	9 m	Gold Elution circuit

Point source emissions to surface water

18. The Licence Holder must ensure that where waste is emitted to surface water from the emission points in Table 9 and identified on the Premises map in Schedule 1, Figure 10 it is done so in accordance with the conditions of this Licence.

Table 9: Point source emissions to surface water

Emission point reference on Premises map	Description	Source including abatement
Lake Raeside	Salt lake	Dewater from mining activities via sedimentation pond

Point source emissions to groundwater

19. The Licence Holder must ensure that where waste is emitted to groundwater from the emission points in Table 10 and identified on the Premises map in Schedule 1, it is done so in accordance with the conditions of this Licence.

Table 10: Point source emissions to groundwater

Emission point reference on Premises map	Description	Source including abatement
Tower Hill Pit	Dewater disposal (open) pits	Dewater from mining activities
Harbour Lights Pit		

Emission point reference on Premises map	Description	Source including abatement
Gwalia Pit		

Monitoring

General monitoring

20. The Licence Holder must ensure that:

(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;

(b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11;

(c) all pH field measurements are undertaken in accordance with USEPA SESDPROC-100-R3; and

(d) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.

21. The Licence Holder must 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.

22. The Licence Holder must ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

23. The Licence Holder must, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

Monitoring of point source emissions to surface water

24. The Licence Holder must undertake the monitoring in Table 11 according to the specifications in that table.

Table 11: Monitoring of emissions to surface water

Emission point reference	Parameter	Units	Frequency
Lake Raeside	Volumetric flow	m^3	Cumulative monthly during active discharge period
	pH	-	Monthly during active discharge period
	Total Suspended Solids (TSS), Total Dissolved Solids	mg/L	

Emission point reference	Parameter	Units	Frequency
	(TDS), WAD-CN (weak acid dissociable cyanide), sodium (Na), potassium (K), calcium (Ca), magnesium (Mg), arsenic (As), lead (Pb), nickel (Ni), iron (Fe), cadmium (Cd), chromium (Cr), copper (Cu), mercury (Hg), selenium (Se), zinc (Zn), chloride (Cl), carbonate (CO3), bicarbonate (HCO3), sulfate (SO4) and nitrate (NO3).		

Monitoring of point source emissions to groundwater

25. The Licence Holder must undertake the monitoring in Table 12 according to the specifications in that table.

Table 12: Monitoring of emissions to groundwater

Emission point reference	Parameter	Units	Frequency
Tower Hill Pit, Harbour Lights Pit and Gwalia Pit.	Volumetric flow	m^3	Cumulative monthly
	pH	-	Six monthly during active discharge period
	TSS, TDS, WAD-CN, Na, K, Ca, Mg, As, Pb, Ni, Fe, Cd, Cr, Cu, Hg, Se, Zn, Cl, CO3, HCO3, SO4, and NO3.	mg/L	

Ambient environmental quality monitoring

26. The Licence Holder must undertake the monitoring in Table 13 according to the specifications in that table and record and investigate results that do not meet any limit specified.

Table 13: Ambient environmental quality monitoring

Monitoring point reference and location	Parameter	Limit	Trigger	Units	Averaging period	Frequency
TSF 2/1 to TSF 2/12 Monitoring bores	SWL	-	-	mbgl mAHD	Spot sample	Six monthly
	pH	-	-	pH units		

Monitoring point reference and location	Parameter	Limit	Trigger	Units	Averaging period	Frequency
As presented in Schedule 1, Figure 6.	TDS	-	-	mg/L		
	WAD-CN	-	-			
TSF 3/1 to TSF 3/7 Monitoring bores As presented in Schedule 1, Figure 6.	SWL	-	-	mbgl mAHD	Spot sample	Monthly, while the plant is operating; quarterly while in care and maintenance.
TSF 3/1 to TSF 3/8 Monitoring bores As presented in Schedule 1, Figure 6.	pH	-	-	pH units	Spot sample	Quarterly while the plant is operating; six monthly while in care and maintenance.
	TDS, WAD-CN, Na, K, Ca, Mg, As, Pb, Ni, Fe, Cd, Cr, Cu, Hg, Se, Zn, Cl, CO3, HCO3, SO4, and NO3	0.5 mg/L WAD-CN	-	mg/L		
TSF 4/1 to TSF 4/6 Monitoring bores As presented in Schedule 1, Figure 6.	SWL	-		mbgl mAHD	Spot sample	Monthly, while the plant is operating; quarterly while in care and maintenance
	pH	-	-	pH units		Quarterly while the plant is operating; six monthly while in care and maintenance.
	TDS, WAD-CN, Na, K, Ca, Mg, As, Pb, Ni, Fe, Cd, Cr, Cu, Hg, Se, Zn, Cl, CO3, HCO3, SO4, and NO3	0.5 mg/L WAD-CN	-	mg/L		
Vegetation Monitoring Bores MB01 to MB04 and Zone of Influence Monitoring	pH	-	-	pH units	Spot sample	Quarterly while the plant is operating; six monthly while in care and maintenance.
	TDS, WAD-CN, Na, K, Ca, Mg, As, Pb, Ni, Fe, Cd, Cr, Cu, Hg, Se, Zn, Cl, CO3, HCO3,	0.5 mg/L WAD-CN	-	mg/L		

Monitoring point reference and location	Parameter	Limit	Trigger	Units	Averaging period	Frequency
Bores MB05 to MB09 As presented in Schedule 1, Figure 6.	SO4, and NO3					
MB01	SWL	-	0.5	mbgl & mAHD	Spot sample	Monthly, while the plant is operating; quarterly while in care and maintenance.
MB02						
MB03			1.0			
MB04						
MB05			0.5			
MB06						
MB07						
MB08			1.0			
MB09						
[1]Passive Siphon Sampling As presented in Schedule 1, Figure 13.	TDS, WAD-CN, Na, K, Ca, Mg, As, Pb, Ni, Fe, Cd, Cr, Cu, Hg, Se, Zn, Cl, CO3, HCO3, SO4, and NO3.	-	-	mg/L	Spot sample	Annually with the objective to capture "first flush" of water runoff from the TSFs and surrounding area after a rainfall event.

Note 1: Monitoring methodology must occur as described in Mackay, A.K. and Taylor, M.P., 2011. Event-based water quality sampling method for application in remote rivers. River Research and Applications, 28(8), 1105-1112.

27. The Licence Holder must, in the event of a parameter in condition 26 exceeding the corresponding trigger value specified in that condition, undertake the management actions that correspond with the relevant parameter within the corresponding timeframe as specified in Table 14.

Table 14: Management actions required in the event of trigger value exceedance

Parameter	Management action	Timeframe
SWL	• Implement groundwater recovery measures (including but not limited to operation of seepage recovery bores) to reduce groundwater levels below trigger levels; and	Within 30 days of exceedance.

Parameter	Management action	Timeframe
	• Report the trigger exceedance within the Annual Environmental Report required by condition 33 with results of management actions taken and details of any environmental impact as a result of the exceedance.	

28. For annual periods where a dewatering discharge into Lake Raeside has occurred, the Licence Holder must prepare a dewatering discharge report that assesses environmental impacts associated with the mine dewater discharge. The assessment must include:

(a) description of the receiving environment of Lake Raeside, including lake geology, topography, hydrological processes, sediment and water quality and significant flora and fauna;

(b) report on the dewatering discharge volumes and water quality from the Premises;

(c) salt and water balance estimates for the reporting period in relation to the addition of the dewatering discharge from the Premises to Lake Raeside;

(d) sampling of metals in sediments at impacted and non-impacted sites;

(e) an assessment of the impact of the discharge on the receiving environment by comparison of impacted monitoring sites against non-impacted monitoring sites;

(f) an assessment of current results as compared to previous reporting periods; and

(g) summary of findings, conclusions and any recommendations for the improvement of the monitoring program and/or modifications for management of the discharge to reduce impact.

Records and Reporting

29. The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:

(a) the name and contact details of the complainant, (if provided);

(b) the time and date of the complaint;

(c) the complete details of the complaint and any other concerns or other issues raised; and

(d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.

30. The licence holder must:

(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

(b) prepare and submit to the CEO by no later than 30 days after the end of that annual period an Annual Audit Compliance Report in the approved form.

31. The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:

(a) the calculation of fees payable in respect of this licence;

(b) the works conducted in accordance with this licence;

(c) any maintenance of infrastructure that is performed in the course of complying with this licence;

(d) monitoring programmes undertaken in accordance with this licence; and

(e) complaints received under condition 29 of this licence.

32. The books specified under condition 31 must:

(a) be legible;

(b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;

(c) be retained by the licence holder for the duration of the licence; and

(d) be available to be produced to an inspector or the CEO as required.

33. The Licence Holder must submit to the CEO an Annual Environmental Report within 60 calendar days after the end of the annual period. The report must contain the information listed in Table 15 in the format or form specified in that table.

Table 15: 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
-	Seepage recovery bores (RB01 to RB06) pumping rates are reviewed to ensure abstraction remains efficient and sustainable (achieve an initial well loss of 5 m (+/- 1 m) and a pump duty cycle of about 75%). Evidence of the review, along with justification for current or revised abstraction rates, must be provided.	
6	Annual assessment of vegetation	
7	TSF3 and TSF4 Water balance	
24, Table 11	Volumetric flow, pH, TSS, TDS, WAD-CN, Na, K, Ca, Mg, As, Pb, Ni, Fe, Cd, Cr, Cu, Hg, Se, Zn, Cl, CO3, HCO3, SO4, and NO3	
25, Table 12	Volumetric flow, pH, TSS, TDS, WAD-CN, Na, K, Ca, Mg, As, Pb, Ni, Fe, Cd, Cr, Cu, Hg, Se, Zn, Cl, CO3, HCO3, SO4, and NO3	

Condition or table (if relevant)	Parameter	Format or form
26, Table 13	pH, TSS, TDS, WAD-CN, Na, K, Ca, Mg, As, Pb, Ni, Fe, Cd, Cr, Cu, Hg, Se, Zn, Cl, CO3, HCO3, SO4, and NO3	
27	Date and location of any SWL trigger exceedances and details on management actions undertaken to reduce SWL below trigger level, any environmental impact that has occurred as a result of the exceedance and any actions undertaken to prevent triggers exceedances in the future.	
28	Dewatering discharge report for discharges to Lake Raeside	
30	Compliance	Compliance Report
29	Complaints summary	None specified

34. The Licence Holder must ensure that the Annual Environmental Report also contains:

(a) any relevant process, production or operational data recorded under Condition 22; and

(b) an assessment of the information contained within the report against previous monitoring results and Licence limits or triggers.

35. For each stage of the TSF4 works described in Table 3 and Table 4 and for the infrastructure described in Table 5, the Licence Holder must undertake and audit of their compliance and submit a compliance document to the CEO within 30 days of the completion of the of each infrastructure/stage completed.

36. The Compliance document required by condition 35 must include as a minimum the following:

(a) certify by a suitably qualified professional engineer that the works were constructed in accordance with the requirements of Table 3 and Table 4 for TSF4 works and Table 5; and

(b) be signed by a person authorised to represent the Licence Holder and contains the printed name and position of that person within the company.

Definitions

In this licence, the terms in Table 16 have the meanings defined.

Table 16: Definitions

Term	Definition
ACN	Australian Company Number
Acceptance criteria	has the meaning defined in Landfill Definitions
AEP	means Annual Exceedance Probability
Annual Period	a 12 month period commencing from 1 September until 31 August of the immediately following year.
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 September until 31 August of the immediately following year.
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples;
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;
books	has the same meaning given to that term under the EP Act.
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
Clean fill	has the meaning defined in Landfill Definitions;
Compliance Report	means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO from time to time and published on the Department's website.
controlled waste	has the definition in Environmental Protection (Controlled Waste) Regulations 2004;
Department	means the department established under section 35 of the *Public Sector*

Term	Definition
	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)
HDPE	means High-Density Polyethylene
inert waste type 1	has the meaning defined in Landfill Definitions;
inert waste type 2	has the meaning defined in Landfill Definitions;
Landfill definitions	means the document entitled "Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009) published by the Chief Executive Officer and as amended from time to time.
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.
mbgl	means meters below ground level
NATA	means the National Association of Testing Authorities, Australia
NATA accredited	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
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.
SWL	means standing water level
TSF	means Tailings Storage Facility
WAD CN	means Weak Acid Dissociable cyanide
waste	has the same meaning given to that term under the EP Act.
WRL	means waste rock landform
'µS/cm'	means microsiemens per centimetre.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The Premises is shown in the map below. The red line depicts the Premises boundary.

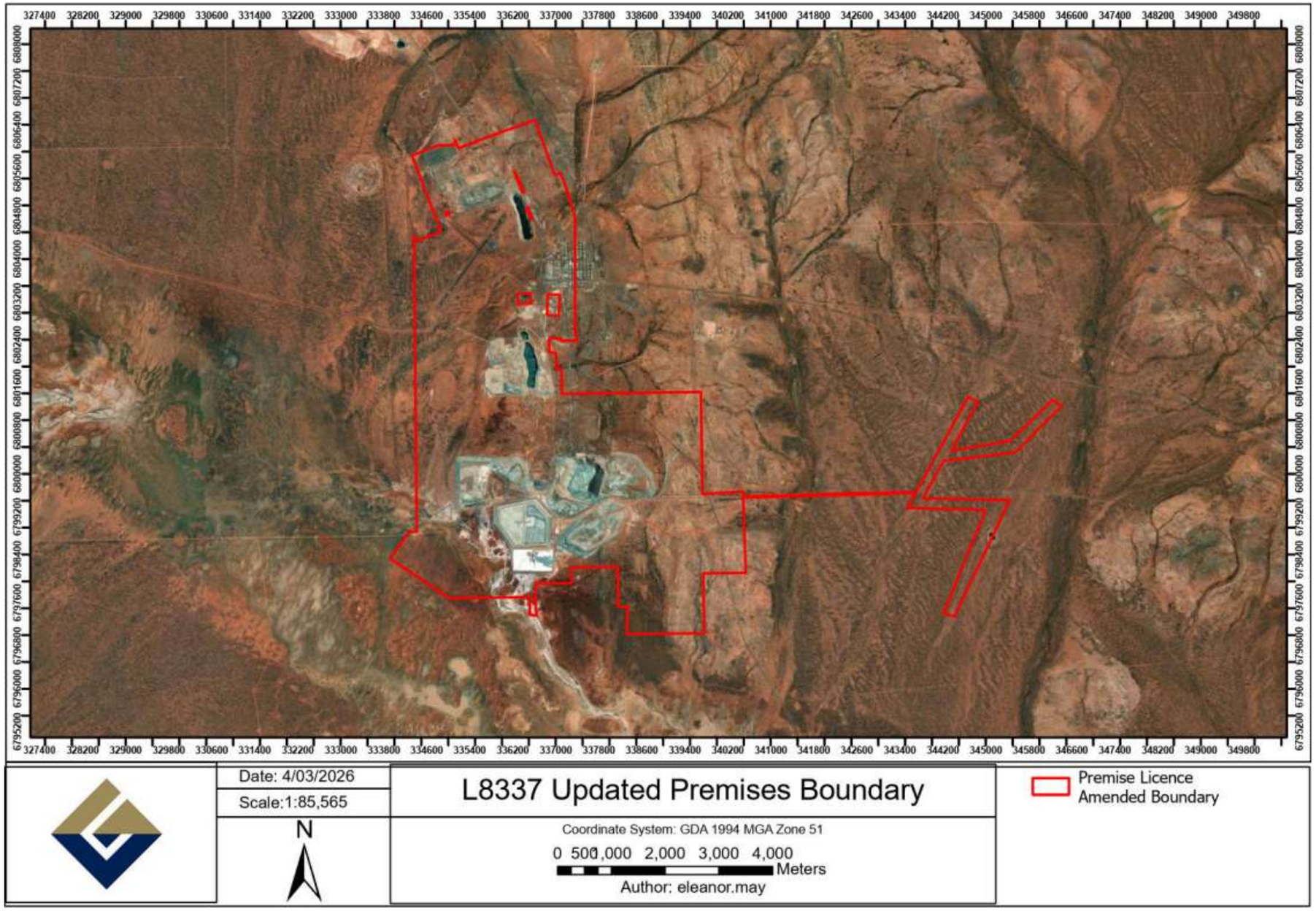


Figure 1: Premises Map

Figure 2: Location of the TSF3 and TSF4

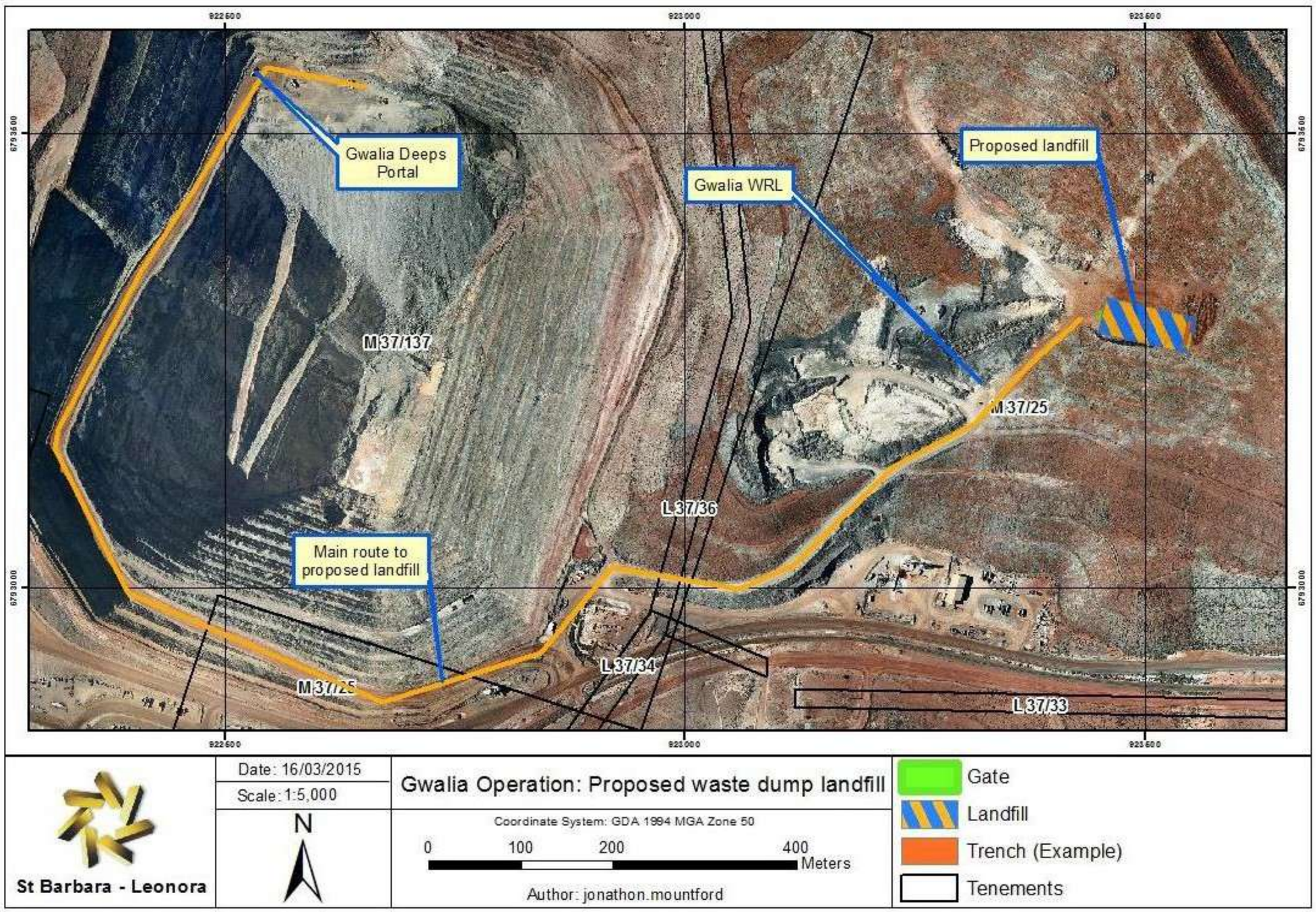


Figure 3: Location of the new proposed landfill adjacent to Gwalia Deeps

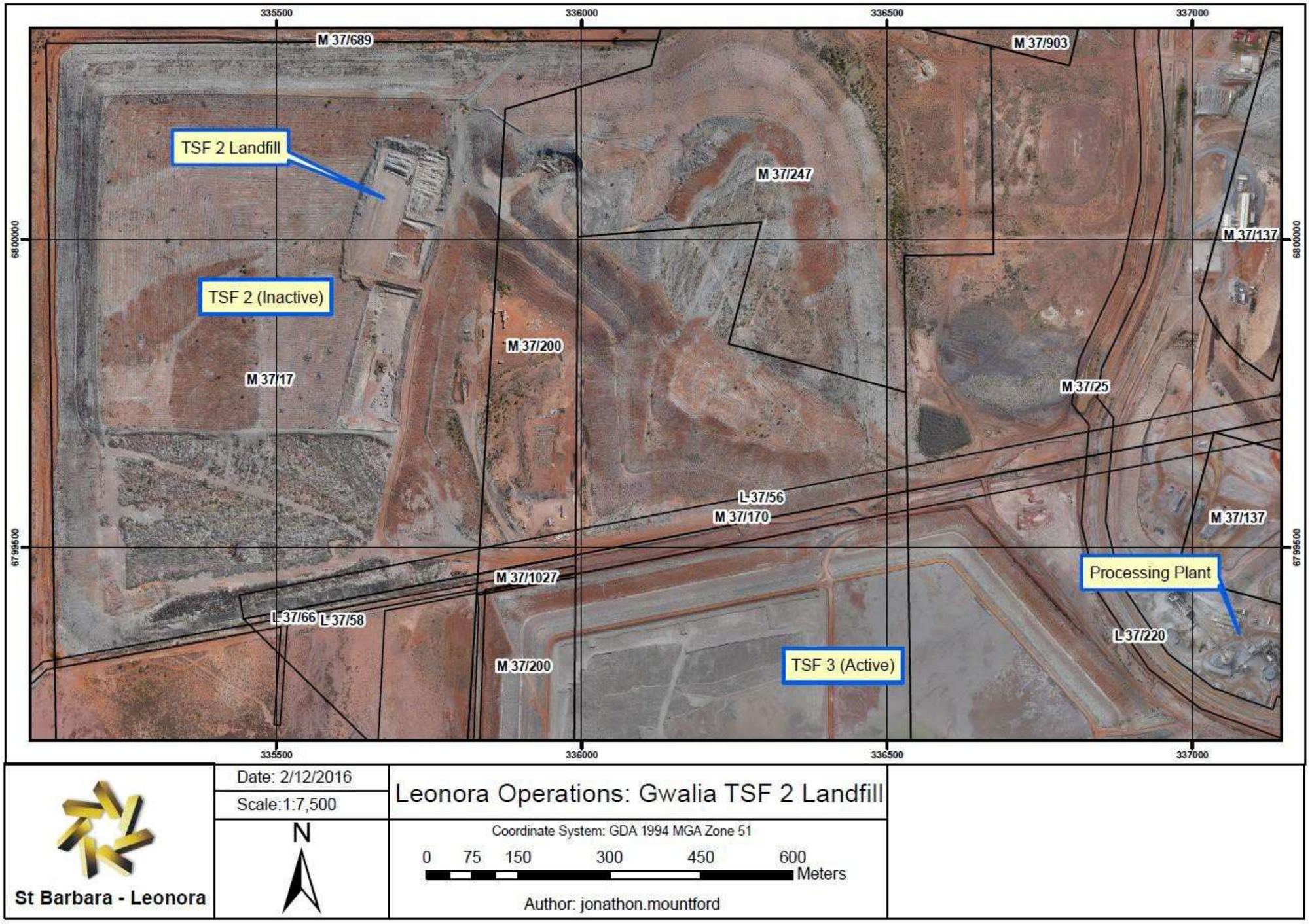
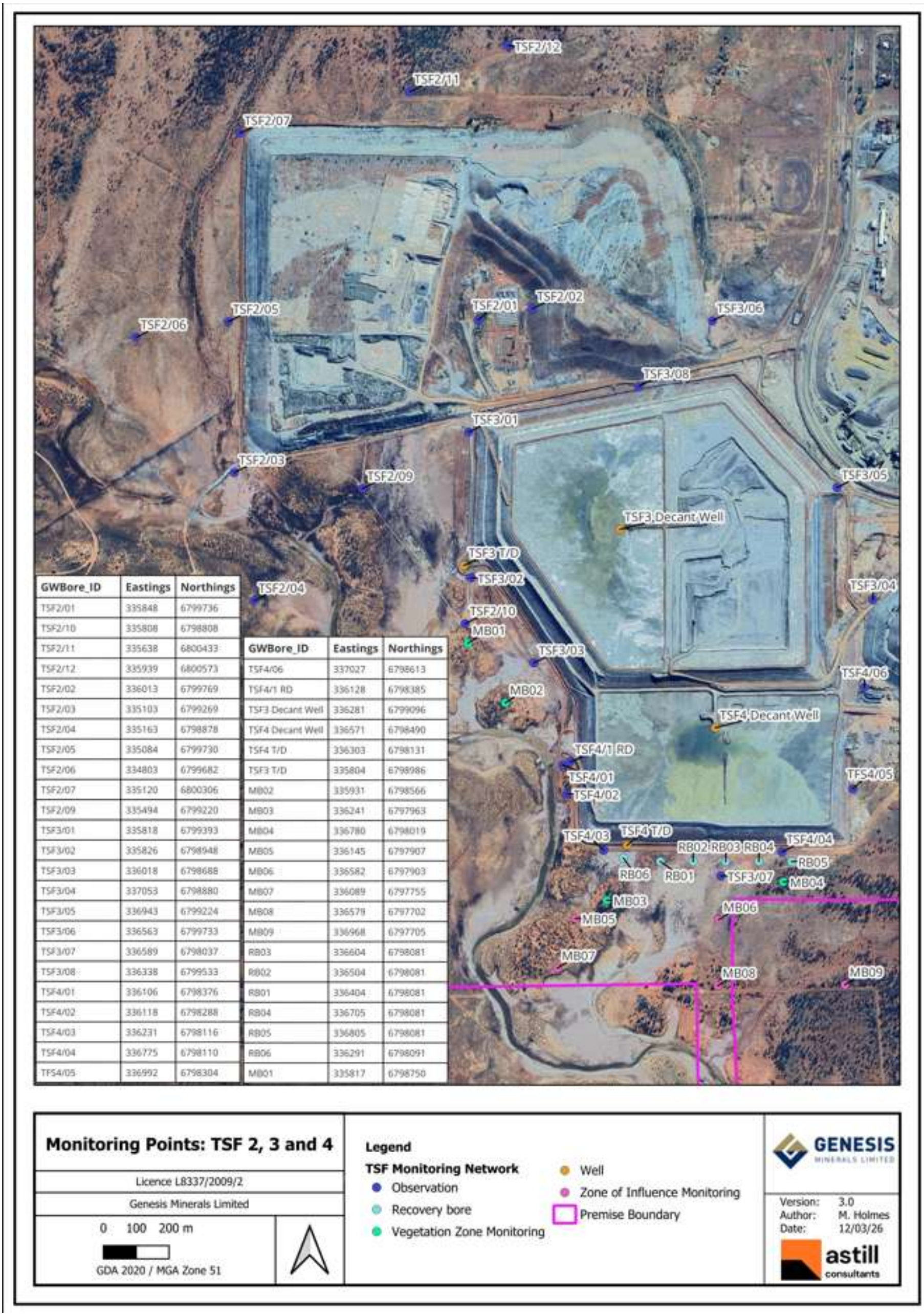


Figure 4: Location of the existing landfill on TSF2

Figure 5: Locations of the emission points to air



GWBore_ID	Eastings	Northings
TSF2/01	335848	6799736
TSF2/10	335808	6798808
TSF2/11	335638	6800433
TSF2/12	335939	6800573
TSF2/02	336013	6799769
TSF2/03	335103	6799269
TSF2/04	335163	6798878
TSF2/05	335084	6799730
TSF2/06	334803	6799682
TSF2/07	335120	6800306
TSF2/09	335494	6799220
TSF3/01	335818	6799393
TSF3/02	335826	6798948
TSF3/03	336018	6798688
TSF3/04	337053	6798880
TSF3/05	336943	6799224
TSF3/06	336563	6799733
TSF3/07	336589	6798037
TSF3/08	336338	6799533
TSF4/01	336106	6798376
TSF4/02	336118	6798288
TSF4/03	336231	6798116
TSF4/04	336775	6798110
TFS4/05	336992	6798304

GWBore_ID	Eastings	Northings
TSF4/06	337027	6798613
TSF4/1 RD	336128	6798385
TSF3 Decant Well	336281	6799096
TSF4 Decant Well	336571	6798490
TSF4 T/D	336303	6798131
TSF3 T/D	335804	6798986
MB02	335931	6798566
MB03	336241	6797963
MB04	336780	6798019
MB05	336145	6797907
MB06	336582	6797903
MB07	336089	6797755
MB08	336578	6797702
MB09	336968	6797705
RB03	336604	6798081
RB02	336504	6798081
RB01	336404	6798081
RB04	336705	6798081
RB05	336805	6798081
RB06	336291	6798091
MB01	335817	6798750

Figure 6: Location of the groundwater monitoring bores surrounding TSF 2 (decommissioned) and TSF3 and TSF4

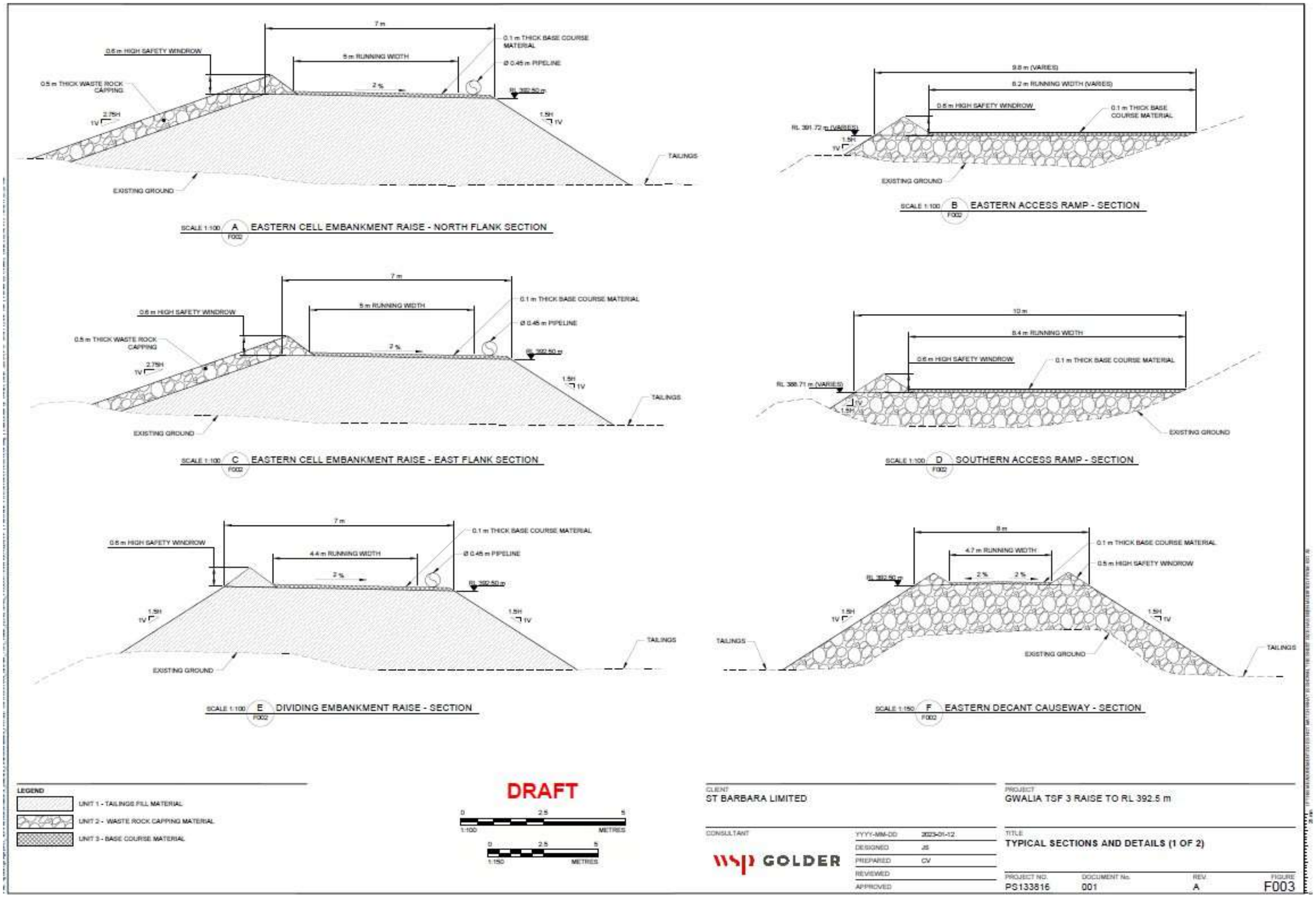


Figure 7: TSF 3 Raise to RL 392.5m – typical sections and details (1 of 2)

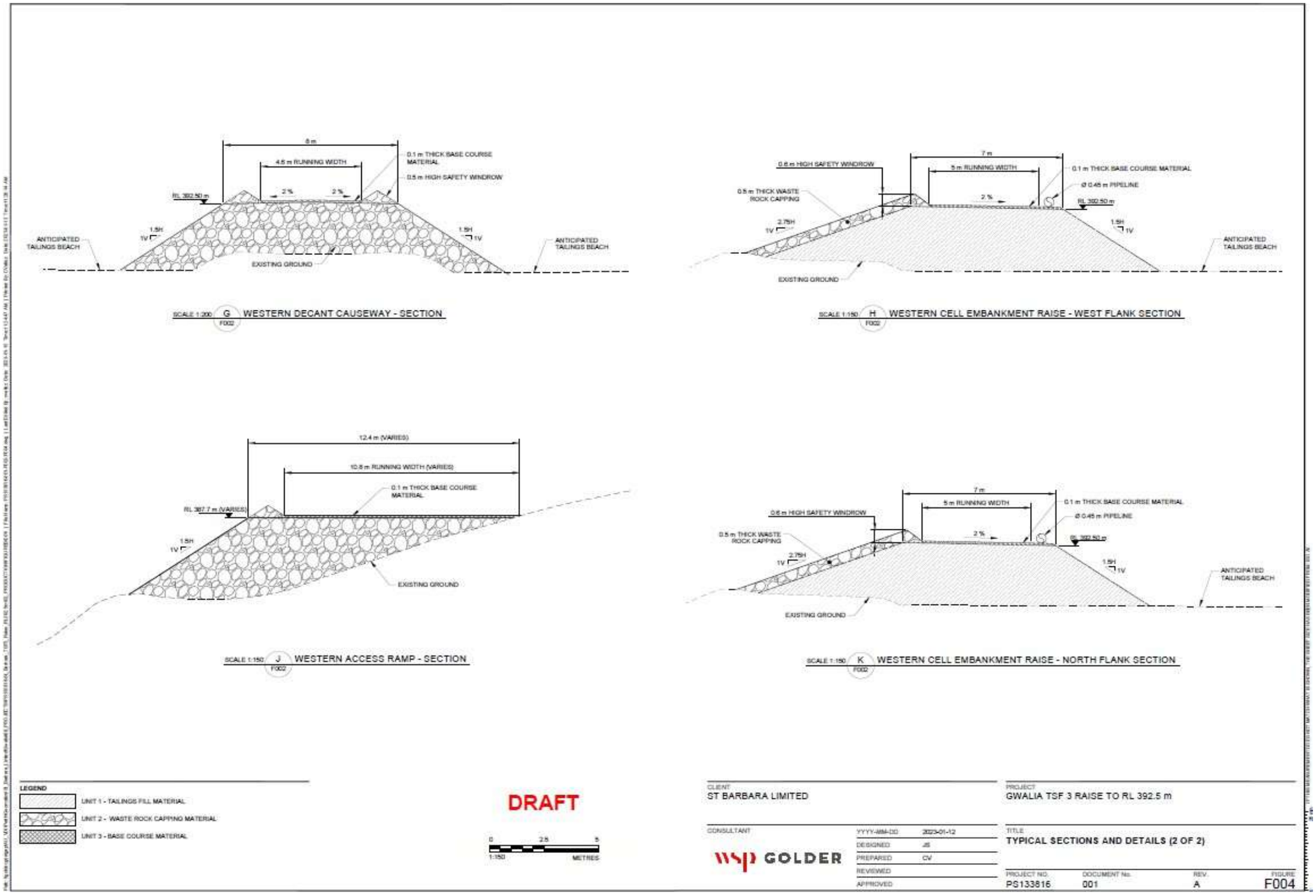


Figure 8: TSF 3 Raise to RL 392.5m – typical sections and details (2 of 2)

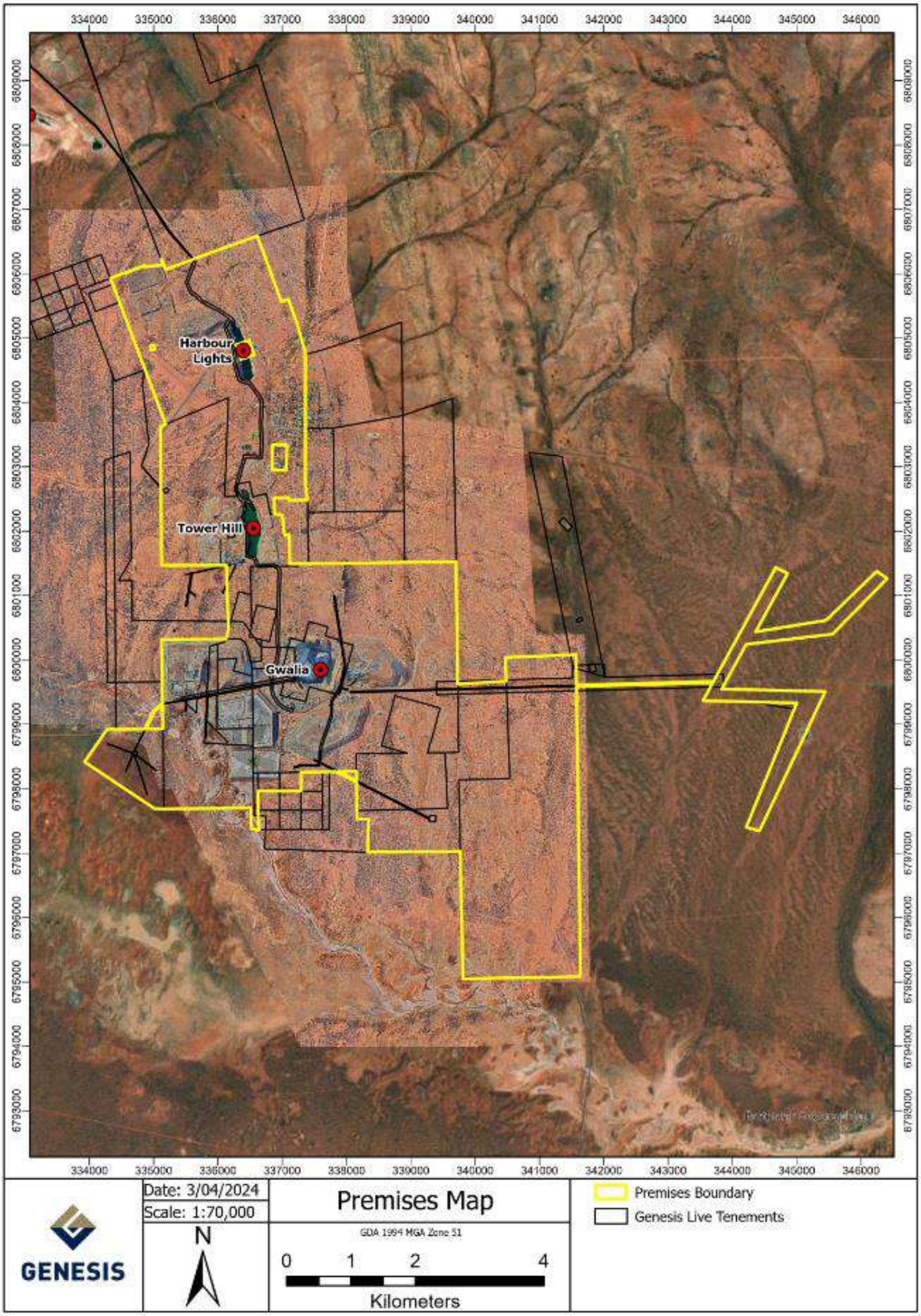


Figure 9: Discharge points for mine dewatering

Figure 10: Mine dewater pipeline route

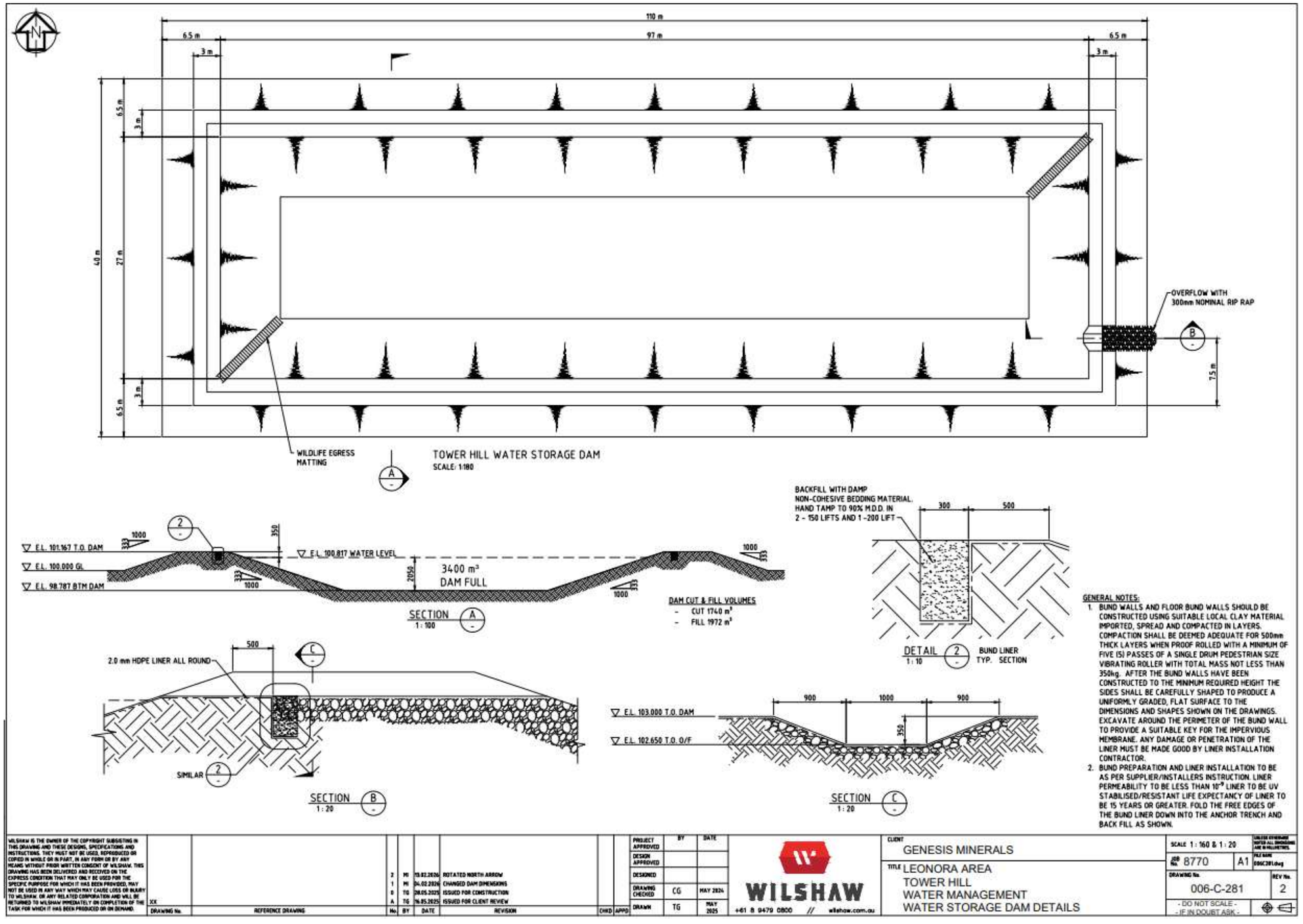


Figure 11: Tower Hill Turkeys Nest construction requirements

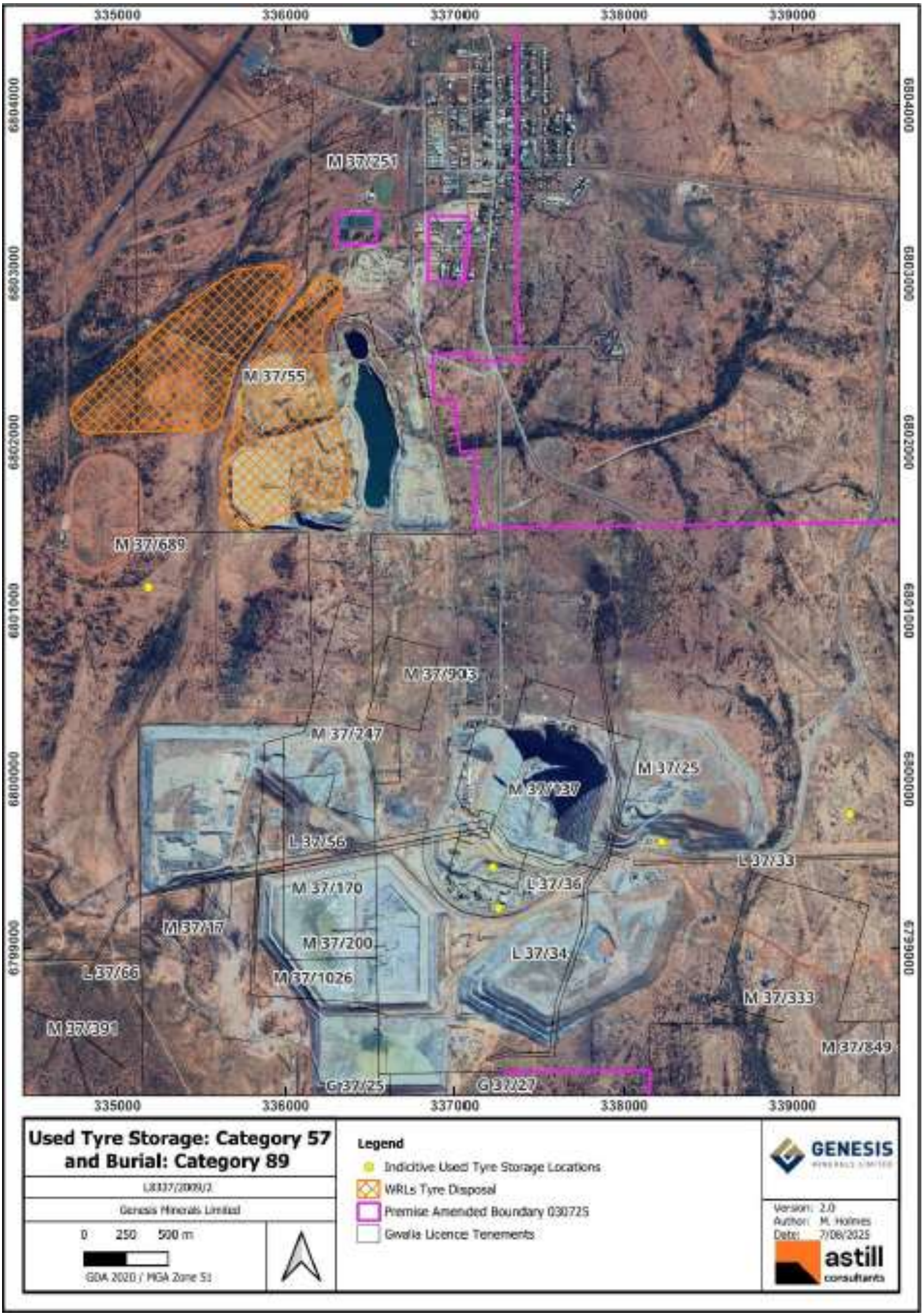


Figure 12: WRL tyre disposal and used tyre storage locations

Figure 13: Passive siphon sampling locations