



Licence number	L8050/1991/3
Licence holder	Water Corporation
Registered business address	629 Newcastle Street Leederville, WA 6007
DWER file number	2010/003526-1
Duration	1/11/2014 to 31/10/2023
Date of amendment	18/03/2022
Premises details	Jurien Wastewater Treatment Plant Lot 11300 (Crown Reserve 40417) Airstrip Road JURIEN BAY WA 6516 Legal description - Lot 11300 on Deposited Plan 185509

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed design capacity
Category 54: Sewage facility premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters.	300 cubic metres per day
Category 61: Liquid waste facility – premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	150 cubic metres per day

This licence is granted to the licence holder, subject to the attached conditions, on 17 November 2022, by:

Abbie Crawford

A/MANAGER, WASTE INDUSTRIES

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

[L8050/2014/1](#)

Licence history

Date	Reference number	Summary of changes
20/06/2001	W3151/1991/1	Works Approval
25/10/2005	L8050/1991/1	Licence re-issue
09/05/2008	L8050/1991/1	Licence amendment
17/09/2009	L8050/1991/2	Licence re-issue
16/10/2014	L8050/1991/3	Licence reissue and amendment to new format
16/01/2014	W5495/2014/1	Works Approval for premises upgrade
12/11/2015	L8050/1991/3	Licence amendment on completion of works upgrade
12/02/2019	L8050/1991/3	Amendment Notice 1
26/03/2021	L8050/1991/3	Licence amendment for the discharge of saline waste via infiltration for a period of six months
18/03/2022	L8050/1991/3	Licence amendment for the discharge of saline waste via infiltration for a further two year period
17/11/2022	L8050/1991/3	Licence amendment to extend the timeframes for compliance with Conditions 13 and 16 and to correct a typographical error in Condition 20

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

The licence holder must ensure that the following conditions are complied with:

Waste acceptance

1. The licence holder must only accept onto the premises waste of a waste type, which does not exceed the corresponding rate at which waste is received, and which meets the corresponding acceptance specification set out in Table 1.

Table 1: Types of waste authorised to be accepted onto the premises

Waste type	Waste code	Rate at which waste is received	Acceptance specification
Sewage – waste from the reticulated sewerage system	K130	300 cubic metres/day	Accepted through sewer inflow(s) and via tankers only.
Septage wastes	K210		Tankered into the premises and discharged directly into the primary pond via the receivable point.
Grease wastes	K110	<100 t/annual period and as part of total premises design capacity	This includes biological wastes only (e.g. grease wastes from food preparation)
Non toxic salts (saline waste)	D300	150 cubic metres/day	Accepted via tankers only between 18/03/2022 and 18/03/2024

Note 1: Additional requirements for the acceptance of controlled waste are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

Waste processing

2. The licence holder must ensure that the waste types specified in Table 2 are only subjected to the corresponding process(es), subject to the corresponding process limits and/or specifications.

Table 2: Waste processing

Waste type	Process(es)	Process limits and/or specifications
Sewage	Physical and biological treatment	Treatment of sewage waste shall be maintained at or below the treatment capacity of 300 m3/day.
Sewage sludge	Storage	N/A
Saline waste	Disposal by infiltration	Saline waste acceptance must be maintained at or below 150 m3/day.

Infrastructure and equipment

3. The licence holder must ensure that the site infrastructure and equipment listed in Table 3 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 3.

Table 3: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
Pond 1 – Primary	Wastewater	Clay lined to achieve a permeability of less than 10^{-9} m/s or equivalent.
Pond 1B – Primary	Wastewater	Clay lined to achieve a permeability of less than 10^{-9} m/s or equivalent.
Pond 2 – Secondary	Wastewater	Clay lined to achieve a permeability of less than 10^{-9} m/s or equivalent.
Pond 2B – Secondary	Wastewater	Clay lined to achieve a permeability of less than 10^{-9} m/s or equivalent.
Infiltration pond 1	Wastewater, Saline waste	Base unlined, in-situ soils; geotextile embankments.
Infiltration pond 2	Wastewater, Saline waste	Base unlined, in-situ soils; geotextile embankments.
Infiltration Pond 3	Wastewater, Saline waste	Unlined, in-situ soils.
Sewage sludge compound	Sewage sludge	<p>Temporary or permanent infrastructure to consist of a bunded hardstand or lined area (lined to achieve a permeability of less than 10^{-9} m/s or equivalent), capable of preventing surface run-off of leachate and sludge and which includes a leachate collection system.</p> <p>The sewage sludge geobag laydown area should be managed such that:</p> <ul style="list-style-type: none"> (a) stormwater runoff is prevented from entering the area; (b) discharges/leachate from the area are directed to the primary ponds.

4. The licence holder must:
- (a) take all reasonable and practicable measures to prevent stormwater run-off becoming contaminated by the activities and operations undertaken at the premises.
 - (b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.
5. The licence holder must manage all wastewater treatment and infiltration ponds such that
- (a) overtopping of the ponds does not occur;
 - (b) a freeboard equal to, or greater than, 300mm is maintained;
 - (c) the integrity of the containment infrastructure is maintained;

- (d) trapped overflows are maintained on the outlet of ponds to prevent carry-over of surface floating matter; and
 - (e) vegetation and floating debris (emergent or otherwise) is prevented from encroaching onto pond surfaces or inner pond embankments.
6. The licence holder must manage the infiltration of treated wastewater such that:
- (a) treated wastewater is evenly distributed over the infiltration area; and
 - (b) wastewater disposal is to be rotated between the infiltration areas on a regular basis to minimise soil erosion and surface ponding and allow the soils to dry between disposal; and
 - (c) sludges are removed from the base of the pond to maintain the infiltration performance;
7. The licence holder must:
- (a) implement security measures at the site to prevent as far as is practical unauthorised access to the site; and
 - (b) undertake regular inspections of all security measures and repair damage as soon as practicable; and
 - (c) ensure the entrance gates are closed and locked when the site is closed or unmanned.

Emissions and discharges

8. The licence holder must ensure that the emissions specified in Table 4, are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

Table 4: Authorised discharge points

Emission	Discharge point	Description
Discharge of wastewater from secondary pond 2B and 2 to infiltration ponds 1, 2 and 3	L1 and L2 as shown in Schedule 1: Map of emission and monitoring locations	Discharge of wastewater from secondary pond 2B and 2 to infiltration ponds 1, 2 and 3
Discharge of saline waste	L1 and L2 as shown in Schedule 1: Map of emission and monitoring locations	Discharge of saline waste through infiltration to infiltration ponds 1, 2 and 3

Monitoring

General monitoring

9. The licence holder must 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 groundwater sampling is conducted in accordance with AS/NZS 5667.11;
 - (d) all microbiological samples are collected and preserved in accordance with AS/NZS 2031; and

- (e) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.
- (f) monitoring equipment used on the Premises to comply with the conditions of this Licence is maintained and calibrated in accordance with the manufacturer's specifications.
- (g) 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.

10. The licence holder shall ensure that:

- (a) monthly monitoring is undertaken at least 15 days apart; and
- (b) quarterly monitoring is undertaken at least 45 days apart.

Monitoring of emissions to land

11. The licence holder must undertake emission to land monitoring as specified in Table 5 according to the corresponding specifications;

Table 5: Monitoring emissions to land

Emission point reference	Monitoring location	Parameter	Unit	Frequency	Averaging period
M1	Monitoring outfall flume facility (from secondary treatment ponds '2 and 2B' prior to entering infiltration ponds)	pH ¹	pH	Quarterly	Spot sample
		Biochemical Oxygen Demand	Mg/L		
		Total Dissolved Solids			
		Total Suspended Solids			
		Nitrate + Nitrite-nitrogen			
		Ammonium-nitrogen			
		Total Nitrogen			
		Total Phosphorus			
		<i>Escherichia coli</i> ²			

Note 1: In-field non-NATA accredited analysis permitted.

Note 2: Actual units are to be reported except where the result is greater than the highest detectable level of 24,000 cfu/100mL. In this case the reporting of the highest detectable level is permitted.

Input and output monitoring

12. The licence holder must undertake emission to land monitoring as specified in Table 6 according to the corresponding specifications;

Table 6: Monitoring of input and output

Emission point reference	Monitoring location	Parameter ¹	Units	Averaging period	Frequency
Sewage - Inlet Flow	Derived ² volume (M2)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
Septage waste	Tankered waste receival point (M3)	Volume received	m ³ /day	Monthly	Each load to the facility
Treated wastewater discharged to onsite infiltration ponds 1, 2 and 3	Outflow meter (M1)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
Saline waste	Tankered saline waste receival point	Volume received	m ³ /day	Monthly	Each load to the facility

Note 1: In-field non-NATA accredited analysis permitted.

Note 2: Derived Inflow is calculated from sum of magflow at the three pump stations: (Jurien SPS No 1 Magflow Meter – Consumption/Flow Since Last Rdg) + (Jurien SPS No 5 Magflow Meter – consumption/Flow Since Last Rdg) + (Jurien SPS Hamersley St Magflow Meter – Consumption/Flow Since Last Rdg)

Groundwater monitoring

13. The licence holder must design, construct, and install groundwater monitoring wells in accordance with the requirements specified in Table 7.

Table 7: Groundwater monitoring well installation

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
Shallow and Deep offsite groundwater monitoring well(s)	<p><u>Well design and construction:</u></p> <p>Designed and constructed in accordance with <i>ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores</i>.</p> <p>Shallow monitoring wells must be constructed with a screened interval from the water table to a depth of 2 metres below the water table and 1 metre above the water table.</p> <p>Deep monitoring well must target the part, or parts, of the aquifer most likely to be affected by contamination¹.</p>	Sited to monitor plume migration downgradient from the prescribed premises.	Must be constructed, developed (purged), and determined to be operational by 31/10/2023
	<p><u>Logging of borehole:</u></p> <p>Soil samples must be collected and logged during the installation of the monitoring wells.</p> <p>A record of the geology encountered during drilling must be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS1726.</p>		

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
	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 <i>ASTM D5092/D5092M-16</i> . 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.		

Note 1: refer to Section 8 of Schedule B2 of the *Assessment of Site Contamination NEPM* for guidance on well screen depth and length.

14. The licence holder must, within 90 calendar days of the monitoring wells being constructed, submit to the CEO a well construction report evidencing compliance with the requirements of condition 13.
15. The licence holder must monitor groundwater for concentrations of the identified parameter(s) in accordance with Table 8.

Table 8: Groundwater monitoring of ambient concentrations

Monitoring well location	Parameter	Unit	Frequency	Averaging period
Monitoring wells as shown in Figure 3, Schedule 1 of the Licence New monitoring wells once installed in accordance with Condition 13	Standing water level ¹	m(AHD)	Quarterly	Spot sample, in accordance with AS/NZS 5667.11
	pH ¹	pH unit		
	Electrical conductivity ¹	µS/cm		
	Redox potential ¹	Eh		
	Total nitrogen	mg/L		
	Total phosphorus			
	Total dissolved solids			
	Dissolved oxygen ¹			
	Major cations and anions: calcium, magnesium, potassium, sodium, chloride, bicarbonate and sulphate			
	Heavy Metals: Aluminium, Arsenic, Cadmium, Chromium, Copper, Iron (total) Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Vanadium and Zinc			
	Radium-226 and Radium-228	µg/L		
	Total Uranium and Thorium	Bq/L		

- 16.** The licence holder must provide to the CEO by 30/05/2023, a subterranean fauna assessment, undertaken in accordance with EPA Technical Guidance Subterranean Fauna Survey for Environmental Impact Assessment (December 2021).

Records and reporting

- 17.** 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.
- 18.** 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 90 days after the end of that annual period an Annual Audit Compliance Report in the approved form.
- 19.** 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) any maintenance of infrastructure that is performed in the course of complying with condition 3 of this licence;
 - (c) monitoring programmes undertaken in accordance with conditions 13 to 16 of this licence; and
 - (d) complaints received under condition 17 of this licence.
- 20.** The books specified under condition 19 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.
- 21.** The licence holder must submit to the CEO by no later than 90 days after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 8, and which provides information in accordance with the corresponding requirement set out in Table 9.

Table 9: Annual Environmental Report

Condition	Requirement	Format
-	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
-	Any relevant process, production or operational data recorded;	
-	An assessment of the information contained within the report against previous monitoring results and Licence limits.	
-	Include copies of original monitoring reports submitted to the licence holder by third parties	
Condition 2	Summary of any treatment capacity exceedances and any action taken	
Condition 5	Summary of any freeboard exceedances and any action taken	
Condition 11 Table 5	Monitoring of emissions to land	
Condition 12 Table 6	Monitoring of inputs and outputs	
	Methodology and calculations used to estimate the daily volumetric flow rate of treated wastewater gravity fed to infiltration ponds 1, 2 and 3, and results of those calculations	
Condition 13 Table 7	Monitoring of ambient groundwater quality	
Condition 16	Provide a summary of any subterranean fauna studies or monitoring undertaken	

Condition	Requirement	Format
Condition 14	Complaint's summary	
Condition 15	Compliance	Annual Audit Compliance Report (AACR)

Notification

General monitoring

- 22.** The Licensee must ensure that the parameters listed in Table 10 are notified to the CEO in accordance with the notification requirements as set out in Table 10.

Table 10: Notification requirements

Condition	Parameter	Notification requirement ¹	Format
-	Taking process equipment offline for maintenance works that may result in increased odour emissions	No less than 72 hours in advance of works	None specified
-	Removal of sewage sludge from a treatment pond, wastewater treatment vessel, sewage sludge storage pond or Geobag	No less than 14 days in advance of works ³	None specified
-	Groundwater bores being de-commissioned or rendered useless	Within 14 days	None specified
Condition 15	Breach of any limit specified in the Licence	Submit N1 Form as attached in Schedule 2. Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1
3.1.4	Calibration report	As soon as practicable.	None specified

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with Section 72 of the EP Act.

Definitions

In this licence, the terms in Table 11 have the meanings defined.

Table 11: Definitions

Term	Definition
ACN	Australian Company Number
AHD	means the Australian height datum
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 July until 30 June of the immediately following year.
AS/NZS 2031	means the Australian Standard AS/NZS 2031 <i>Selection of containers and preservation of water samples for microbiological analysis</i>
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples</i>
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.10 <i>Water Quality – Sampling – Guidance on sampling of waste waters</i>
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 <i>Water Quality – Sampling – Guidance on sampling of groundwaters</i>
averaging period	means the time over which a limit is measured or a monitoring result is obtained;
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 <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
Controlled waste	has the definition in <i>Environmental Protection (Controlled Waste) Regulations 2004</i> ;
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.

Term	Definition
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	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;
Geobag	means a geotextile dewatering bag that allows solids to dewater over time while containing the solid component.
hardstand	means a surface with a permeability of 10^{-9} metres/second or less;
In-situ soils	means soils that are in place and have not been moved from their original place of deposition;
leachate	means liquid released by or water that has percolated through waste and which contains some of its constituents.
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.
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 in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
quarterly	means the 4 inclusive periods from 1 July to 30 September, 1 October to 31 December and in the following year 1 January to 31 March, and 1 April to 30 June
sewage	means waste containing faecal matter or urine
spot sample	means a discrete sample representative at the time and place at which the sample is taken
usual working	means 0800 – 1700 hours, Monday to Friday excluding public

Term	Definition
day	holidays in Western Australia.
waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).

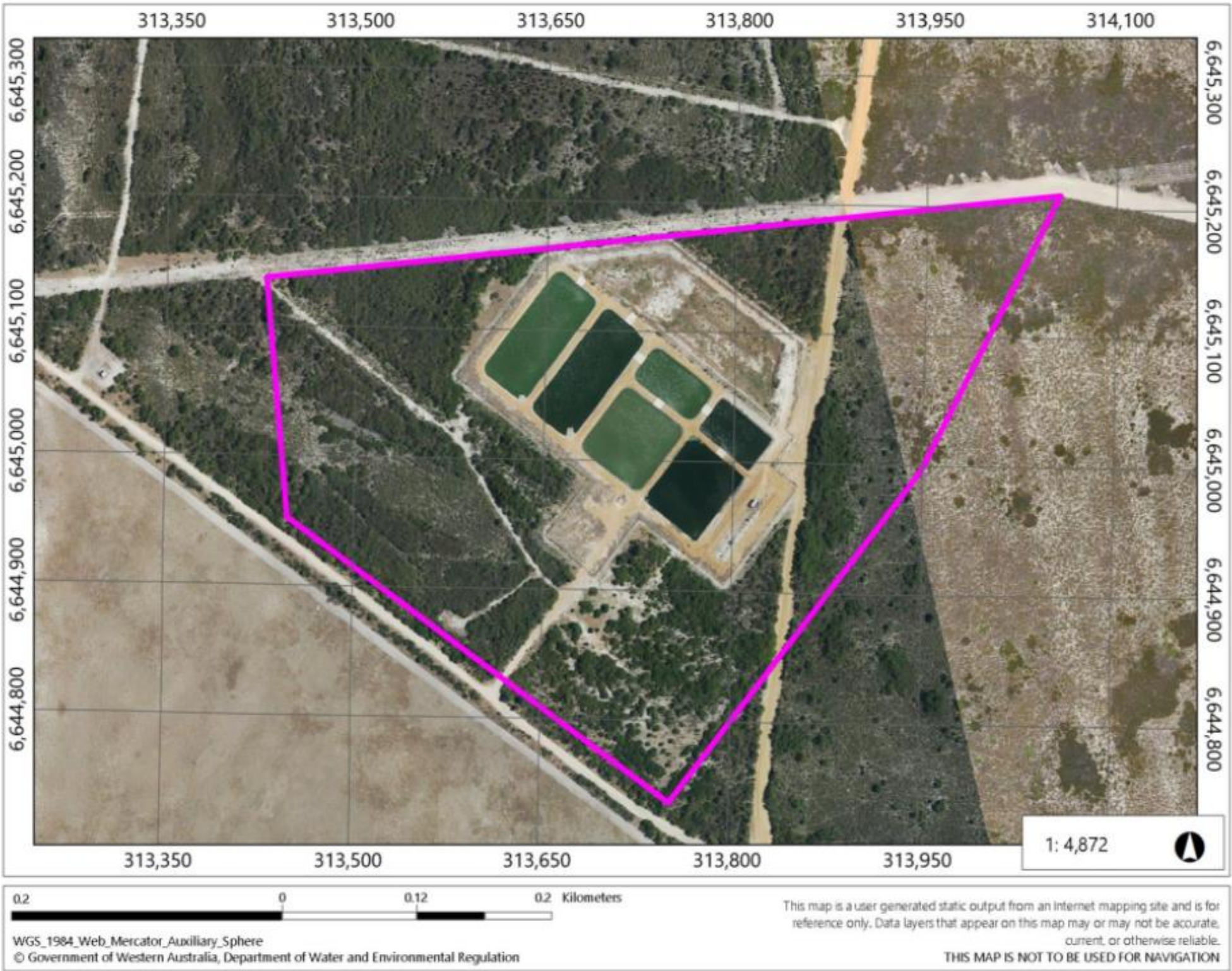
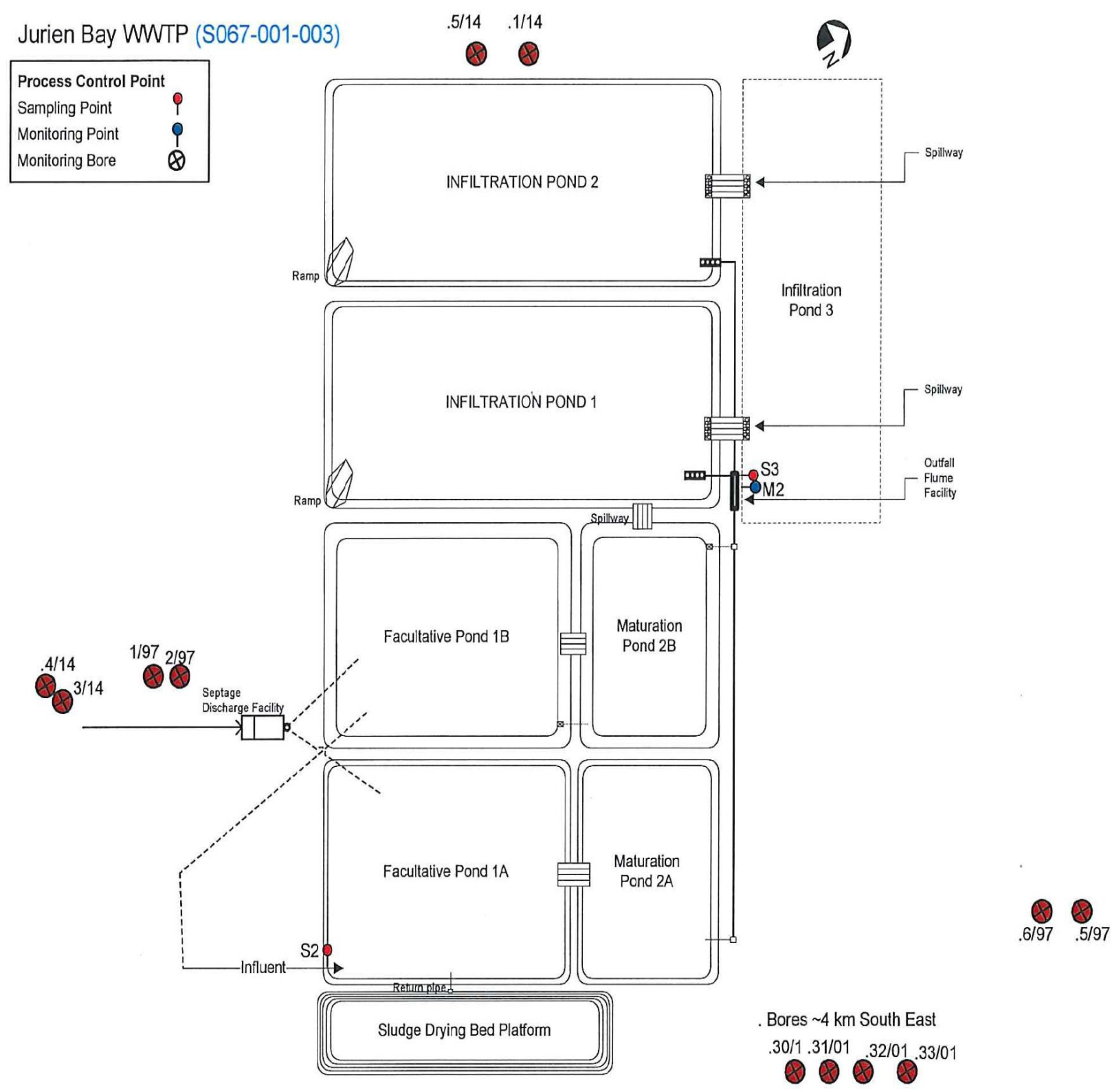


Figure 1: Map of the boundary of the prescribed premises

Site layout

The site layout is shown in the map below (Figure 2).



Monitoring Points			Sampling Points		
M1	S067-001-003-INFLOW	Jurien WWTP Derived Inflow	S1	S4004747	SP POND 1A TANKERED SEWERAGE JURIEN
M2	S4009305	Flume infiltration WWTP Jurien Bay	S2	S4000071	SP Jurien Inlet Channel
			S3	S4000072	SP POND 2A SECONDARY WWTP JURIEN BAY

Figure 2: Site layout

Emission and monitoring locations

The locations of the emission and monitoring points are shown below in Figure 3.

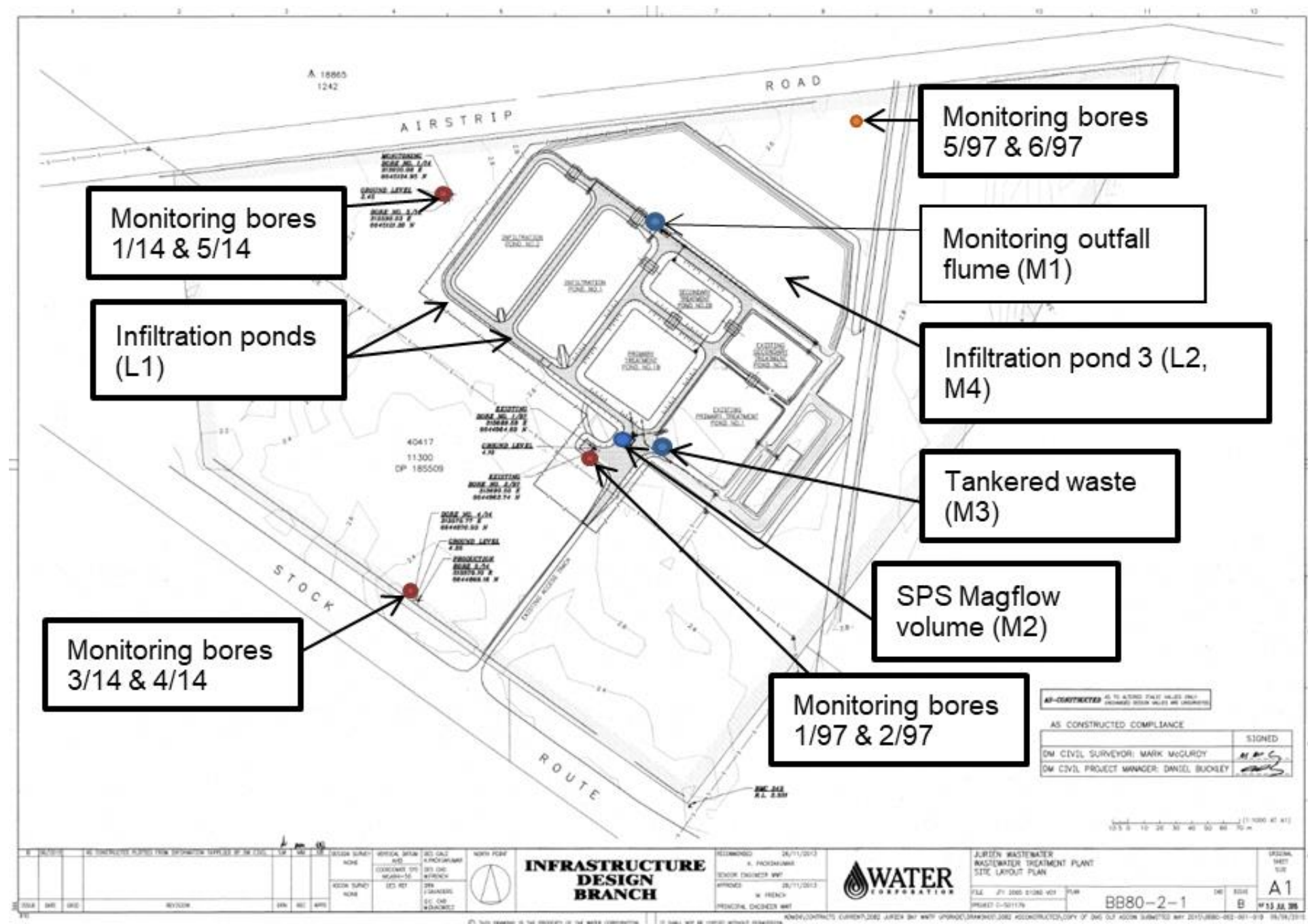


Figure 3: Emission and monitoring points

Schedule 2: Forms

Licence: L8050/1991/3
Form: N1

Licence Holder: Water Corporation
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 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	

Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution	
Date and time of event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident	

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 Water Corporation	
Date	