Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L8245/2008/3
Licence holder	Water Corporation
Registered business address	629 Newcastle Street LEEDERVILLE WA 6007
DWER file number	DER2014/001477
Duration	03/10/2024 to 02/10/2044
Date of issue	03/10/2024
Premises details	Narngulu Wastewater Treatment Plant Legal description - Part of Lot 150 on Deposited Plan 78656 and Part of Lot 1782 on Deposited Plan 248686

Prescribed premises category description **(Schedule 1, Environmental Protection Regulations 1987)**	**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.	3,500 m^3 per day

This licence is granted to the licence holder, subject to the attached conditions, on 3 October 2024, by:

Abbie Crawford

Digitally signed by Abbie Crawford
Date: 2024.10.03 10:46:59 +08'00'

Abbie Crawford
MANAGER, WASTE INDUSTRIES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

Date	Reference number	Summary of changes
28/11/2002	W3675/2002/1	Works approval granted
26/07/2005	W3675/2002/1	Amendment to works approval
02/10/2008	L8245/2008/1	Licence granted
03/10/2013	L8245/2008/2	Licence renewed
29/04/2016	L8245/2008/2	Notice of amendment of licence expiry dates – licence expiry date amended to 5 October 2024
16/05/2022	L8245/2008/2	Notice of amendment of reporting requirements – environmental reporting period reduced from annual to biennial
03/10/2024	L8245/2008/3	Licence renewed

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:

Infrastructure and equipment

1. The licence holder must ensure that the infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

Table 1: Infrastructure and equipment requirements

Infrastructure and equipment		Operational requirement	Infrastructure location
1.	Wastewater treatment plant (WWTP)	(a) The integrity of all containment infrastructure and pipelines must be maintained; (b) All ponds/basins used for the storage and/or treatment of sewage or sludges must be lined to achieve a permeability of less than 1 x 10^{-9} m/s; and (c) Vegetation and floating debris (emergent or otherwise) must be prevented from growing or accumulating onto pond surfaces and embankments.	N/A
2.	Inlet works/screen	(a) Must be located on a hardstand area that is graded to a collection drain which returns leachate to the start of the treatment process; and (b) Must be installed with a flow meter capable of recording sewage inputs.	As shown on Figure 2 in Schedule 1: Maps, labelled as “Inlet Works”
3.	Reactor basin	(a) Must be equipped with aerators; (a) A top of embankment freeboard height equal to, or greater than 300 mm must be maintained; and (b) Outflow from the pond must be directed to Settling Basin 1.	As shown on Figure 2 in Schedule 1: Maps, labelled as “Reactor Basin”
4.	Settling basins (1, 2 & 3)	(a) Each pond to be equipped with aerators; (b) A top of embankment freeboard height equal to, or greater than 300 mm must be maintained; and (c) Outflow from Settling Basin 3 must be directed to Infiltration Basins.	As shown on Figure 2 in Schedule 1: Maps, labelled as “Settling Basin 1”, “Settling Basin 2” and “Settling Basin 3”
5.	Sludge drying beds (1 & 2)	(a) Comprised of permanent infrastructure that provides a suitably lined area, capable of preventing the discharge of leachate or sludge to the environment and preventing the ingress of stormwater runoff; and (b) Leachate from the drying bed must be contained within the sludge drying bed.	As shown on Figure 2 in Schedule 1: Maps, labelled as “Sludge Drying Bed 1” and “Sludge Drying Bed 2”

Infrastructure and equipment		Operational requirement	Infrastructure location
6.	Infiltration basins (1, 2, 3, 4 & 5)	(a) A top of embankment freeboard height equal to, or greater than 300 mm must be maintained.	As shown on Figure 2 in Schedule 1: Maps, labelled as “Infiltration Basin 1”, “Infiltration Basin 2”, “Infiltration Basin 3”, “Infiltration Basin 4” and “Infiltration Basin 5”,
7.	Fencing and site security	(a) Suitable fencing must be erected and maintained to prevent unauthorised access to the premises; (b) Any entrance gates to the premises must be securely locked when the premises is unattended; and (c) Regular inspections must be undertaken of all security measures and damage repaired within 10 working days of identification.	Site perimeter
8.	Groundwater monitoring bores (1/01, 2/01, 4/01, 5/01, 6/01 & 3/22)	(a) Must be maintained in good working order to allow representative groundwater samples to be taken.	As shown on Figure 4 in Schedule 1: Maps

Waste acceptance

2. The licence holder must only accept onto the premises waste of a type that:

(a) does not exceed the rate at which that waste is received; and

(b) meets the relevant acceptance specification,

as set out in Table 2.

Table 2: Waste acceptance criteria

Waste type	Controlled waste code	Rate at which waste is received	Acceptance specification
Sewage	N/A	No more than 3,500 m^3/day	(a) Accepted via sewerage inflow
Sewage waste from the reticulated sewerage system	K130	No more than 100 tonnes per annual period	(a) Accepted via waste tanker

Waste processing and operations

3. The licence holder must ensure that the waste types specified in Table 3 are only subjected to the corresponding process(es), subject to the corresponding process limits and/or specifications.

Table 3: Waste processing

Waste type		Process(es)	Process limits and/or specifications
1.	Sewage	Physical, chemical and biological treatment	(a) Treatment of sewage waste must be maintained at or below the treatment capacity of 3,500 m^3/day.
2.	Screenings	Separation and temporary storage prior to offsite removal	(a) Must be stored in an impermeable receptacle or container; (b) The storage container must be located on a hardstand area that is graded to a collection drain which returns sludge leachate to the start of the treatment process; and (c) The licence holder must dispose of all collected screenings from the pre-treatment area, via a controlled waste carrier to a licensed landfill.
3.	Sewage sludge	Dewatering and storage prior to offsite removal	(a) Must be stored in the sludge drying beds; and (b) Must be removed off-site for further treatment and/or disposal.
4.	Treated wastewater	Disposal via infiltration	(a) Treated wastewater must be disposed of via the infiltration basins.

Emissions and discharges

General

4. The licence holder must:

(a) immediately recover, or remove and dispose of, spills of sewage, treatment chemicals, fuel, or other environmentally hazardous materials, whether inside or outside an engineered containment system; and

(b) ensure that all material used for the recovery, removal, and/or disposal of spills is stored in an impermeable container prior to disposal at an appropriately authorised facility.

5. The licence holder must prevent stormwater run-off becoming contaminated by the activities and operations undertaken at the premises.

Treated wastewater discharge

6. 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	Discharge point location
Treated wastewater	Infiltration basins (1, 2, 3, 4 & 5)	As shown on Figure 2 in Schedule 1: Maps, labelled as “Infiltration Basin 1”, “Infiltration Basin 2”, “Infiltration Basin 3”, “Infiltration Basin 4” and “Infiltration Basin 5”,

Monitoring

Waste inputs and outputs

7. The licence holder must record the total amount of waste accepted onto and removed from the premises, for each waste type listed in Table 5, in the corresponding unit, and for each corresponding time period, as set out in Table 5.

Table 5: Waste inputs and outputs monitoring

Accepted/Removed	Waste type	Unit	Frequency	Averaging period
Waste accepted	Sewage inflow	m^3/day	Continuous	Monthly
	Sewage waste from the reticulated sewerage system (K130)	tonnes	Each load arriving at the premises	Per load
Waste removed	Treated wastewater outlet pipe	m^3/day	Continuous	Monthly

Accepted/Removed	Waste type	Unit	Frequency	Averaging period
	Sludge	tonnes	Each load leaving the premises	Per load

Treated wastewater

8. The licence holder must monitor emissions of treated wastewater in accordance with the requirements specified in Table 6.

Table 6: Emissions and discharge monitoring

Monitoring location	Parameter	Unit	Frequency	Method
Treated wastewater outlet pipe	Cumulative volume discharged	m^3/day and kL	Continuous	Flow metering device
	pH[1]	-	Quarterly	Spot sample in accordance with AS/NZS 5667.1 and AS/NZS 5667.10
	Electrical conductivity[1]	µS/cm		
	Biochemical oxygen demand (BOD_5)	mg/L		
	Ammonium as N			
	Nitrate as N			
	Nitrate + Nitrite as nitrogen (NO_x-N)			
	Total Kjeldahl Nitrogen (TKN)			
	Total Nitrogen (TN)			
	Total Phosphorous (TP)			
	E. coli	CFU or MPN /100mL		

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

Ambient monitoring

9. The licence holder must monitor groundwater for concentrations of the identified parameters in accordance with Table 7.

Table 7: Ambient monitoring

Monitoring location	Parameters	Unit	Frequency	Method
Field measurements				
Groundwater monitoring bores 1/01, 2/01, 3/22, 4/01, 5/01 & 6/01	Standing water level[1]	mbgl and mAHD	Quarterly	Spot sample in accordance with AS/NZS 5667.1 and AS/NZS 5667.11
	pH[1]	-		
	EC[1]	µS/cm		
	Redox[1]	mV		
	DO[1]	mg/L		
	Temperature (at 25°C)[1]	°C		
General water quality parameters				
Groundwater monitoring bores 1/01, 2/01, 3/22, 4/01, 5/01 & 6/01	Biochemical oxygen demand (BOD_5)	mg/L	Quarterly	Spot sample in accordance with AS/NZS 5667.1 and AS/NZS 5667.11
	Total dissolved solids (TDS)			
	Major Cations (Ca, Mg, Na, K)			
	Major Anions (Cl, SO4, bicarbonate, carbonate)			
	Ammonium as N			
	Nitrate as N			
	Nitrate + Nitrite as nitrogen (NO_x-N)			
	Total Kjeldahl Nitrogen (TKN)			
	Total Nitrogen (TN)			
	Total phosphorus (TP)			
Pathogens				

Monitoring location	Parameters	Unit	Frequency	Method
Groundwater monitoring bores 1/01, 2/01, 3/22, 4/01, 5/01 & 6/01	*E. coli*	CFU or MPN / 100 mL	Quarterly	Spot sample in accordance with AS/NZS 5667.1 and AS/NZS 5667.11

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

General

10. The licence holder must ensure that all sample analysis undertaken pursuant to conditions 8 and 9 is undertaken by a holder of a current accreditation from NATA for the methods of analysis relevant to the corresponding parameter.

11. The licence holder must ensure that monitoring is undertaken in each quarterly period such that there are at least 45 days in between the days on which samples are taken in successive quarters.

12. The licence holder must ensure that all monitoring equipment used to comply with conditions 7, 8 and 9 is operated and calibrated in accordance with the manufacturer's specifications.

Trigger values for ambient monitoring

13. Subject to condition 9, the licence holder must undertake the actions specified within condition 14 within 14 days of an exceedance where ambient concentrations:

(a) at the monitoring location listed in Table 8;

(b) for the corresponding parameter;

(c) exceed the corresponding trigger value over the specified averaging period,

when monitored in accordance with condition 9.

Table 8: Ambient groundwater quality trigger values

Monitoring bore location	Parameter	Trigger value	Averaging period
3/22 & 4/01	*E. Coli*	100 CFU/100mL	Yearly
	Nitrate as N	90.3 mg/L	Spot

14. The licence holder must undertake the following actions referred to in condition 13 in relation to any exceedances of any of the trigger values identified in that condition:

(a) record the nature and characteristics of the emissions or ambient concentrations exceedance;

(b) record the time and date when the exceedance occurred;

(c) identify the nature and extent of any impacts to humans, the environment or livestock occurred as a result of the exceedance;

(d) record the details and result of any investigation undertaken into the cause of the exceedance; and

(e) identify actions or specified measures that have been taken, or will be taken, to prevent the exceedance occurring again and for the purpose of minimising the likelihood of pollution or environmental harm.

Records and reporting

Records

15. 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.

16. 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 conditions 1 and 3 of this licence;

(c) monitoring programs undertaken in accordance with conditions 7, 8 and 9 of this licence; and

(d) complaints received under condition 15 of this licence.

17. The books specified under condition 16 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.

Reporting

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 1 October after the end of that annual period an Annual Audit Compliance Report in the approved form.

19. The licence holder must prepare and submit to the CEO by no later than 1 October 2026 and then biennially thereafter, an Environmental Report for the previous two annual periods (or part thereof) for the conditions in Table 9 and which provides information in accordance with the corresponding requirement set out in Table 9.

Table 9: Environmental report requirements

Condition	Requirement[1]
1 and 3	(a) A summary of inspections, maintenance and audits performed to address the requirements of Table 1 and Table 3.
7	(a) A summary of the waste acceptance and removal at the premises presented in table format.
8	(a) A clear statement of the scope of work carried out; (b) A description of the field methodologies employed; (c) Monthly volume (in m^3 or kL) of treated wastewater disposed to infiltration basins for an annual period presented in a table format; (d) A tabulated summary of results; (e) an interpretive summary and assessment of results against previous monitoring results; (f) an interpretive summary and assessment of the results against relevant assessment levels, with rationale provided to justify why assessment levels have been assigned; and (g) trend graphs to provide a graphical representation of historical results and to support the interpretive summary
9	(a) A clear statement of the scope of work carried out; (b) A description of the field methodologies employed; (c) Copies of the field monitoring records and field QA/QC documentation; (d) A tabulated summary of results; (e) an interpretive summary and assessment of the results against relevant assessment levels, with rationale provided to justify why assessment levels have been assigned; (f) an interpretive summary and assessment of results against previous monitoring results; and (g) trend graphs to provide a graphical representation of historical results and to support the interpretive summary.
13 and 14	(h) A summary of each action item taken in accordance with condition 14 where a trigger value has been exceeded as specified in condition 13.
15	(a) A summary of complaints received, and any action taken to investigate or respond to any complaint.
-	(a) A summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period, including any actions taken.

Note 1: General guidance on report presentation can be found in the department's *Guideline: Assessment and management of contaminated sites*.

Definitions

In this licence, the terms in Table 10 have the meanings defined.

Table 10: Definitions

Term	Definition
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).
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*
annual period	a 12 month period commencing from 1 July until 30 June of the immediately following year.
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
Controlled waste	has the definition in *Environmental Protection (Controlled Waste) Regulations 2004.*
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).
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point.

Term	Definition
hardstand	means a surface with a permeability of 10^{-9} metres/second or less.
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	National Association of Testing Authorities
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.
sewage	means waste containing faecal matter or urine.
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).

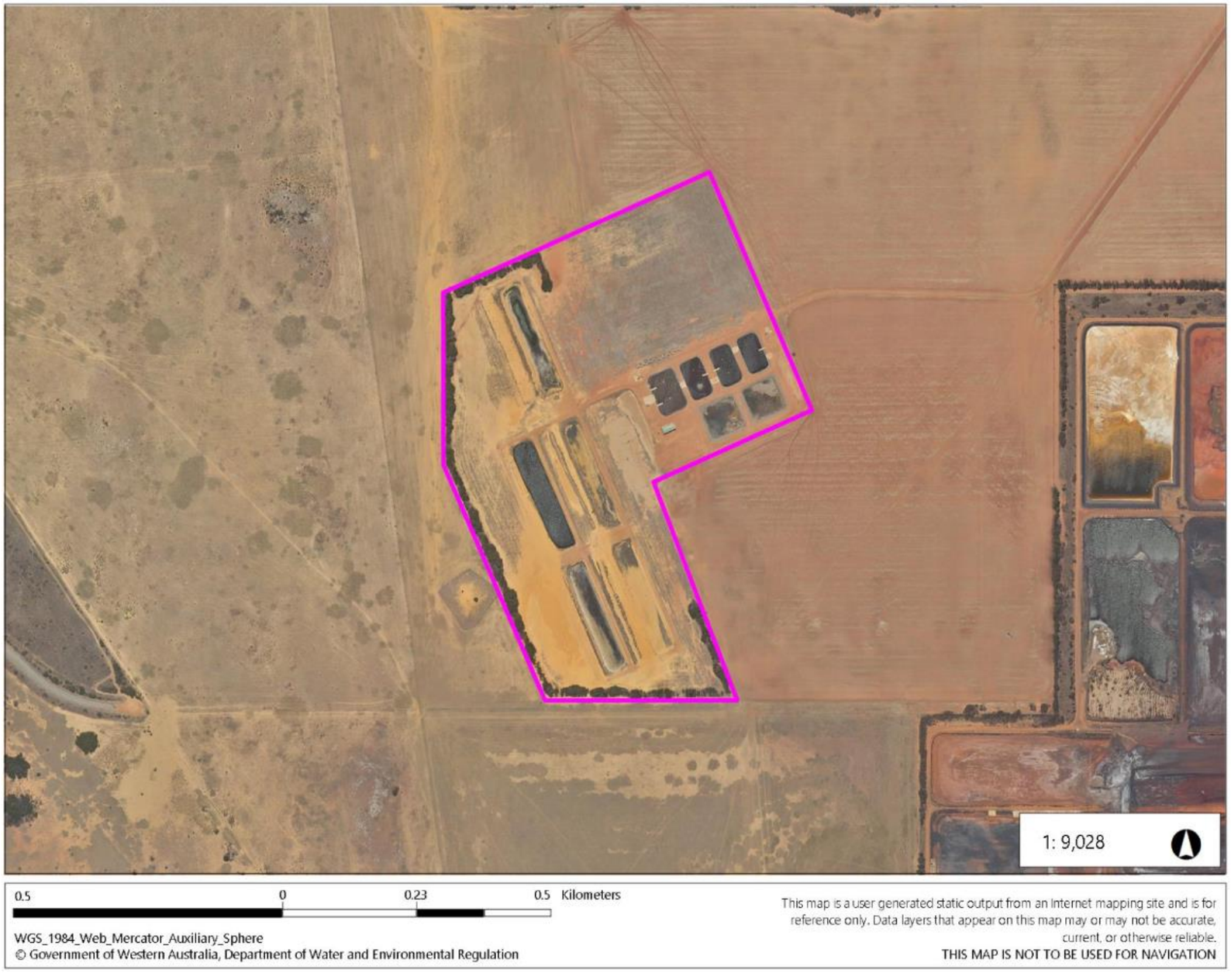

Figure 1: Map of the boundary of the prescribed premises

Figure 2: Layout of site infrastructure

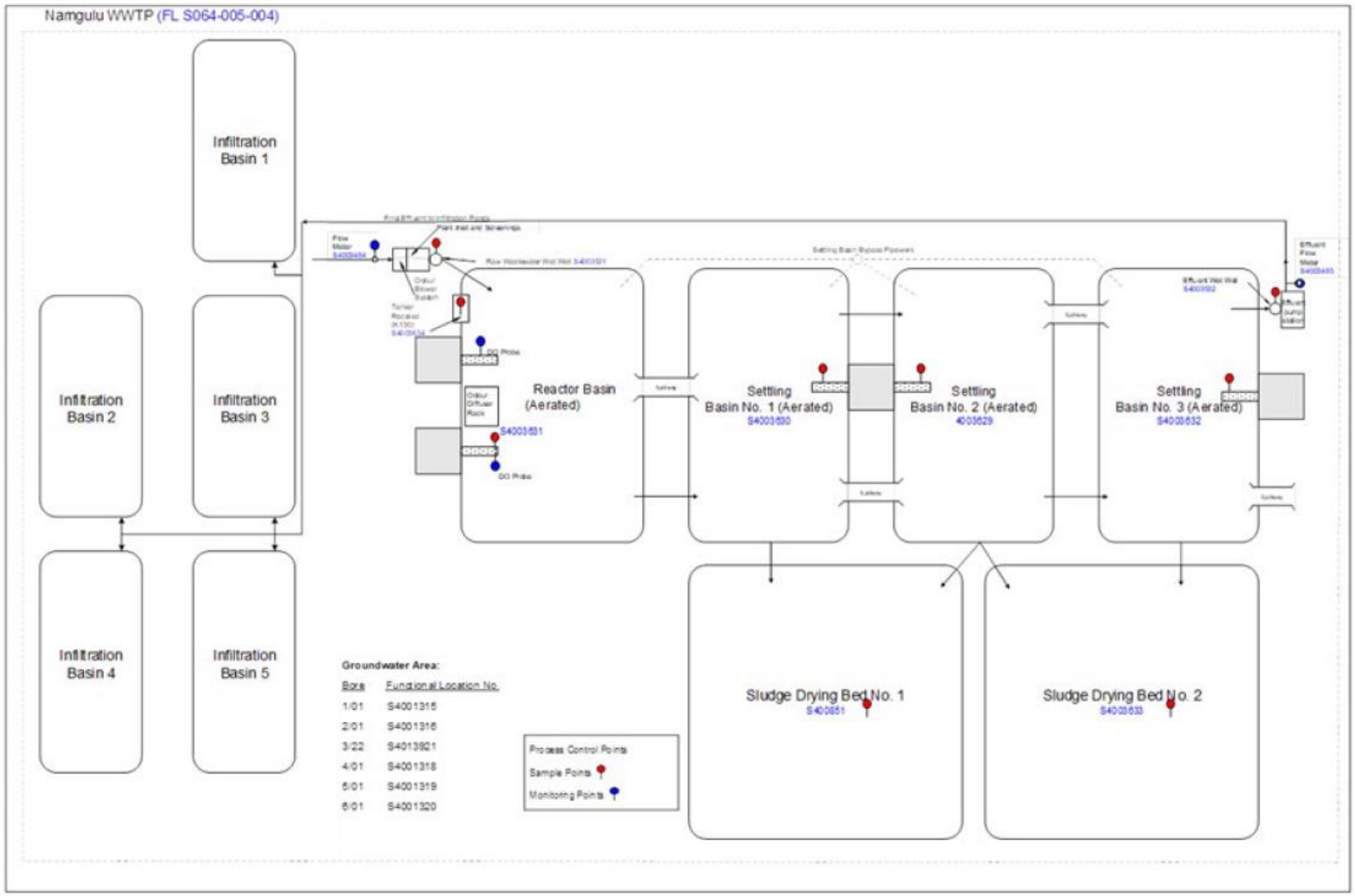

Figure 3: Site schematic

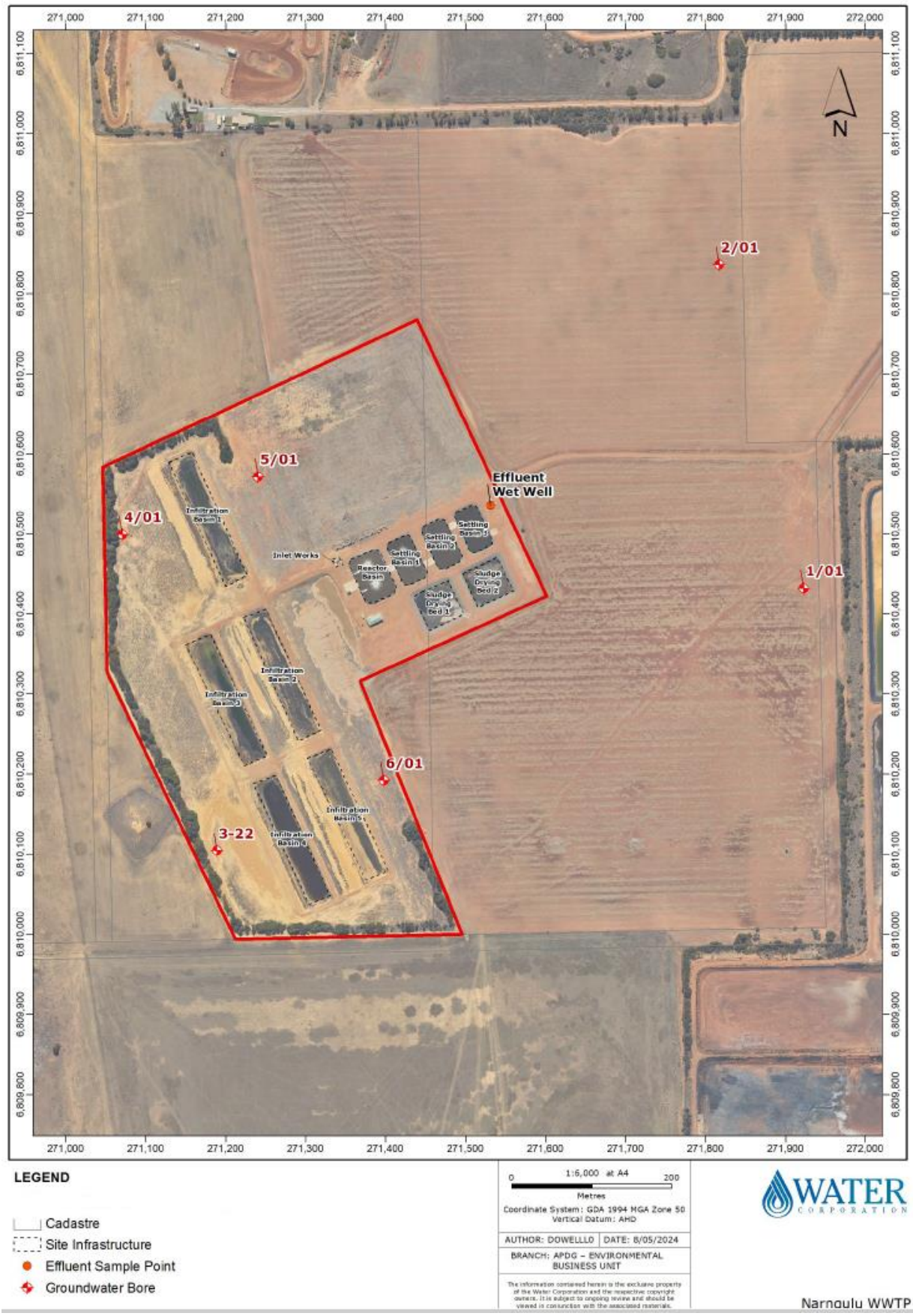

Figure 4: Groundwater monitoring bore network