



Licence number	L6543/1991/12
Licence holder	Water Corporation
ACN	634 169 841
Registered business address	John Tonkin Water Centre 629 Newcastle Street LEEDERVILLE WA 6007
DWER file number	2010/006732-1
Duration	24/09/2022 to 23/09/2042
Date of issue	21/09/2022
Date of amendment	26/07/2023
Premises details	Kwinana Water Resource Recovery Facility 119 and 143 McLaughlan Rd POSTANS WA 6167 Legal description - Lot 2128 and part of Lot 2129 on Plan 173137 As defined by the coordinates in Schedule 1

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 54: Sewage facility: premises – (a) on which sewage is treated (excluding septic tanks); or from which treated sewage is discharged onto land or into waters	12,000 m ³ per day

This licence is granted to the licence holder, subject to the attached conditions, on 26 July 2023, by:

Sarah Cross

A/Senior Environmental Officer

Industry Regulation

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

Licence history

Date	Reference number	Summary of changes
30/09/2000	L6543/1991/5	Licence reissue.
27/09/2001	L6543/1991/6	Licence reissue.
27/09/2002	L6543/1991/7	Licence reissue.
13/10/2003	L6543/1991/8	Licence reissue.
24/09/2004	L6543/1991/9	Licence reissue.
24/09/2009	L6543/1991/10	Licence reissue.
24/09/2014	L6543/1991/11	Licence reissue to REFIRE format with targets removed.
29/04/2016	L6543/1991/11	Amendment Notice 1 to extend expiry date to 23 September 2022.
12/09/2016	L6543/1991/11	Licence amendment to update premises address and include premises boundary coordinates.
18/09/2020	L6543/1991/11	Licence review to remove redundant conditions.
24/09/2022	L6543/1991/12	New Licence with 20-year duration.
26/07/2023	L6543/1991/12	Licence amendment to amend the reporting date for the Annual Audit Compliance Report and the Environmental Report to 1 October annually and to update the Premises name.

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.

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Licence conditions

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

Input restrictions

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	Rate at which waste is received	Acceptance specification
Sewage	12,000 m ³ per day (calculated as an average of annual flow)	Accepted via reticulated sewage system into Inlet Works (as described in Table 2)

Infrastructure and equipment

2. The licence holder must ensure that the site infrastructure and equipment listed in Table 2 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.

Table 2: Infrastructure and equipment requirements

Premises infrastructure and equipment	Plan reference (if applicable)	Infrastructure and equipment specifications	Operational requirements
All waste conveyance pipelines and transfer pumps	-	-	<ol style="list-style-type: none"> 1. Fully enclosed and constructed of impervious material. 2. Free of leaks or defects that could result in the discharge of waste material to the environment.
Inlet works	Labelled "INLET WORKS" on the Infrastructure map in Schedule 1	2 x Band screens 2 x Wash presses 1 x Grit removal and washing system 2 x Spirotainers 1 x Bioselector	<ol style="list-style-type: none"> 1. Sewage and solids contained in impervious containment vessel/s, or in the case of uncovered containment, on a hardstand area that is graded to a collection drain which returns leachate to the treatment process. 2. Free of leaks or defects that could result in the discharge of waste material to the environment. 3. Leachate returned to the bioselector for treatment.
Two oxidation ditches	Labelled "OXIDATION DITCH 1" and "OXIDATION DITCH 2" on the Infrastructure map in Schedule 1	2 x 6.0 ML/day oxidation ditches 2 x Aerators 2 x DO probes (duty/standby) 2 x Submersible blade propulsors	<ol style="list-style-type: none"> 1. Lined with impervious concrete. 2. Free of leaks or defects that could result in the discharge of waste material to the environment.
Two clarifiers	Labelled "CLARIFIER 1" and "CLARIFIER 2" on the Infrastructure map in Schedule 1	2 x 32 m Clarifiers with associated scraping mechanisms	<ol style="list-style-type: none"> 1. Lined with impervious concrete. 2. Free of leaks or defects that could result in the discharge of waste material to the environment.
Four unlined infiltration ponds	Labelled "Infiltration ponds" on the Premises map in Schedule 1	Operated in pairs with each pair providing a maximum infiltration area of 4,800 m ²	<ol style="list-style-type: none"> 1. Unlined.

Premises infrastructure and equipment	Plan reference (if applicable)	Infrastructure and equipment specifications	Operational requirements
Sludge management system (Polymer Dosing System, Thickened Sludge Storage Tank, Dissolved Air Flotation Thickener)	Labelled "THICKENED SLUDGE STORAGE TANK" and "DAF THICKENING" on the Infrastructure map in Schedule 1	1 x Liquid Polymer Bulk Storage Tank with associated transfer pumps and polymer dosing pump 1 x Thickened Sludge Storage Tank with 5 day storage capacity at maximum plant inflow and associated mixing pumps 1 x Dissolved Air Flotation Thickener (DAFT) tank and associated pumps 1 x Saturation tank (air dissolving vessel) 1 x DAFT sludge collection tank	<ol style="list-style-type: none"> 1. Sludge and/or leachate are contained in impervious containment vessel/s, or, in the case of uncovered containment, on a hardstand area surrounded by bunds capable of preventing the discharge of leachate or sludge to the environment and preventing the ingress of stormwater from surrounds. 2. Free of leaks or defects that could result in the discharge of waste material to the environment. 3. Leachate returned to the bioselector for treatment.
Dewatering system	Labelled "DEWATERING BUILDING" on the Infrastructure map in Schedule 1	2 x Centrifuges 4 x Cake hoppers	<ol style="list-style-type: none"> 1. Sludge and/or leachate contained in impervious containment vessel/s, or in the case of uncovered containment, on a hardstand area surrounded by bunds capable of preventing the discharge of leachate or sludge to the environment and preventing the ingress of stormwater from surrounds. 2. Leachate returned to the bioselector for treatment.

Sewage treatment processes

3. The licence holder must ensure that waste materials on the premises as specified in Table 3 are subjected to the corresponding process(es) in accordance with the corresponding process requirements as set out in Table 3.
4. The licence holder must ensure that sewage has undergone all preliminary and secondary treatment processes referred to in Table 3, prior to:
 - (a) disposal to infiltration ponds;
 - (b) disposal to the SDOOL; or
 - (c) transfer for third party reuse.

Table 3: Sewage treatment processes

Material	Process(es)	Process requirements
Sewage	Preliminary treatment: screening and grit removal	<ol style="list-style-type: none"> 1. Initially screened through band screens and wash press and grit removed via grit removal and washing system, prior to progression to secondary treatment. 2. Recovered grit and screenings stored in a sealed bin within a bunded hardstand area or a hardstand area which is graded to a collection drain that returns sludge leachate to the bioselector. 3. Overtopping of wastewater, grit or screenings from the inlet works is not allowed to occur.
	Secondary treatment: physical and biological	<ol style="list-style-type: none"> 1. Treatment through bioselector, oxidation ditch/es and clarifier/s, respectively. 2. Sewage sludge separated from liquid after treatment through the oxidation ditch/es, and after treatment through the clarifier/s. 3. Freeboards of at least 300 mm are maintained on any uncovered treatment or storage infrastructure to ensure overtopping of sewage is not allowed to occur.
Sewage sludge	Treatment and storage	<ol style="list-style-type: none"> 1. Sewage sludge transferred to a dissolved air flotation tank for thickening forming a sludge float of 3-5 % solids. 2. The water stream from the thickening process is directed to the return liquor pumping station and then pumped to the bioselector. 3. Sewage sludge transferred to centrifuges for dewatering and polymer is added to assist in flocculation and dewatering of the sludge 4. Freeboards of at least 300 mm are maintained on any uncovered treatment or storage infrastructure to ensure overtopping of sludge or leachate does not occur.

Process monitoring

5. The licence holder must monitor treated sewage for volumes and concentrations of the parameters listed in Table 4:
 - (a) at the corresponding location (sampling point);
 - (b) for each corresponding parameters in the corresponding units;
 - (c) at no less than the corresponding frequency; and
 - (d) for the corresponding averaging period.
6. All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified in Table 4.

Table 4: Process monitoring

Location	Parameter	Averaging Period	Frequency	Method
Inlet Works (as described in Table 2)	Volume of sewage (m ³) arriving at the premises	Daily; and monthly cumulative totals	Continuous	Magnetic flow metering devices ¹
Magnetic flowmeter	Volume (m ³) of treated wastewater discharged to infiltration ponds			
Magnetic flowmeter	Volume (m ³) of treated wastewater discharged to the SDOOL			
Magnetic flowmeter	Volume (m ³) transferred for third party reuse when operational.			
Effluent Pump Station (as shown on the Infrastructure Map in Schedule 1)	<ul style="list-style-type: none"> • pH² • Total Nitrogen (mg/L) • Ammonium (NH₄-N) (mg/L) • Nitrate + nitrite nitrogen (mg/L) • Total Phosphorus (mg/L) • Total Suspended Solids (mg/L) • Total Dissolved Solids (mg/L) • Biochemical Oxygen Demand (mg/L) • Oil and grease (mg/L) • Arsenic (mg/L) • Cadmium (mg/L) • Copper (mg/L) • Chromium (mg/L) • Lead (mg/L) • Mercury (mg/L) • Nickel (mg/L) • Zinc (mg/L) • <i>Escherichia coli</i> (cfu/100mL) 	Spot or composite sample	Monthly	AS/NZS 5667.10 AS/NZS 2031 (<i>Escherichia coli</i>)

Note 1: All measurements from flow metering devices must be performed in accordance with the Australian Technical Standards and Australian Standards specified within the *Guidelines for Water Meter Installation* (Department of Water, 2009).

Note 2: In field non-NATA accredited analysis permitted.

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Emission requirements

7. The licence holder must ensure that the emissions specified in Table 5, are discharged only from the corresponding discharge point.

Table 5: Authorised discharge points

Emission	Discharge point location
Treated wastewater discharged to infiltration ponds	Effluent Pump Station (as shown on the Infrastructure Map in Schedule 1)
Discharge of treated wastewater via the SDOOL	SDOOL

8. The licence holder must ensure that where treated wastewater is discharged to the infiltration ponds, it is done so at the location specified in Table 5 and does not exceed the limit of 4.7 ML/day over an average of any three consecutive day period. The exceedance of the 4.7 ML/day limit is a reportable event and requires notification to the CEO in accordance with condition 18 of this licence.
9. The licence holder must, where emissions monitored in accordance with condition 5:
- from the discharge point listed in Table 6;
 - for the corresponding parameter; and
 - exceed the corresponding trigger value,
- submit to the CEO a written summary on the exceedance(s) for the annual period as part of the annual environmental report required by condition 17.

Table 6: Emission trigger values

Discharge point	Parameter	Trigger value
Effluent Pump Station (as shown on the Infrastructure Map in Schedule 1)	Volume discharged to on-site infiltration ponds	4.7 ML/day (average of any three consecutive day period)
	Total Nitrogen	> 5 mg/L (average of any three consecutive results).
	Total Phosphorus	> 7 mg/L (average of any three consecutive results)
	Total Suspended Solids	> 10 mg/L (average of any three consecutive results)
	Biochemical Oxygen Demand	> 5 mg/L (average of any three consecutive results)

Ambient groundwater monitoring program

10. The licence holder must conduct a groundwater monitoring programme in accordance with the requirements specified in Table 7 and record the results of all monitoring activity conducted under that programme.
11. The licence holder must adhere to the field quality assurance and quality control procedures specified in Schedule 2 for the monitoring required by condition 10.
12. All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified in Table 7.

Table 7: Groundwater monitoring of ambient concentrations

Monitoring well location	Parameter	Unit	Averaging Period	Frequency	Method
Groundwater monitoring bores: KW4, KW5, KW6, KW11, KW13, KW14, KW15 and KW16 (as shown on the Map of Monitoring Bores in Schedule 1) and 1/09, 2/09 and 3/09 (as shown on the Map of Monitoring Bores in Schedule 1)	Standing water level	m(AHD) and m(BGL)	Spot sample	Quarterly	AS/NZS 5667.11
	pH ¹	pH units			
	Total Nitrogen	mg/L			
	Ammonium (NH ₄ -N)				
	Nitrate + nitrite nitrogen				
	Total Phosphorus				
	Total Dissolved Solids				
	Biochemical Oxygen Demand	mg/L			
	Oil and grease				
	Arsenic				
	Cadmium				
	Copper				
	Chromium				
	Lead				
	Mercury				
	Nickel	cfu/100mL			
Zinc					
<i>Escherichia coli</i>		AS/NZS 2031			

Note 1: In field non-NATA accredited analysis permitted

Records and reporting

- 13.** 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 2 of this licence;
 - (c) reports submitted in accordance with conditions 9 and 10 of this licence;
 - (d) monitoring programmes undertaken in accordance with conditions 5 – 12 of this licence; and
 - (e) complaints received under condition 15 of this licence.
- 14.** The books specified under condition 13 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.
- 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:

 - (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, an Annual Audit Compliance Report in the approved form by 1 October each year.
- 17.** The licence holder must:

 - (a) prepare an environmental report that provides information in accordance with Table 8 for the preceding annual period, and
 - (b) submit the environmental report to the CEO by 1 October each year.

Table 8: Environmental reporting requirements

Condition	Requirement
5	<p>Process monitoring, including:</p> <ul style="list-style-type: none"> i) data in a table format for the annual period; and ii) data in graphical format for trend analysis to include at least the last four years data where available. iii) calculated contaminant load to land for the monitored parameters (except pH and <i>E. coli</i>) as kg/ day monthly average; and total annual loading kg/ year.
9	<p>The summary referred to in condition 9, in relation to any exceedances of any of the trigger values identified in that condition, must include:</p> <ul style="list-style-type: none"> i) the time and date when the exceedance(s) occurred; ii) the sampling or measurement date(s); iii) the raw monitoring data for the exceedance(s) in tabulated form; iv) the details of any investigation, mitigation and action measures taken to address the trigger value exceedance.
10	<p>Monitoring of groundwater quality, including:</p> <ul style="list-style-type: none"> i) data in a table format for the annual period; ii) data in graphical format for trend analysis to include at least the last four years data where available; and iii) an assessment of ambient groundwater quality monitoring data in terms of migration and extent of the plume and potential risk to the adjacent Spectacles wetland.
15	Summary of complaints

18. The licence holder must notify the CEO of an exceedance of the limit specified in condition 8 in accordance with the requirements outlined in Table 9.

Table 9: Notification requirements

Condition	Requirement
8	<p>Exceedance of the limit of 4.7 ML/day as specified in condition 8 must be notified to the CEO within 14 days of the event occurring.</p> <p>The following information shall be provided with the notification:</p> <ul style="list-style-type: none"> i) the time and date when the exceedance(s) occurred; ii) the raw monitoring data for the exceedance(s) in tabulated form; iii) the details of any investigation, mitigation and action measures taken to address non-compliance.

Definitions

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

Table 10: 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.
approved form	means the Annual Audit Compliance Report (AACR) form template approved by the CEO for use and available via DWER's external website.
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>
BGL	means below ground level.
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
condition	a condition to which the licence is subject under section 62 of the <i>Environmental Protection Act 1986</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.
discharge	has the same meaning given to that term under the EP Act.

Term	Definition
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.
hardstand	means a surface with a permeability of 10 ⁻⁹ metres/second or less.
infiltration ponds	means the two unlined ponds dedicated for the infiltration of treated sewage, as depicted and labelled "Infiltration ponds" in the Premises Map (Figure 1) in Schedule 1.
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.
Ministerial Statement 665	means the document titled 'Use of the Cape Peron Outlet Pipeline to Dispose of Industrial Wastewater to the Sepia Depression, Kwinana' (<i>Minister for the Environment Statement No. 000665</i> , published 28 October 2004).
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.
SDOOL	means the Sepia Depression Ocean Outlet Landline, as defined in Ministerial Statement 665.
Spot sample	means a discrete sample representative at the time and place at which the sample is taken.
waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

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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

Infrastructure map

Infrastructure for the treatment of sewage at the Premises is shown in the map below (Figure 2).

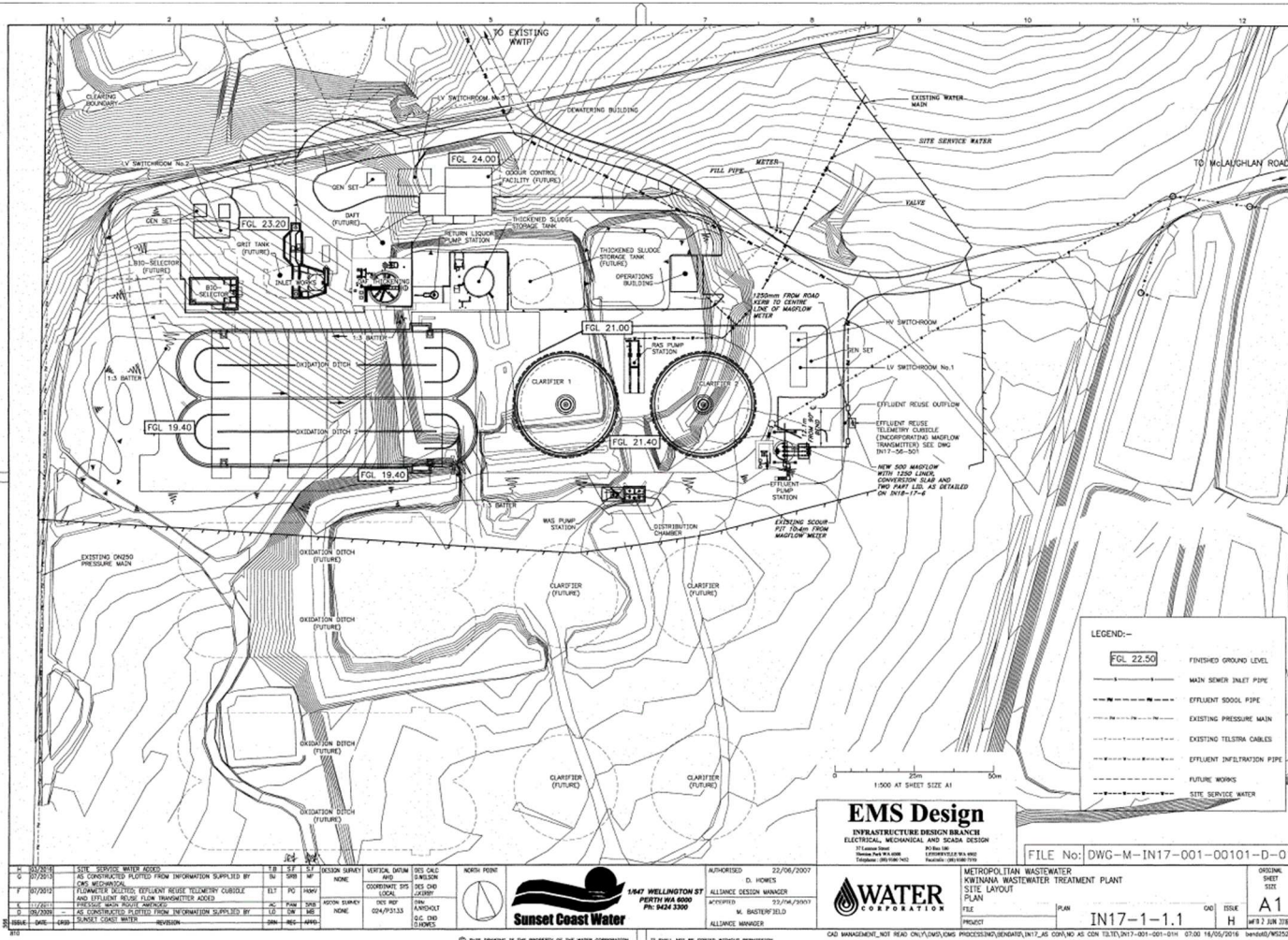


Figure 2: Infrastructure map

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Map of monitoring bores

Groundwater monitoring bore locations are shown in the map below (Figure 3).



Figure 3: Groundwater monitoring bores map

Premises boundary coordinates

The corners of the premises boundary are the coordinates listed in Table 11.

Table 11: Premises boundary coordinates (GDA94)

Easting	Northing	Zone
389173	6435322	50
389681	6435312	50
389578	6435028	50
389067	6434821	50
389503	6434734	50

Schedule 2: Quality assurance and quality control requirements

The licence holder must adhere to the following field quality assurance and quality control procedures, as specified in Schedule B2 of the Assessment of Site Contamination NEPM, and must include as a minimum:

- (a) decontamination procedures for the cleaning of tools and sampling equipment before sampling and between samples;
- (b) field instrument calibration for instruments used on site;
- (c) blind replicate samples and rinsate blanks must be collected in the field and sent to the primary laboratory to determine the precision of the field sampling and laboratory analytical program;
- (d) completed field monitoring sheets / sampling logs for each sample collected, showing:
 - (i) time of collection;
 - (ii) location of collection;
 - (iii) initials of sampler;
 - (iv) sampling method;
 - (v) field analysis results;
 - (vi) duplicate type / location (if relevant); and
 - (vii) site observations and weather conditions, and
- (e) chain-of-custody documentation must be completed which details the following information:
 - (i) site identification;
 - (ii) the sampler;
 - (iii) nature of the sample;
 - (iv) collection time and date;
 - (v) analyses to be performed;
 - (vi) sample preservation method;
 - (vii) departure time from site;
 - (viii) dispatch courier(s); and
 - (ix) arrival time at the laboratory.