



Works Approval

Works Approval Number	W6201/2018/1
Works Approval Holder	Water Corporation
Registered business address	Water Corporation 624 Newcastle Street Leederville WA 6007
File Number	DWERVT15756
Duration	14/08/2020 to 31/12/2029
Date of issue	14 August 2020
Date of amendment	10 October 2024
Premises	Exmouth North Wastewater Treatment Plant Murat and Willersdorf Roads Legal description - Part of Lot 43 on Deposited Plan 209471 Certificate of Title Volume 1873 Folio 708

Prescribed premises category description (Schedule 1, Environmental Protection Regulations 1987)	Assessed design capacity
Category 54: Sewage facility; premises – - on which sewage is treated (excluding septic tanks) ; or - from which treated sewage is discharged onto land or into waters	1000 m ³ /day

This Works Approval is granted to the Works Approval Holder, subject to the following conditions, on 10 October 2024 by

**MANAGER WASTE INDUSTRIES
REGULATORY SERVICES**

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

Explanatory notes

These explanatory notes do not form part of this Works Approval.

Defined terms

Definition of terms used in this Works Approval can be found at the start of this Works Approval. Terms which are defined have the first letter of each word capitalised throughout this Works Approval.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986* (WA) (EP Act). The Department also monitors and audits compliance with licences and works approvals, takes enforcement action and develops and implements licensing and industry regulation policy.

Works Approval

Section 52 of the EP Act provides that an occupier of any premises commits an offence if any work is undertaken on, or in relation to, the premises which causes the premises to become, or to become capable of being, Prescribed Premises, except in accordance with a works approval.

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered or permitted to be altered from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987* (WA) (EP Regulations).

This Works Approval does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to, the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007*;
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Works Approval Holder to ensure that any action or activity referred to in this Works Approval is permitted by, and is carried out in compliance with, statutory requirements.

The Works Approval Holder must comply with the Works Approval. Contravening a Works Approval Condition is an offence under s.55 of the EP Act.
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Responsibilities of Works Approval Holder

Separate to the requirements of this Works Approval, general obligations of Works Approval Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Works Approval Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under s.61; and
- restrictions on making certain changes to Prescribed Premises unless the changes are in accordance with a Works Approval, Licence, closure notice or environmental protection notice (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Works Approval Holder has a duty to report to the Department all Discharges of Waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)*.
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA)*.

Section 53 of the EP Act provides that a Works Approval Holder commits an offence if Emissions are caused, or altered, from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a closure notice or an environmental protection notice.

Defences to certain offences may be available to a Works Approval Holder and these are set out in the EP Act. Section 74A(b)(iii) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Works Approval Holder can prove that an Emission or Discharge occurred in accordance with a Works Approval.

This Works Approval specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of specified Emissions and Discharges, in order for the defence to offence provision to be available.

Amendment of Works Approval

The Works Approval Holder can apply to amend the Conditions of this Works Approval under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Works Approval at any time on the initiative of the CEO without an application being made.

Duration of Works Approval

The Works Approval will remain in force for the duration set out on the first page of this

Works Approval or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

Suspension or revocation

The CEO may suspend or revoke this Works Approval in accordance with s.59A of the EP Act.

Definitions and interpretation

Definitions

In this Works Approval, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
AS/NZ 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/NZ 5667.10	means the Australian Standard AS/NZS 5667.10 Water Quality – Sampling – Guidance on sampling of waste waters
Books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 JOONDALUP DC WA 6919 info@dwer.wa.gov.au
Condition	means a condition to which this Works Approval is subject under s.62 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Works Approval Holder in writing and sent to the Works Approval's address for notifications, as described at the front of this Works Approval, in relation to: (a) compliance with the EP Act or this Works Approval; (b) the Books or other sources of information maintained in accordance with this Works Approval; or (c) the Books or other sources of information relating to Emissions from the Premises.
Discharge	has the same meaning given to that term under the EP Act.
DWER	Department of Water and Environmental Regulation
Emission	has the same meaning given to that term under the EP Act.
Environmental	has the same meaning given to that term under the EP Act.

Harm	
EP Act	means the <i>Environmental Protection Act 1986</i> (WA).
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA).
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Works Approval applies, as specified at the front of this Works Approval and as shown on the map in Schedule 1 to this Works Approval.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Suitably qualified geotechnical engineer	means a person who: (a) holds a Bachelor of Engineering recognised by the Institute of Engineers; and (b) has a minimum of five years of expertise working in a supervisory area of geotechnical engineering; and (c) is employed by an independent third party external to the Works Approval Holder's business; or is otherwise approved in writing by the CEO to act in this capacity.
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.
Works	refers to the Works described in Schedule 2, at the locations shown in Schedule 1 of this Works Approval to be carried out at the Premises, subject to the Conditions.
Works Approval	refers to this document, which evidences the grant of the works approval by the CEO under s.54 of the EP Act, subject to the Conditions.
Works Approval Holder	refers to the occupier of the Premises being the person to whom this Works Approval has been granted, as specified at the front of this Works Approval.
WWTP	Exmouth Wastewater Treatment Plant

Interpretation

In this Works Approval:

- (a) the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a Condition, each row in a table constitutes a separate Condition;
- (d) any reference to an Australian or other standard, guideline or code of practice in this Works Approval means the version of the standard, guideline or code of practice in force at the time of granting of this Works Approval and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Works Approval; and
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Infrastructure and equipment

1. The Works Approval Holder must install and undertake the Works for the infrastructure and equipment:
 - (a) specified in Column 1;
 - (b) to the requirements specified in Column 2; and
 - (c) at the location specified in Column 3of Table 2 below.
2. The Works Approval Holder must not depart from the requirements specified in Column 2 of Table 2 except:
 - (a) where such departure does not increase risks to public health, public amenity or the environment; and
 - (b) all other Conditions in this Works Approval are still satisfied.
3. The Works Approval Holder must submit a Construction Compliance Document to the CEO following construction of the works specified in Table 2 and prior to commissioning, that:
 - (a) includes a detailed description addressing how each as-constructed item of infrastructure and equipment meets the applicable specifications in Table 2 and, if applicable, Schedule 5 Table 6;
 - (b) includes a description of, and explanation for, any departure from the applicable specifications in Table 2 and, if applicable, Schedule 5 Table 6 including how the departure complies with Condition 2;
 - (c) contains as-constructed plans for the applicable item of infrastructure or equipment;
 - (d) contains photographs of the applicable item of infrastructure to support the descriptions provided under (a);
 - (e) is signed by a person authorised to represent the Licence Holder and contains the printed name and position of that person within the company; and
 - (f) is accompanied by a construction quality assurance report that:
 - (i) is written and certified by a suitably qualified geotechnical engineer who has undertaken construction quality assurance on the completed works; and
 - (ii) confirms the details of construction requirements reported by the Works Approval Holder under (a) and (b).

Table 2: Infrastructure and equipment requirements table

Column 1	Column 2	Column 3
Infrastructure/ Equipment	Requirements (design and construction)	Site plan reference
Sewage treatment system	The sewage treatment system must be designed and constructed to meet the following specifications: (a) be able to receive and treat a sewage inflow of up to 1000 m³/ day; (b) allow sufficient capacity with a 200mm top of bank freeboard to capture a 1 in 10 year 72 hour rainfall event; (c) provide interconnecting spillways between ponds to improve management of emergency overflow during extreme rainfall events: and (d) direct all treated wastewater to the Winter Storage pond or the Evaporation / Infiltration pond.	As shown in Schedule 3 Site Plan
Facultative Pond including Anaerobic Pot	• to be free of leaks and defects and lined with a Bituminous Geomembrane liner with a permeability of $\leq 1 \times 10^{-9}$ m/s. • the Bituminous Geomembrane liner is to be installed in accordance with the minimum specifications as specified in the manufacturer's specifications and Schedule 5 Table 6. comprise the following dimensions¹: i. width of 60m; ii. depth of 2.1m; and iii. length of 140m. the Facultative pond will comprise a Anaerobic Pot with the following dimensions¹ within the Facultative pond: a) width of 19.2m; b) depth of 1m; and c) length of 30.2m. • to be free of leaks and effects and lined with a concrete liner with a permeability of $\leq 1 \times 10^{-9}$ m/s.	As shown in Schedule 3 Site Plan
Maturation Pond	• to be free of leaks and defects and lined with a Bituminous Geomembrane liner with a permeability of $\leq 1 \times 10^{-9}$ m/s. • the Bituminous Geomembrane liner is to be installed in accordance with the minimum specifications as specified in the	As shown in Schedule 3 Site Plan

Column 1	Column 2	Column 3
Infrastructure/ Equipment	Requirements (design and construction)	Site plan reference
	manufacturer's specifications and Schedule 5 Table 7. - comprise the following dimensions¹: i. width of 40m; ii. depth of 1.75m; and iii. length of 95m.	
Storage Pond	- to be free of leaks and defects and lined with a Bituminous Geomembrane liner with a permeability of $\leq 1 \times 10^{-9}$ m/s. - the Bituminous Geomembrane liner is to be installed in accordance with the minimum specifications as specified in the manufacturer's specifications and Schedule 5 Table 7. - comprise the following dimensions¹ (L shaped as per site plan): i. width of 114m; ii. depth of 2.3m; and iii. length of 147m.	As shown in Schedule 3 Site Plan
Infiltration / Evaporation Pond	- comprise the following dimensions¹: i. width of 72m; ii. depth of 1.4m; and iii. length of 140m.	As shown in Schedule 3 Site Plan
Copper Ioniser	- The Copper Ioniser unit will have a residual dose rate of 1.0mg/L; and - Be constructed and located adjacent to the Chlorination unit.	As shown in Schedule 3 Site Plan
Chlorination	- The Chlorination unit will meet the following standards: i. To meet 0.2-2mg/L free chlorine after a minimum contact time of 30 minutes; ii. Maximum dosing rate of 20mg/L; iii. Wastewater flow = 17.4L/s for 16 hours per day; and iv. The average maximum dose rate will be 0.25kg/h and 1.25kg/h. A four 70kg chlorine cylinder (2 duty and 2 standby)	As shown in Schedule 3 Site Plan

Column 1	Column 2	Column 3
Infrastructure/ Equipment	Requirements (design and construction)	Site plan reference
	configuration is required. The maximum cylinder changeover frequency will be 35 days at 4mg/L and 7 days at 20mg/L.	
Geobag laydown area	- constructed on a concrete hardstand pad with a permeability of $\leq 1 \times 10^{-9}$ m/s ; - be fully bunded to retain liquid waste within the bed; and - direct liquid fraction to Facultative Pond	As shown in Schedule 3 Site Plan

Note 1: Alternate dimensions may be employed provided engineering certification that any dimension changes have not compromised pond performance is provided with the certification required under Condition 3

Commissioning

4. The Works Approval Holder must notify the CEO in writing one week prior to the commencement of Commissioning.
5. Commissioning must not exceed a period of six (6) months from the date of commencement of Commissioning.
6. The Works Approval Holder must undertake treated wastewater monitoring during Commissioning:
 - (a) at the location specified in Column 1;
 - (b) for the parameters specified in Column 2;
 - (c) for the units specified in Column 3;
 - (d) at the frequency specified in Column 4; and
 - (e) using the methods specified in Columns 5 and 6 of Table 3 below.

Table 3: Commissioning monitoring

Treated Wastewater Monitoring					
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Emission Point Reference Schedule 4	Parameters	Units	Frequency	Averaging Period	Method
Outlet of Storage Dam S3	Biochemical Oxygen Demand	mg/L	Weekly	Spot sample	AS/NZ 5667.1 AS/NZ 5567.10
	Total Suspended Solids				
	Total Phosphorus				
	Total Nitrogen				
	pH	pH units			
Post Chlorination Sample Point S3	Escherichia coli	cfu/ 100 mL			
Copper Ioniser S3	Copper	Mg/L	Weekly		
Magflow M3	Volume	kL/day	Continuous		

7. The Works Approval Holder must provide to the CEO a commissioning report within 30 days of the completion of the commissioning including:
 - (a) a summary of monitoring results recorded under Condition 6;
 - (b) the original monitoring reports submitted to the Works Approval Holder from third parties for the commissioning period; and
 - (c) a summary of the environmental performance of the plant as installed.
8. The Works Approval Holder shall ensure that odour emitted from the premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity

of any person who is not on the premises.

Record-keeping

- 9.** The Works Approval Holder must maintain accurate Books including information, reports and data in relation to the Works and the Books must:
 - (a) be legible;
 - (b) if amended, be amended in such a ways that the original and subsequent amendments remain legible or are capable of retrieval;
 - (c) be retained for at least 3 years from the date the Books were made;
 - (d) be available to be produced to an Inspector or the CEO.
- 10.** The Works Approval Holder must comply with a Department Request within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

Schedule 1: Maps

Premises map

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



Premises boundary

The Premises boundary is defined by the coordinates in Table 4.

Table 4: Premises boundary coordinates

Easting	Northing
<i>203266E</i>	<i>7573278N</i>
<i>203736E</i>	<i>7573278N</i>
<i>203266E</i>	<i>75732770N</i>
<i>203736E</i>	<i>7572770N</i>

Schedule 2: Works

At the time of assessment, Emissions and Discharges from the Works listed in Table 5 were considered in the determination of the risk and related Conditions for the Works Approval.

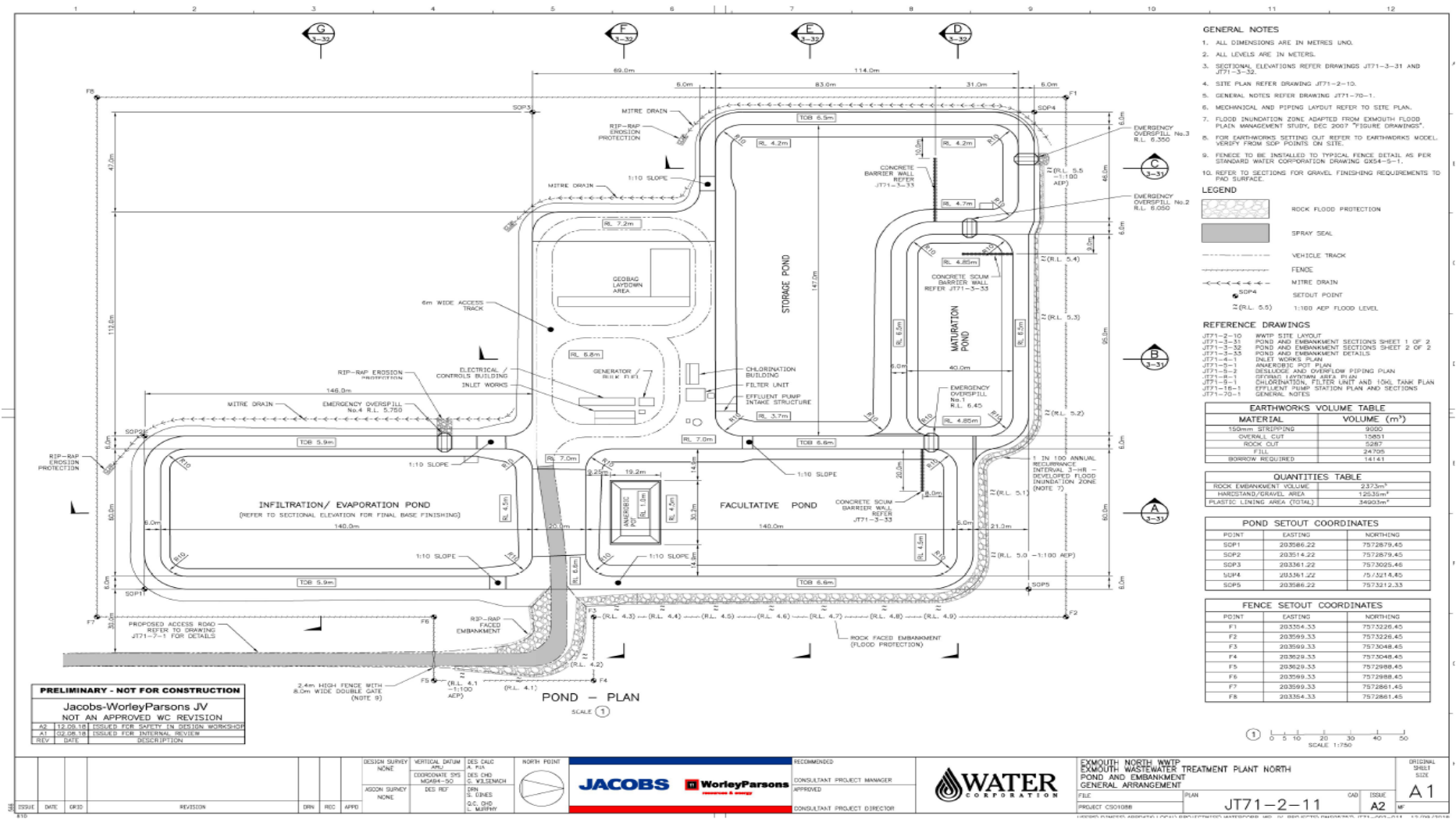
Table 5: Authorised Works

Works	Specifications/Drawings
Bituminous Geosynthetic lined Facultative Pond with a concrete lined Anaerobic pot	Schedule 3 Site Plan
Bituminous Geosynthetic lined Maturation Pond	
Bituminous Geosynthetic lined Storage Pond	
Unlined Evaporation / Infiltration Pond	
Chlorination unit	
Copper Ioniser unit	
Concrete lined Geobag laydown area	

Site layout

The infrastructure and equipment are set out on the Premises in accordance with the site layout specified on the Schedule 3 Site Plan.

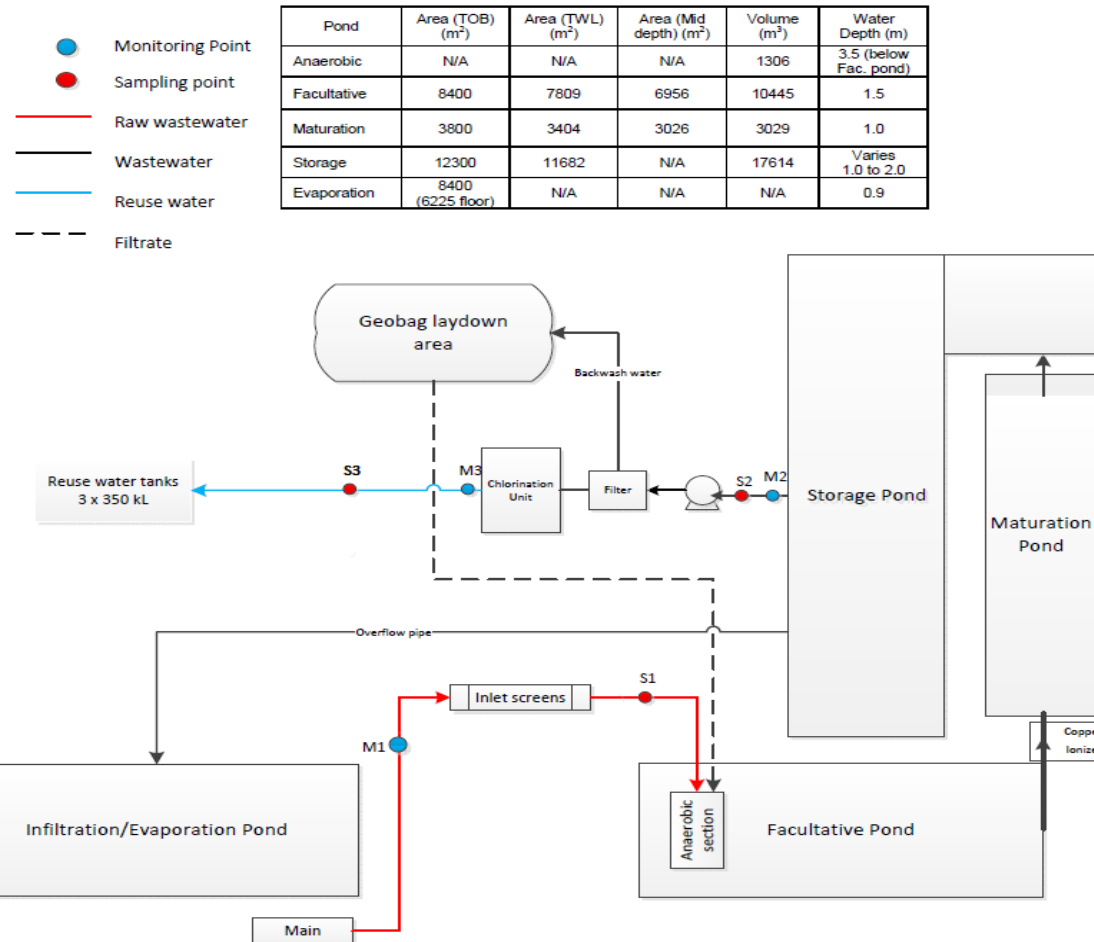
Schedule 3: Site Plan



W6201/2018/1 (Amendment date: 10 October 2024)

IR-T05 Works Approval Template v2.0 (July 2017)

Schedule 4: Monitoring points



Schedule 5 – Minimum specification for bituminous geomembrane installation

The construction works and requirements described in the following table are required to be completed on the occasion that bituminous geomembrane liner material is used for the Facultative Pond, Maturation Pond and Storage Pond construction in accordance with Condition 1.

Table 6: Geomembrane installation requirements

	Infrastructure or Equipment	Requirements (design and construction)										
1	Site preparation	- Excavation of all unsuitable materials to a minimum depth of -300 mm from final surface level (FSL) to form a suitable subgrade, and replace with engineered fill material, moisture condition and compact to Standard Maximum Dry Density (SMDD) of 95% and Optimum Moisture Content (OMC) of -2% to +2% in 250 mm layers to FSL; - If suitable material (meeting requirements for engineered fill material) exists in the cell footprint, the material shall be excavated to -250 mm of FSL, ripped and treated as per engineered fill material for moisture conditions and compaction requirements; - Cut internal batters to be 3:1 (H:V); and - Proof roll entire footprint including cell floor and embankments.										
2	Bituminous Geomembrane liner	- To extend over the entire pond base and up the side embankments; - To be 4 mm thick, overlaying the subbase; - Shall be free of holes, blisters, blemishes, striations, bubble, roughness, contaminants and permanently attached raw materials; and - Internal ballast shall be installed, if required prior to filling, at the toe of the internal embankment and across the centre of each pond floor.										
3	Anchor trenches	- To be set back 1.0 m from the crest of the perimeter embankment, cell edge bunds and interim cell edge bunds; and - To be backfilled with engineered fill while liner materials are in the relaxed state, in full contact with subgrade and without wrinkles or folds.										
4	Quality Assurance and Quality Control	Construction and installation performance shall be measured by the following specifications: - Construction requirements (as specified by Condition 1 and this table); - General requirements (as specified by the Application); - Manufacturer requirements (as specified by the supplier of the Bituminous Geomembrane); - Conformance testing – to show materials meet the following minimum requirements ; <table><tr><th>Property</th><th>Units</th><th>Value</th><th>Test</th><th>Testing frequency</th></tr><tr><td>Thickness (average)</td><td>mm</td><td>≥4.0</td><td>EN 1849-1</td><td>One for every two rolls</td></tr></table>	Property	Units	Value	Test	Testing frequency	Thickness (average)	mm	≥4.0	EN 1849-1	One for every two rolls
Property	Units	Value	Test	Testing frequency								
Thickness (average)	mm	≥4.0	EN 1849-1	One for every two rolls								

	Infrastructure or Equipment	Requirements (design and construction)					
		Minimum thickness		mm	3.6	EN 1849-1	
		Surface mass (minimum)		kg/m ²	4.3	EN 1849-1	One per 3000 m ²
		Tensile properties: max. tensile strength (minimum)	Longitudinal	N/50 mm	800	EN 12311-1	One per 3000 m ²
			Cross directional		750		
		Tensile properties: elongation (minimum)	Longitudinal	%	30	EN 12311-1	One per 3000 m ²
			Cross directional		30		
		• Quality Control Procedures; • Reports and Certificates – including: ○ Manufacturer and supplier certifications • Reporting requirements; • Testing requirements; • Construction Quality Assurance (CQA) procedures; • Inspection and Monitoring requirements; • Hold point requirements; • Liner Inspection and Monitoring requirements; and • Performance Indicators.					