



Works approval number W6759/2022/1

Works approval holder Cleanaway Co Pty Ltd

ACN 127 853 561

Registered business address Unit 4
441 St Kilda Road
MELBOURNE VIC 3004

DWER file number DER2022/000600

Duration 22/02/2023 to 22/02/2026

Date of issue 19/04/2023

Premises details Karratha Liquid Waste Treatment Plant and Waste Transfer Station
Lot 126 Warlu Road
COOYA POOYA WA 6714

Legal description -
Lot 126 on Plan 183297

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed design capacity
Category 61 Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	40,000 tonnes per annual period

This works approval is granted to the works approval holder, subject to the attached conditions, on 19 April 2023, by:

Adam Green
SENIOR ENVIRONMENTAL OFFICER, WASTE INDUSTRIES

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

Instrument history

Date	Reference number	Summary of changes
22/02/2023	W6759/2022/1	Works approval granted
19/04/2023	W6759/2022/1	DWER initiated amendment to correct administrative error regarding an incorrect batter slope ratio.

Interpretation

In this works approval:

- (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 works approval:
 - (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 works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

Works approval conditions

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

Construction phase

Infrastructure and equipment

1. The works approval holder must:
 - (a) construct the infrastructure and/or equipment; and
 - (b) in accordance with the corresponding design and construction requirements; as set out in Table 1.

Table 1: Design and construction requirements

Infrastructure	Design and construction requirements
Evaporation Pond 4	<ul style="list-style-type: none">• Designed and constructed to receive and treat a liquid wastewater inflow of up to 40,000 tonnes per annum, in conjunction with evaporation ponds 1, 2 and 3 existing at the premises;• 55 m wide and 60 m length at the crest;• 50 m wide and 50 m length at the base;• 2.0 m maximum operating depth;• Maximum operating volume of 6,300 m³;• Site preparation and subgrade construction as specified in Schedule 2, Table 5;• Lined with 2.0 mm HDPE to achieve $<1 \times 10^{-9}$ m/sec, as specified in Schedule 2 Table 6;• Evaporation pond and associated pipework to be free of leaks and defects; and• To be connected to the existing pump station.

2. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being constructed:
 - (a) undertake an audit of their compliance with the requirements of condition 1; and
 - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:
 - (a) certification by a suitably qualified geotechnical engineer that the items of infrastructure or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;
 - (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and
 - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

4. The Environmental Compliance Report required by Condition 3 must be accompanied by a Construction Quality Assurance Validation Report that:
 - (a) is written and certified by an independent GITA accredited engineer;
 - (b) assesses test results against the relevant minimum values;
 - (c) documents all repairs to subgrade and resulting from non-destructive weld testing;
 - (d) certifies that the constructed infrastructure is free of fault of defect, built to the design specification and fit for the intended purpose; and
 - (e) includes copies of drawings, inspections, monitoring, and testing results required by the corresponding Specifications referenced in Schedule 2.

Time limited operations

Commencement and duration

5. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1 when the Environmental Compliance Report required by condition 2, and the Construction Quality Assurance Validation Report required by condition 3 have been submitted by the works approval holder for that item of infrastructure.
6. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 7:
 - (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 5 for that item of infrastructure; or
 - (b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 6(a).

Operational requirements

7. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Condition 1 is maintained and operated in accordance with the corresponding operational requirement set out in Table 2

Table 2: Infrastructure operational requirements

Infrastructure	Operational requirements
Evaporation Pond 4	<ul style="list-style-type: none"> • Maintained to achieve a 2.0 m maximum operating depth; • Maintained to achieve a 500 mm freeboard; • HDPE liner maintained to achieve permeability of 1×10^{-9} m/sec; and • Vegetation and floating debris (emergent or otherwise) is excluded from the pond surface or inner pond.

Monitoring during time limited operations

8. The works approval holder must undertake the monitoring in Table 3 according to the specifications in that table.

Table 3: Monitoring of inputs and outputs

Input/output	Parameter	Unit	Averaging period	Frequency
Treated wastewater pumped to evaporation pond 4	Volumetric flow rate (cumulative)	Tonnes or m ³ /week	Monthly	Quarterly

Compliance reporting

9. The works approval holder must submit to the CEO a report on the time limited operations within 30 calendar days of the completion date of time limited operations or 30 calendar days before the expiration date of the works approval, whichever is the sooner.
10. The works approval holder must ensure the report required by condition 9 includes the following:
- (a) a summary of monitoring results obtained during time limited operations under condition 8.
 - (b) a review of performance and compliance against the conditions of the works approval; and
 - (c) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting

11. The works approval holder must record the following information in relation to complaints received by the works approval 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 works approval holder to investigate or respond to any complaint.
12. The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:
- (a) the works conducted in accordance with condition 1;
 - (b) any maintenance of infrastructure that is performed in the course of complying with condition 7; and
 - (c) monitoring programmes undertaken in accordance with condition 8; and
 - (d) complaints received under condition 11.

- 13.** The books specified under condition 12 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 works approval holder for the duration of the works approval;
and
 - (d) be available to be produced to an inspector or the CEO as required.

Definitions

In this works approval, the terms in Table have the meanings defined.

Table 4: Definitions

Term	Definition
annual period	a 12 month period commencing from 1 January until 31 December.
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
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.
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.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure has been constructed and/or installed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986</i> (WA).
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA).
GITA	Geotechnical Inspection and Testing Authority
premises	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 works approval.
prescribed premises	has the same meaning given to that term under the EP Act.

Term	Definition
suitably qualified geotechnical engineer	means a person who: (a) holds a Bachelor of Engineering degree recognised by Engineers Australia; and (b) has a minimum of five years of experience working in a supervisory role 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.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
waste	has the same meaning given to that term under the EP Act.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 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.

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

Premises layout

The layout of the premises infrastructure is shown in the map below (Figure 2).



Figure 2: Premises layout

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IR-T05 Works approval template (v6.0) (September 2022)

Schedule 2: Minimum specification for excavation and HDPE geomembrane installation

The construction works and requirements described in the following tables are required to be completed in accordance with Condition 1.

Table 5: Pond Subgrade Construction Specifications

Infrastructure or Equipment	Requirements (design and construction)
Site Preparation and Subgrade construction	<p>The following site preparation works must be undertaken:</p> <ul style="list-style-type: none"> • Clearing and grubbing of entire pond footprint including embankments, bunds and base. • Excavation of all unsuitable materials to a minimum depth of -300mm 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 layers to FSL not exceeding 300mm and not less than 100mm. • If suitable material (meeting requirements for engineered fill material) exists in the pond footprint, the material shall be excavated to -250mm of FSL, ripped and treated as per engineered fill material for moisture conditions and compaction requirements. • Internal batters cut to 1:2 (V:H). • Proof roll entire footprint including pond floor and embankments • following rolling, the surface is to have no irregularities in excess of 10 mm deep over a straightedge length of 20 mm.

Table 6: HDPE Liner Design, Construction and Quality Assurance Specifications

	Parameter	Requirements (design and construction)
1	High Density Polyethylene liner	<ul style="list-style-type: none"> • To extend over the entire pond base and up the side embankments; • Must be uniform and free of pin holes, blisters, blemishes, striations, bubbles, roughness, contaminants and permanently attached raw materials; • Completely sealed and waterproof along all joins and seams with heat welded joints; <ul style="list-style-type: none"> • All seams and joins made on site should be continuous; • Panels of the liner should be overlapped by a minimum of 100mm, prior to heat welding; and • Leak detection survey to be carried out following installation.
2	Quality Assurance and Quality Control	<p>Construction and installation performance must be measured by the following specifications:</p> <ul style="list-style-type: none"> • Construction requirements (as specified by 1 and this table); • Conformance testing – to show materials meet the following minimum requirements;

	Parameter	Requirements (design and construction)					
		Property		Units	Value	Test	Testing Frequency
		Thickness (average)		mm	2.0	ASTM D5199	One for every two rolls
		Thickness (minimum)		mm	2.0	ASTM D5199	
		Density		g/cm³	0.94	ASTM D3776	
		Water permeability (liquid tightness) (minimum)		m/s	< 1 x 10 ⁻⁹	ASTM E96	Every five years
		Tensile properties	Break strength	kN/m	21	ASTM D7275	One per batch
			Yield strength	kN/m	29	ASTM D7275	
			Yield elongation	%	12	ASTM D7275	
			Break elongation	%	100	ASTM D7275	
		Tear resistance		N	249		
		Puncture resistance		N	534		
		Carbon black content		%	2.0 – 3.0		
		Carbon black dispersion		Cat	9 in Cat 1 or Cat 2; 1 in Cat 3		
		Destructive fusion weld testing on-site tests undertaken by Contractor, witnessed by CQA Consultant	Fusion/Wedge Weld - Shear strength	N/25 mm	700	ASTM D6392	Every 150m along weld
			Fusion/Wedge Weld - Peel strength		530		
			Extrusion Weld – Shear Strength		700		Every 150m along weld
Extrusion Weld – Peel Strength	455						

	Parameter	Requirements (design and construction)						
		Non - destructive weld testing – tests undertaken by Contractor, witnessed by CQA Consultant	Air pressure test	-	pass/fail	ASTM D5820	All seams over full length	
			Vacuum box test			ASTM D5641		