



Works approval number W6782/2023/1

Works approval holder Karratha Recycling Pty Ltd

ACN 163 991 106

Registered business address

DWER file number DER2022/000678

Duration 08/03/2024 to 07/03/2029

Date of issue 08/03/2024

Premises details

Karratha Recycling Liquid Waste Facility

Lot 120 and Lot 121 on DP 424552

Certificate of Title Volume 4027 Folio 393 & 394

GAP RIDGE WA 6714

As defined by the coordinates in Schedule 2

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 61: Liquid waste facility: premises on which liquid waste produced on other premises (other than sewage waste) is stored, reprocessed, treated or irrigated.	35,000 tonnes per annual period.

This works approval is granted to the works approval holder, subject to the attached conditions, on 8 March 2024, by:

STEPHEN CHECKER
MANAGER WASTE INDUSTRIES
REGULATORY SERVICES

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

Works approval history

Date	Reference number	Summary of changes
08/03/2024	W6782/2023/1	Works approval granted.

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 and/or install the infrastructure and/or equipment;
 - (b) in accordance with the corresponding design and construction / installation requirements; and
 - (c) at the corresponding infrastructure location, as set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	Oleology WTS	<p>Located as per premises layout plan in Schedule 1.</p> <p>1 x 40-foot container with modifications to house the wastewater treatment system.</p> <p>The MyCelx filtration system must be designed and constructed to meet the following specifications:</p> <ol style="list-style-type: none"> (a) be able to receive and treat a wastewater sewage inflow of up to 24 kL/hr; (b) Able to treat wastewater to the following output emission standards: <ol style="list-style-type: none"> (i) pH – 5.5 – 8.5; (ii) Total Petroleum Hydrocarbon < 15 mg/L; (iii) Surfactants <5 mg/L; (iv) Ammonia < 2.3 mg/L; (v) Arsenic < 0.001 mg/L; (vi) Cadmium < 0.00002 mg/L; (vii) Lead < 0.002 mg/L; (viii) Mercury < 0.0015 mg/L; (ix) Nickel < 0.007 mg/L; (x) Zinc < 0.11 mg/L; (xi) BTEX < 10 mg/L; (xii) BOD < 5 mg/L; (xiii) COD < 25 mg/L; (xiv) Turbidity <5 NTU; (xv) Total Dissolved Solids < 2000 mg/L; (xvi) <i>E.coli</i> < 10 MPN or cfu /100mL; (xvii) PFAS < 0.005 ug/L; (xviii) PFOS < 0.0001 ug/L; (xix) PFOA < 0.01 ug/L; 	As shown in Figure 2: Premises layout

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		<p>(xx) PFHxS < 0.001 ug/L;</p> <p>(xxi) Total nitrogen ≤ 26 mg/L; and</p> <p>(xxii) Total phosphorus ≤ 0.02 mg/L.</p> <p>(c) All conveyance, storage and treatment infrastructure must be designed and constructed to ensure that stormwater runoff does not enter the WRRF treatment and storage system; and</p>	
2.	Holding tanks	<p>Comprise:</p> <ul style="list-style-type: none"> 1 x 78 m³ treated water tank; and 2 x 35 m³ untreated water tanks. 	As shown in Figure 2: Premises layout
3.	Secondary Containment / Bunding	<ul style="list-style-type: none"> 2 x impervious bunded areas; Fully lined with 2 mm HDPE, all joints fully welded; Ensure all associated pumping and filtration equipment are contained within a separate bunded area, bund dimension 14 m x 6 m x 0.5 m; Ensure holding tanks are surrounded by bunding to contain any potential damage/failure resulting in leakage of product from the holding tanks, bund dimension 30 m x 8 m x 0.5 m 	As shown in Figure 2: Premises layout
4.	Pumps	<p>Comprise:</p> <ul style="list-style-type: none"> 5 x Centrifugal Process Pumps; and 1 x Diaphragm Pump 	As shown in Figure 2: Premises layout
5.	Inlet to treatment system	<p>Comprise:</p> <ul style="list-style-type: none"> Flow switch for pump control/protection; and Ultrasonic Liquid Sensor for holding tank 	As shown in Figure 2: Premises layout
6.	Automated Backwash vessel	<p>Comprise:</p> <ul style="list-style-type: none"> 2 x MXR Regenerable Media Housing; and Air relief valves fitted to each vessel 	As shown in Figure 2: Premises layout
7.	Filter and chemical dosing system	<p>Comprise:</p> <ul style="list-style-type: none"> Fully automated chemical dosing system for pH correction and flocculation; Nanobubble injector system for the sump; 7 x MXH-7 stainless steel housings in series with MYCelx cartridge filter capacity; 2 x MXH-15 stainless steel housings in series with MYCelx cartridge filter capacity; and 	As shown in Figure 2: Premises layout

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		<ul style="list-style-type: none"> Additional filter added for the filtration process to ensure TPH are reduced to below discharge level. 	
8.	Polishing	<ul style="list-style-type: none"> 3 x MXR Performer Polishing Media Housings; and Air relief valves fitted to each vessel 	As shown in Figure 2: Premises layout
9.	Ozone treatment	Comprise: <ul style="list-style-type: none"> Ozone generator and contact tank; Ozone injection pump with Venturi Ozone recirculation pump; 2 x UV single lamps 	As shown in Figure 2: Premises layout
10	Monitoring instruments	Comprise: <ul style="list-style-type: none"> Ozone system monitoring instruments: ORP monitor and probe or equivalent pH sensors and probe; pressure transducers plus gauges and mag flow meter; 	NA
11	PLC Program	Comprise: <ul style="list-style-type: none"> Automation on/off controller for system processing 	As shown in Figure 2: Premises layout layout

Compliance reporting

2. The works approval holder must within 30 calendar days of the completion of construction and/or installation of the infrastructure or equipment required by condition 1:
 - (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 qualified civil or wastewater 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;
 - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person; and
 - (d) a summary of monitoring results obtained under condition 1.

Records and reporting (general)

4. 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.
5. 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 1; and
 - (c) complaints received under condition 4.
6. The books specified under condition 5 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 2 have the meanings defined.

Table 2: Definitions

Term	Definition
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 and/or equipment 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).
HDPE	High Density Polyethylene.
L100	Car and truck wash waters.
L150	Industrial wash waters contaminated with a controlled waste.
premises	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 and Premises boundary in Table 2 Schedule 2 to this works approval.
prescribed premises	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.
WRRF	Water Resource Recovery Facility
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

Term	Definition
	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: Map of the boundary of the prescribed premises

Schedule 1: Premises layout

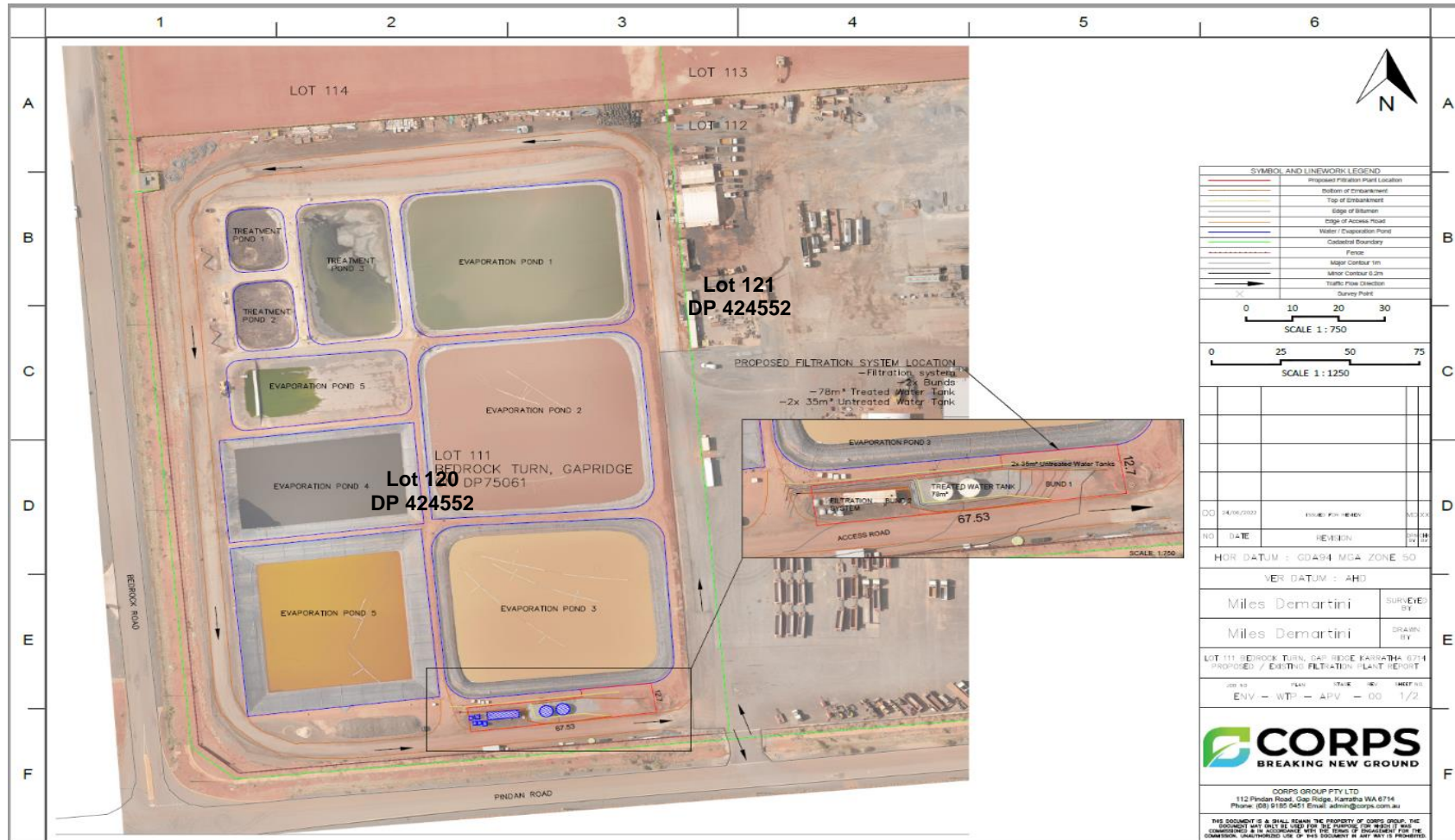


Figure 2: Premises layout

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

Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 3.

Table 3: Premises boundary coordinates (GDA2020)

Point	Easting	Northing
A	475585	7704155
B	475973	7704188
C	475972	7703844
D	475619	7703810