



Works Approval

Works approval number W2893/2025/1

Works approval holder Fortescue Ltd
ACN 002 564 872
Registered business address Ground Level
256 St Georges Terrace
PERTH WA 6000

DWER file number App-0027086

Duration 06/06/2025 to 05/06/2030

Date of issue 06/06/2025

Premises details Rail Camp 25A
Port Hedland
Legal description -
Part of L1SA

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 54: Sewage facility	225 m ³ /day

This works approval is granted to the works approval holder, subject to the attached conditions, on 6 June 2025, by:

Steve Checker

MANAGER, WASTE INDUSTRIES

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

Works approval history

Date	Reference number	Summary of changes
7/04/2011	W4861/2011/1	Works approval granted.
14/06/2012	W5160/2012/1	Works approval granted.
06/06/2025	W2893/2025/1	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.	Rail Camp WWTP	(a) Containerised and enclosed WWTP sequence batch reactor system comprising of: <ol style="list-style-type: none"> (i) Sequential Batch Reactor (combined 150 kL); (ii) Balance tanks (combined 150 kL); (iii) Waste activated sludge tanks (combined 50 kL capacity); and (iv) Chlorine contact tanks (combined 150 kL). (b) All sewage storage and treatment tanks, vessels, transfer pipelines and conveyance infrastructure must be impermeable and free of leaks or defects; (c) Above ground infrastructure located on a hardstand within an earthen bund; (d) Stormwater is prevented from entering the sewage treatment system and storage infrastructure; (e) WWTP able to treat up to 150 m³ of sewage per day; (f) WWTP able to treat sewage to the following discharge limits: <ol style="list-style-type: none"> (i) 5-day Biochemical Oxygen Demand <20 mg/L; (ii) Total suspended solids <30 mg/L; (iii) Total nitrogen <20 mg/L; (iv) Total phosphorus <7.5 mg/L; (v) Thermotolerant coliforms ≤1000 colony forming units 	

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		<p>(CFU)/100 ml;</p> <p>(vi) Residual free chlorine 0.2-2.0 mg/L; and</p> <p>(vii) pH 6.5 – 8.5.</p> <p>(g) Flow meters installed on the inlet and outlet side of the plant to record both inflows and outflows from the WWTP; and</p> <p>(h) Alarm system installed to notify the operator of:</p> <p>(i) pump fails;</p> <p>(ii) high tank levels; and</p> <p>(iii) tank overflows.</p>	
2.	Irrigation sprayfield	<p>Irrigation spray field must meet the following specifications:</p> <p>(a) Minimum 6 ha irrigation spray field with sprinkler units;</p> <p>(b) Maintain a 5 m spray drift buffer;</p> <p>(c) Above ground sprinklers must be installed;</p> <p>(d) No more than 225 m³ of blended effluent to be applied to the irrigation spray field per day;</p> <p>(e) Irrigation is managed to prevent ponding and pooling of effluent on the ground surface of the irrigation spray field;</p> <p>(f) No blended effluent is permitted to be discharged outside of the irrigation spray field as identified in Schedule 1;</p> <p>(g) Irrigation spray field is fully enclosed within fenced area;</p> <p>(h) Warning signage fixed to all sides of the fence; and</p> <p>(i) Bunds and diversion drains must be installed where required to divert uncontaminated stormwater away from the irrigation spray field.</p>	As depicted in Schedule 1, Premises Map
3.	All infrastructure and equipment	<p>(a) All sewage storage and treatment tanks, vessels, pipework, fittings, and joints are to be constructed of impervious material and free from leaks and/or defects;</p> <p>(b) All sewage storage and treatment tanks, vessels, pipework, fittings, and joins must be designed and constructed to ensure that stormwater does not enter the sewage treatment system and treated wastewater storage infrastructure; and</p> <p>(c) All pipework, fittings and pumps must be hydraulically tested to the required pressure and visually inspected for any defects to ensure infrastructure is fit for</p>	As depicted in Schedule 1, Premises Map

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		purpose prior to use.	
4.	RO brine supply pipeline	Connected to a volumetric flow meter to monitor the daily volume of RO brines delivered to the WWTP irrigation tanks.	As depicted in Schedule 1, Premises Map

Compliance reporting

2. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:
 - (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 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.

Environmental commissioning phase

Environmental commissioning requirements and emission limits

4. The works approval holder may only commence environmental commissioning of an item of infrastructure listed in condition 5 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with conditions 2 and 3 of this works approval.
5. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 2 may only be carried out:
 - (a) in accordance with the corresponding commissioning requirements; and
 - (b) for the corresponding authorised commissioning duration.

Table 2: Environmental commissioning requirements

Infrastructure	Commissioning requirements	Authorised commissioning duration
Irrigation sprayfield	a) Blended effluent may be disposed of to the irrigation spray field; b) No more than 225 m ³ of blended effluent is to be discharged to the irrigation spray field per day;	A period not exceeding 90 calendar days in aggregate.

Infrastructure	Commissioning requirements	Authorised commissioning duration
	c) Irrigation is managed to prevent ponding and pooling of effluent on the ground surface of the irrigation spray field; and d) No blended effluent is permitted to be discharged outside of the irrigation spray field.	
WWTP and pipeline	a) Volumetric flow meters are maintained on the WWTP inlet, RO reject pipeline and outlet to the irrigation spray field; b) Earthen bunding is maintained around the WWTP perimeter; c) Sludge is contained within sealed sludge tanks prior to removal by a licensed waste carrier for disposal to a licensed disposal facility; d) Chemicals are stored in accordance with Australian Standard AS3780-2008 Storage and Handling of Corrosive Substances; and e) In the event of a leak/spill, the source will be isolated, and any contaminated soil remediated or disposed of to an appropriately licensed facility.	

Monitoring during environmental commissioning

6. During environmental commissioning, the works approval holder must ensure that the emission specified in Table 3, is discharged only from the corresponding discharge point(s) and only at the corresponding discharge point location.

Table 3: Authorised discharge points during commissioning

Emission	Discharge point	Discharge point location
Blended effluent	Sprinklers within the irrigation spray field.	Irrigation sprayfield as shown in Schedule 1 Premises Map

Monitoring during environmental commissioning

7. The works approval holder must monitor emissions during environmental commissioning in accordance with Table 4.

Table 4: Emissions monitoring during environmental commissioning

Discharge point	Monitoring location	Parameter	Frequency	Averaging Period	Unit
Irrigation sprayfield	WWTP outlet	Thermotolerant coliforms	Weekly	Spot sample	cfu or MPN /100 ml
		5-day Biochemical Oxygen Demand			mg/L
		Total suspended solids			
		Total dissolved solids			
		Total nitrogen			
		Total phosphorus			
		pH ¹	Daily or continuous online	pH units	
		Residual free chlorine ¹		mg/L	
		Cumulative flow volume discharged to sprayfield ¹	Continuous	N/A	m ³ /day

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

8. For the monitoring activity required by condition 7, the works approval holder must:
- record the results;
 - handle and preserve all water samples collected during the monitoring of the WWTP in accordance with AS 5667.1 and AS 5667.10; and
 - have analysis conducted by a laboratory with current National Association of Testing Authorities (NATA) accreditation for the parameters specified.

Environmental Commissioning Report

9. The works approval holder must submit to the CEO an Environmental Commissioning Report within 30 calendar days of the completion date of environmental commissioning for each item of infrastructure specified in Table 2.
10. The works approval holder must ensure the Environmental Commissioning Report required by condition 9 of this works approval includes the following:
- a summary of the commissioning activities, including date(s) for commencement of commissioning, timeframes and amount of wastewater processed;
 - a summary of blended effluent monitoring results recorded in accordance with condition 7;
 - copies of laboratory reports for blended effluent monitoring results recorded in accordance with condition 8;

- (d) a summary of the environmental performance of each item of infrastructure or equipment as installed, which at minimum includes:
 - (i) a comparison of the blended effluent monitoring results against discharge limits specified in condition 15; and
 - (ii) assessment of the irrigation spray field performance against operational requirements in condition 5;
- (e) a review of the works approval holder’s performance and compliance against the conditions of this works approval; and
- (f) where they have not been met, measures proposed to meet the manufacturer’s design specifications and the conditions of this works approval, together with timeframes for implementing the proposed measures.

Time limited operations phase

Commencement and duration

- 11. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 13 where the Environmental Commissioning Report for that item of infrastructure as required by condition 9 has been submitted by the works approval holder.
- 12. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 13:
 - (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 10 for that item of infrastructure; or
 - (b) until such time as a registration or licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986* and only where this occurs prior to the time period specified in sub provision (a).

Time limited operations requirements and emission limits

- 13. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 5 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 5.

Table 5: Infrastructure and equipment requirements during time limited operations

Site infrastructure and equipment	Operational requirements	Infrastructure location
Irrigation sprayfield	<ul style="list-style-type: none"> a) No more than 225 m³ per day of blended effluent is discharged to the irrigation spray field; b) Irrigation is managed to prevent ponding and pooling of effluent on the ground surface of the irrigation spray field; c) No blended effluent is permitted to runoff or discharge beyond the irrigation spray field boundary; d) No discharge of undiluted RO brine is permitted; and e) Bunds and diversion drains must be maintained 	Schedule 1 Premises Map

Site infrastructure and equipment	Operational requirements	Infrastructure location
	and repaired required to ensure uncontaminated stormwater is directed away from and wastewater is contained within the irrigation spray field.	
WWTP and pipeline	<ul style="list-style-type: none"> a) Volumetric flow meters are maintained on the RO brine holding tank outlet, WWTP inlet and outlet to the irrigation spray field; b) Earthen bunding is maintained around the WWTP perimeter; c) Sludge is contained within sealed sludge tanks prior to removal by a licensed waste carrier for disposal to a licensed disposal facility; d) Screenings are contained within a sealed bin prior to removal for disposal to a licensed disposal facility; e) Chemicals are stored in accordance with Australian Standard <i>AS3780-2008 Storage and Handling of Corrosive Substances</i>; and f) Spills of wastewater or chemicals outside of a vessel/container are cleaned up immediately. 	Schedule 1 Premises Map
RO brine pipeline	<ul style="list-style-type: none"> a) No more than 75 m³ per day of RO brine is supplied to the WWTP; and b) Volumetric flow meters are maintained to monitor daily volume of RO brine delivered to the WWTP irrigation storage tanks. 	Schedule 1 Premises Map

14. During time limited operations, the works approval holder must ensure that the emission specified in Table 6, is discharged only from the corresponding discharge points and only at the corresponding discharge point location.

Table 6: Authorised discharge points during time limited operations

Emission	Discharge point	Discharge point location
Blended effluent	Sprinklers within the irrigation spray field	Irrigation sprayfield as shown in Schedule 1 Premises Map.

Monitoring during time limited operations

15. During time limited operations, the works approval holder must ensure that the emissions from the discharge point listed in Table 7 does not exceed the corresponding limit(s) when monitored in accordance with condition 16.

Table 7: Emission and discharge limits during time limited operations

Discharge point	Parameter	Concentration limit
Irrigation spray field	5-day Biochemical Oxygen Demand	20 mg/L
	Total suspended solids	30 mg/L
	Total dissolved solids	2 800 mg/L
	Total nitrogen	20 mg/L

Discharge point	Parameter	Concentration limit
	Total phosphorus	7.5 mg/L
	Thermotolerant coliforms	1,000 cfu/100mL
	Residual free chlorine	2.0mg/L
	pH	6.5 to 8.5

16. The works approval holder must monitor emissions during time limited operations in accordance with Table 8.

Table 8: Emissions and discharge monitoring during time limited operations

Discharge point	Monitoring location	Parameter	Frequency	Averaging Period	Unit
Irrigation sprayfield	WWTP outlet	Thermotolerant coliforms	Monthly during time limited operations phase	Spot sample	cfu or MPN /100 mL
		5-day Biochemical Oxygen Demand			mg/L
		Total suspended solids			
		Total nitrogen			
		Total phosphorus			
		Total dissolved solids			
	pH ¹	Daily or continuous	24 hours	pH units	
	Residual free chlorine ¹			mg/L	
			Cumulative flow volume discharged to sprayfield	Continuous	
	RO brine pipeline outlets	Cumulative flow volume supplied to the irrigation storage tanks			

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

17. For the monitoring activity required by condition 16, the works approval holder must:

- (a) record the results;
- (b) handle and preserve all water samples collected during the monitoring of the WWTP in accordance with AS 5667.1 and AS 5667.10; and
- (c) have analysis conducted by a laboratory with current National Association of Testing Authorities (NATA) accreditation for the parameters specified.

Compliance reporting

- 18.** 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.
- 19.** The works approval holder must ensure the report required by condition 18 includes the following:
- (a) a summary of the time limited operations, including date(s) for commencement of time limited operations, timeframes and amount of wastewater processed;
 - (b) a summary of monitoring parameter results obtained during time limited operations under condition 16;
 - (c) copies of laboratory reports for blended effluent monitoring results recorded in accordance with condition 17;
 - (d) a summary of the environmental performance of each item of infrastructure or equipment as installed, which at minimum includes:
 - (i) a comparison of the blended effluent monitoring results against discharge limits specified in condition 15; and
 - (ii) assessment of the spray irrigation field performance against operational requirements in condition 13;
 - (e) a review of performance and compliance against the conditions of the works approval and the Environmental Commissioning Report; and
 - (f) where the 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 (general)

- 20.** 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.
- 21.** 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 5 and 13;
 - (c) monitoring programmes undertaken in accordance with condition(s) 7 and 16; and
 - (d) complaints received under condition 20.

- 22.** The books specified under condition 21 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 9 have the meanings defined.

Table 9: Definitions

Term	Definition
AS3780-2008	means Australian Standard AS3780-2008 Storage and Handling of Corrosive Substances
AS 5667.1	means Australian Standard 5667.1 Water quality - Sampling
AS 5667.10	means Australian Standard 5667.10 Water quality - Sampling Guidance on sampling of waste waters
books	has the same meaning given to that term under the EP Act.
blended effluent	means fully treated effluent from the wastewater treatment plant blended with RO brine
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
cfu	colony forming units
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 commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady state operation and confirm design specifications.
Environmental Commissioning Report	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other environmental factors.
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.

Term	Definition
EP Act	<i>Environmental Protection Act 1986 (WA).</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA).</i>
ha	hectare
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 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
RO	Reverse osmosis
NATA	National Association of Testing Authorities
NATA accreditation	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
spot sample	means a discrete sample representative at the time and place at which the sample is taken.
suitably qualified engineer	means a suitably qualified civil or structural engineer who: <ul style="list-style-type: none"> - holds a Bachelor of Engineering recognised by Engineers Australia; and - has a minimum of five years of experience working in a supervisory area of civil engineering.
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.
WWTP	Wastewater Treatment Plant

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown on the map below in red.



Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 10.

Table 10: Premises boundary coordinates (GDA2020)

	Easting	Northing
1.	664107.8464	7724459.119
2.	664188.8668	7724467.58
3.	664226.2413	7724435.337
4.	664322.901	7724372.399
5.	664461.9267	7724364.905
6.	664495.369	7724280.441
7.	664537.9701	7724298.423
8.	664593.383	7724299.96
9.	664619.5631	7724282.218
10.	664718.9968	7724234.719
11.	664791.0971	7724204.946
12.	664829.0222	7724195.058
13.	664839.1925	7724180.64
14.	664844.3468	7724145.156
15.	664907.3117	7724140.183
16.	664918.0086	7724170.711
17.	665053.2379	7724135.351
18.	665042.7983	7723856.715
19.	664960.41	7723858.306
20.	664140.5092	7723879.303