Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6350/2020/1
Works approval holder	City of Kalgoorlie Boulder
ACN	N/A
Registered business address	577 Hannan Street KALGOORLIE WA 6430
DWER file number	DER2019/000675
Duration	20/03/2020 to 20/03/2025
Date of issue	20/03/2020
Premises details	South Boulder Wastewater Treatment Plant Celebration Road, South Boulder BOULDER WA 6432 Portion of Lot 221 DP 217615 and Reserve 42000 Certificate of Title Volume LR3121 Folio 494 As defined by the coordinates in Schedule 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production capacity**
Category 54: Sewage facility: premises- (a) On which sewage is treated (excluding septic tanks); or (b) From which treated sewerage is discharged onto land or into waters	8000 m^3 per day
Category 61: Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, re-processed, treated, or discharged onto land	15,000 tonnes per annual period

This works approval is granted to the Works Approval Holder, subject to the attached Conditions, 20 March 2020, by:

Michael Greenslade

Digitally signed by Michael Greenslade
Date: 2020.03.20 16:53:09 +08'00'

A/MANAGER WASTE INDUSTRIES
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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 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;

(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 requirements; and

(c) at the corresponding infrastructure location; and

(d) within the corresponding timeframe,

as set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	Wastewater primary pond (WWP1)	Full sewer inflow including trade waste disposal directed to IDEA plant; Capacity of 93.4ML; Capacity to store a 24-hour duration, 1 in 20 year ARI critical rainfall event without overflow; The primary pond to be taken offline (drained and dried). Internal embankment walls to be upgraded/ compacted with a permeability of ≤1x10^{-9} m/sec for dual train operation; Install new gravity flow pipework from WWP1, dual trains to WWP2, including optional pipework to sludge lagoon areas; All pipelines will be HDPE with welded joints; Embankments adequately upgraded to provide a minimum freeboard of 300 mm; Freeboard markers installed within each of the two cells that allow visual measurement of the freeboard height; and The primary pond to be free of leaks and defects and lined with in-situ soils/strata with a permeability of ≤1x10^{-9} m/sec.	Wastewater ponding lagoon 1 as shown in Figure 1 of Schedule 1
2.	Wastewater secondary pond (WWP2)	70 percent of sewer inflow will be directed to IDEA plant and 30 percent to be directed to the refurbished primary pond Capacity of 74.9ML; Capacity to store a 24-hour duration, 1 in 20 year ARI critical rainfall event without overflow;	Wastewater ponding lagoon 2 as shown in Figure 1 of Schedule 1

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		The secondary pond to be taken offline (drained and dried); Embankments to be compacted and refurbished, free of leaks and defects with a permeability of ≤1x10^{-9} m/sec; Embankments adequately upgraded to provide a minimum freeboard of 300 mm; The secondary pond inlet to be installed with 45^{o} bend toward southern embankment with stub baffle, 60 m in length; and The secondary pond to be free of leaks and defects and lined with in-situ soils/strata with a permeability of ≤1x10^{-9} m/sec.	
3.	Wastewater ponding lagoon 3 (WWP3)	Capacity of 76.9ML; Capacity to store a 24-hour duration, 1 in 20 year ARI critical rainfall event without overflow; The tertiary pond to be taken offline (drained and dried); Installation of two 140 m long baffles at equal longitudinal spacing; Excavate and install rock filter 8000 m^3 at outlet; Lower outlet pump station set point for top water level at 1.3 m water depth for entire maturation pond; Embankments to be compacted and refurbished, free of leaks and defects with a permeability of ≤1x10^{-9} m/sec; Relocate chlorination unit to WWP3 outlet; Embankments adequately upgraded to provide a minimum freeboard of 300 mm; Freeboard markers installed that allow visual measurement of the freeboard height; and The tertiary pond to be free of leaks and defects and lined with in-situ soils/strata with a permeability of ≤1x10^{-9} m/sec. Disinfection (Chlorine gas) Unit to include: • Chlorinator; and • Installed on a concrete slab.	Wastewater ponding lagoon 3 as shown in Figure 1 of Schedule 1

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 following each stages of the construction works as specified in Table 2 and prior to the time limited operations phase as required under Condition 5.

3. The Environmental Compliance Report required by Condition 2, must include as a minimum the following:

(a) certification by a suitably qualified civil or construction 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.

Table 2: Stages of construction

Stage of Construction	Infrastructure
Construction Stage A	Primary pond upgrade (Wastewater ponding lagoon 1)
Construction Stage B	Secondary and Tertiary pond upgrade (Wastewater ponding lagoons 2 & 3)

Time limited operations phase

Commencement and duration

4. The Works Approval Holder may only commence time limited operations for an item of infrastructure identified in Condition 1 where the Environmental Compliance Report as required by Condition 3 has been submitted by the Works Approval Holder for that item of infrastructure.

5. The Works Approval Holder may conduct time limited operations for an item of infrastructure specified in Condition 6 (as applicable):

(a) for a period not exceeding 120 calendar days from the day the Works Approval Holder meets the requirements of Condition 4 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* and only where this occurs prior to 120 calendar days from the day the works approval holder meets the requirements of Condition 4 for that item of infrastructure.

Time limited operational requirements and emission limits

6. During time limited operations, the Works Approval Holder must ensure that the premises infrastructure and equipment listed in Table 3 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 3.

Table 3: Infrastructure and equipment requirements during time limited operations

No.	Infrastructure and equipment	Operational requirements	Infrastructure and equipment location
1.	Primary, Secondary and Tertiary ponds	1. A minimum vertical freeboard of 300 mm must be maintained below the surrounding ground level at all times. 2. Must be inspected at least weekly (whilst operating) for freeboard capacity and any visible seepage through embankments. A written log is required to be maintained for each inspection, with the record of each inspection signed by the responsible person.	Wastewater ponding lagoons 1, 2 and 3 as shown in Figure 1
2.	Mobile equipment (e.g. vehicles, heavy equipment, generators and pumps)	Maintain all mobile equipment as per manufacturer's specifications.	N/A - mobile equipment

Monitoring during time limited operations

General

7. All monitoring equipment used on the premises to comply with the Conditions of this Works Approval is calibrated in accordance with the manufacturer's specifications.

Emissions and discharge

8. The Works Approval Holder must undertake emissions and discharge monitoring upon establishment of the flow from the primary, secondary and tertiary ponds and then as per the frequencies stated in Table 4 thereafter.

9. The Works Approval Holder must monitor emissions and discharges in accordance with the requirements specified in Table 4 and record the results of all such monitoring.

10. The Works Approval Holder must ensure that all non-continuous sampling and analysis undertaken pursuant to Conditions 8 and 9 are undertaken by a holder of a current accreditation from the National Association of Testing Authorities (NATA) for the methods of sampling and analysis relevant to the corresponding relevant parameter (unless indicated otherwise in Table 4).

Table 4: Emissions and discharge monitoring

Monitoring location	Parameter	Units	Frequency	Sampling method
Discharge point to Hannan's lake	Volumetric flow rate	m^3/day	Continuous	
	pH (field)	-	Within seven days of commencement of discharge and monthly until flow	AS/NZS 5667.1
	E. Coli	CFU/100ml		
	Biological Oxygen	mg/L		

	Demand (BOD_5)		ceases	
	Total Suspended Solids (TSS)			
	Total Nitrogen			
	Total Phosphorus			

Compliance reporting

11. 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.

12. The Works Approval Holder must ensure the report required by Condition 11 includes the following:

(a) a summary of the time limited operations (including timeframes);

(b) a summary of emissions and discharge monitoring required under Conditions 8, 9 and 10;

(c) a summary of the environmental performance of all infrastructure as constructed or installed;

(d) a review of performance and compliance against the Conditions of the Works Approval; and

(e) 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 (general)

13. 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.

14. 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 6;

(c) monitoring programmes undertaken in accordance with Conditions 8, 9 and 10; and

(d) complaints received under Condition 13.

15. The books specified under Condition 14 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 5 have the meanings defined.

Table 5: Definitions

Term	Definition
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.*
books	has the same meaning given to that term under the EP Act.
Category / categories	categories of prescribed premises as set out in Schedule 1 of the EP Regulations.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the *Environmental Protection Act 1986* 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 *Public Sector Management Act 1994* 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 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
environmental harm	has the same meaning given to that term under the EP Act.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point.
inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
m	metres
mbgl	metres below ground level
mg/L	milligrams per litre
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	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.
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.

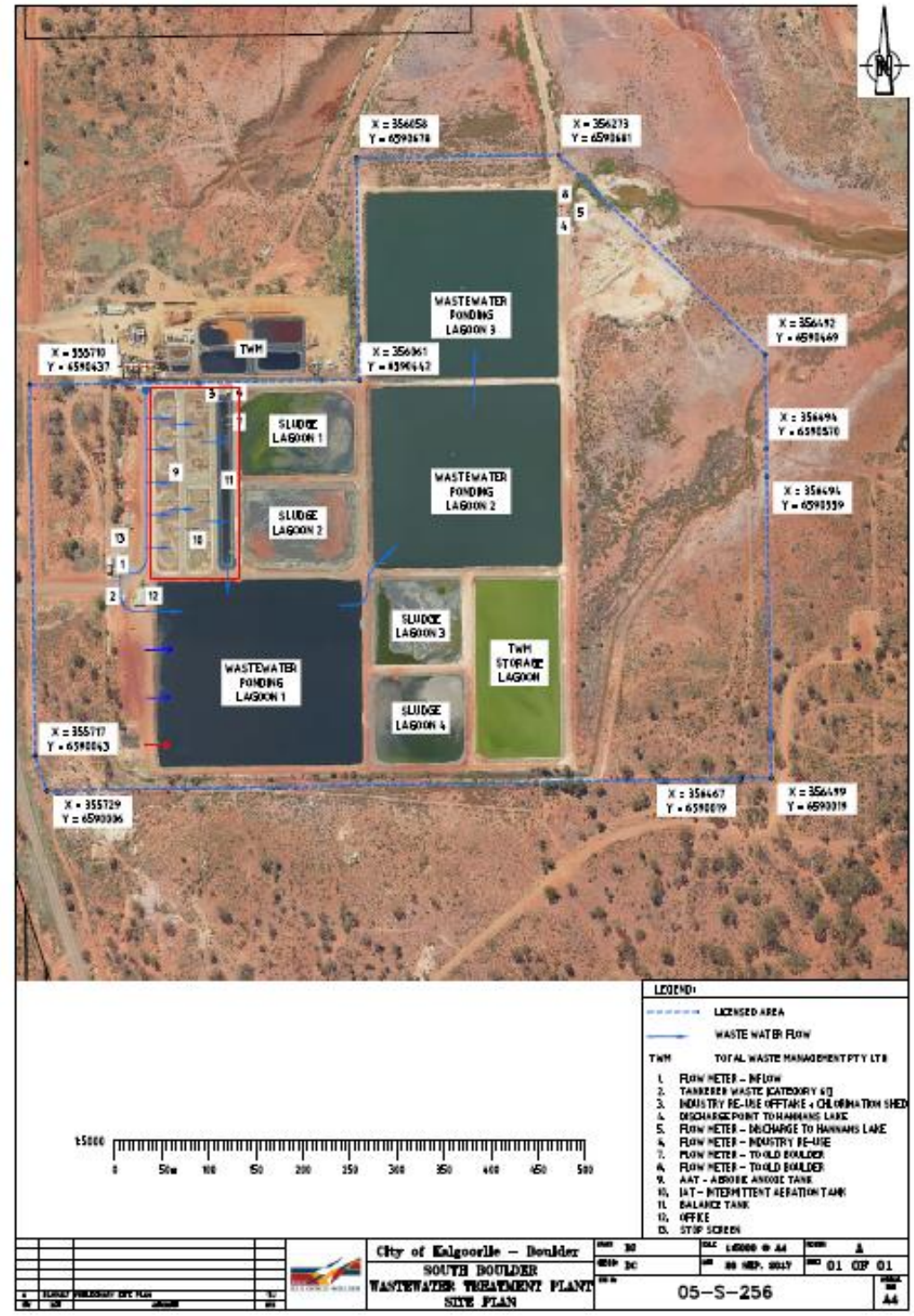

Figure 1: Map of the boundary of the Prescribed Premises