

Works Approval

Works approval number W2844/2025/1

Works approval holder Emerald Resources (WA) Pty Ltd

ACN 118 341 736

1110 Hay Street Registered business address

WEST PERTH WA 6005

DWER file number APP-0026225

Duration 18/03/2025 to 17/03/2030

Date of issue 18/03/2025

Dingo Range Gold Project Wastewater Treatment Premises details

Plant

Legal description -

Part of Mining Tenement M37/1309

As defined by the coordinates in Schedule 2

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed design capacity
Category 85: Sewage facility: premises – (a) on which sewage is treated (excluding septic tanks) or; (b) from which treated sewage is displaying dept. land or into	55.2 cubic metres per day
(b) from which treated sewage is discharged onto land or into waters.	

This works approval is granted to the works approval holder, subject to the attached conditions, on 18 March 2025, by:

Grace Heydon

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

Works approval history

Date	Reference number	Summary of changes
18/03/2025	W2844/2025/1	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 requirements	Infrastructure location
1.	Wastewater treatment plant – Separation Tank	a) Separation Tank to be installed at the village, upstream of the Primary Stabilisation Pond;b) As per dimensions indicated in Figure 7	Indicated by 'Septic Pit' in Figure 6 Schedule 1
2.	Wastewater treatment plant – Primary Stabilisation Pond	 a) Constructed to meet an area of at least 1,953 m2 and a volume of at least 3,691 m3. b) To be lined with 1.6 mm HDPE with 3 m bank; designed to have a 500 mm freeboard and a weir installed to allow water from the primary stabilization pond to flow to the secondary stabilization pond. c) The banks to be constructed at least 2.3 m higher than the base of the pond with overflow channels into the Secondary Stabilisation Pond at 1.8 m high. d) Flow meters to be fitted to the inlet pipeline into the Primary Stabilization Pond. 	As specified in Figure 2; Figure 3; and Figure 4 Schedule 1
3.	Wastewater treatment plant – Secondary Stabilisation Pond	 a) Constructed to meet an area of at least 1,793 m² and a volume of at least 2,754 m³. b) To be lined with 1.6 mm HDPE with 3 m bank; designed to have a 500 mm freeboard and a weir installed to allow water from the primary stabilization pond to flow to the secondary stabilization pond. c) The banks to be constructed at least 2 m higher than the base of the pond, with an overflow channel into the Irrigation Sprayfield at 1.5 m high. d) A mechanical pump to be installed allowing treated effluent to be discharged from the Secondary Stabilization Pond evenly to the 	As specified in Figure 2; Figure 3 and Figure 4 Schedule 1

	Infrastructure	Design and construction requirements		Infrastructure location	
			irrigation sprayfield.		
4.	Irrigation sprayfield	a)	At least 3 ha in size.	As specified in	
		b)	An irrigation system of PE100 loop pipe to be installed with wobbler sprinklers, or equivalent.	Figure 2; Figure 3 and Figure 5 Schedule 1	
		c)	Flow meters to be fitted to discharge pipeline prior to the irrigation sprayfield		
		d)	Pipeline to the Irrigation Sprayfield constructed of HDPE and bunded along entire route to ensure any leaks are contained.		
5.	Fencing	a)	WWTP and irrigation sprayfield to be enclosed by a 2.2 m high fence with access provided through a locked gate.	Premises boundary	

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 qualified, competent civil or structural 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.

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 2 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:

- (a) For a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 3 for that item of infrastructure; or
- (b) Until such time as a registration 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 5(a).

Time limited operations requirements and emission limits

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

Table 2: Infrastructure and equipment requirements during time limited operations

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Wastewater treatment plant	a) Flow meters must be maintained on the WWTP inlet and outlet to the Irrigation Sprayfield	As specified in Figure 2 and Figure 3 Schedule 1
		 Spills of wastewater or chemicals outside of a vessel / container must be cleaned up immediately 	
		 Sludge is contained within sealed Separation Tank and removed by a licensed waste carrier for disposal to an appropriately authorised facility when the tank reaches 75% full; 	
		d) Ponds to be managed with a 500 mm freeboard	
2.	Irrigation sprayfield	 a) Irrigation Sprayfield must be at least 3 ha and must be managed to prevent ponding and pooling of effluent on the ground surface of the irrigation discharge area; 	As specified in Figure 2 and Figure 3 Schedule 1
		 b) Pipeline to Irrigation Sprayfield to be inspected weekly; 	
		 c) Only operated during favorable weather conditions (not to be operated in extremely windy days, rainy days or in high humidity) 	
		d) Ensure the discharged treated wastewater meets the following nutrient loading rates or lower:	
		- Nitrogen: 48.1kg/ha/yr; and	
		- Phosphorous: 9.6kg/ha/yr.	

7. During time limited operations, the works approval holder must ensure that the emission specified in Table 3, are discharged only from the corresponding discharge point and only at the corresponding discharge location

Table 3: Authorised discharge points

Emission	Discharge point	Discharge location
Treated wastewater	Sprinklers within the Irrigation Sprayfield	As specified in Figure 2 and Figure 3 Schedule 1

Monitoring during time limited operations

8. The works approval holder must monitor emissions during time limited operations in accordance with Table 4.

Table 4: Emissions and discharge monitoring during time limited operations

Discharge Point	Monitoring location	Parameter	Frequency	Averaging Period	Unit
	WWTP outlet	e.coli	Weekly	Spot sample	Cfu/100 mL
		Total coliforms			Clu/100 IIIL
		BOD			
Carialdara		Total suspended solids			mg/L
Sprinklers within the Irrigation		Total Nitrogen			Ü
Sprayfield		Total Phosphorous			
		Cumulative flow volume	Continuous		m³
		pH ¹	Daily or continuous online	N/A	pH units
		Residual chlorine ¹			mg/L

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

- **9.** For monitoring activity required by condition 8, the works approval holder must:
 - (a) Record the results;
 - (b) Handle and preserve all water samples collected during the monitoring of WWTP in accordance with AS5667.1:1998; and
 - (c) Have analysis conducted by a laboratory with current National Association of Testing Authorities (NATA) accredited for the parameters specified.

Compliance reporting

10. 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.

- **11.** The works approval holder must ensure the report required by condition 10 includes the following:
 - (a) A summary of the time limited operations, including timeframes and amount of waste and effluent processed;
 - (b) A summary of compliance with operational requirements under condition 6;
 - (c) A summary of emission and discharge monitoring results obtained during time limited operations under condition 8;
 - (d) A summary of the environmental performance of all infrastructure as constructed or installed;
 - (e) A review of performance and compliance against the conditions of the works approval; and
 - (f) 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)

- 12. 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.
- **13.** 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 condition 8; and
 - (d) complaints received under condition 12.
- **14.** The books specified under condition 13 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	
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	Environmental Protection Act 1986 (WA).	
EP Regulations	Environmental Protection Regulations 1987 (WA).	
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

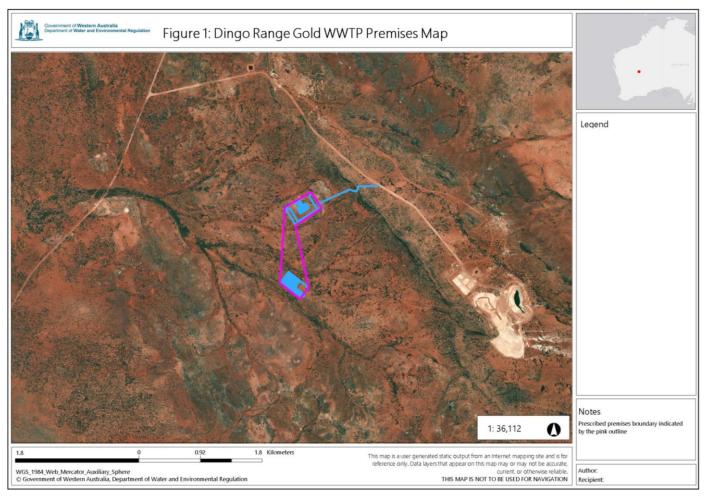


Figure 1: Map of the boundary of the prescribed premises

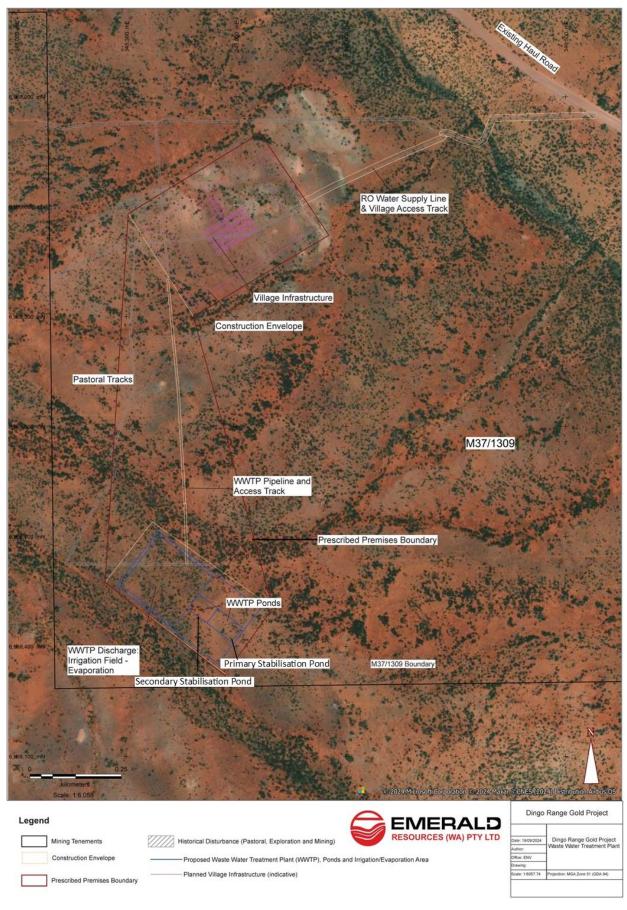


Figure 2: Premises layout

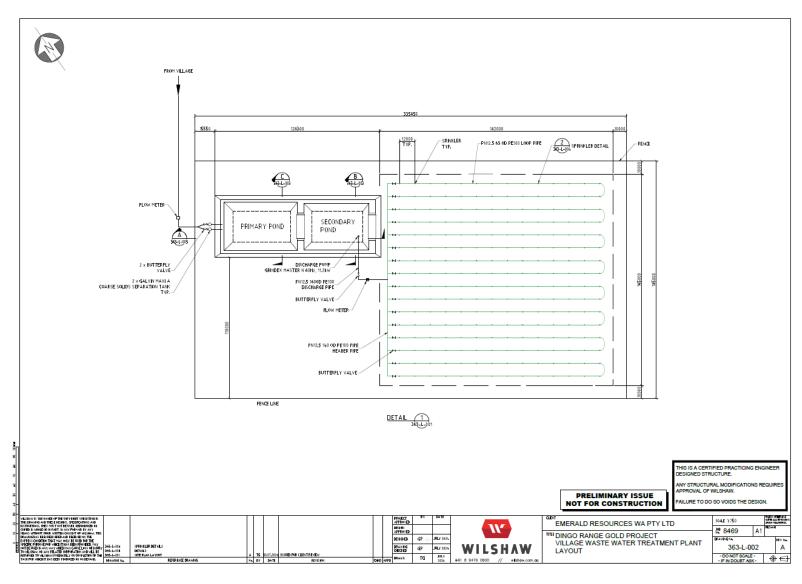


Figure 3: Wastewater Treatment Plant layout

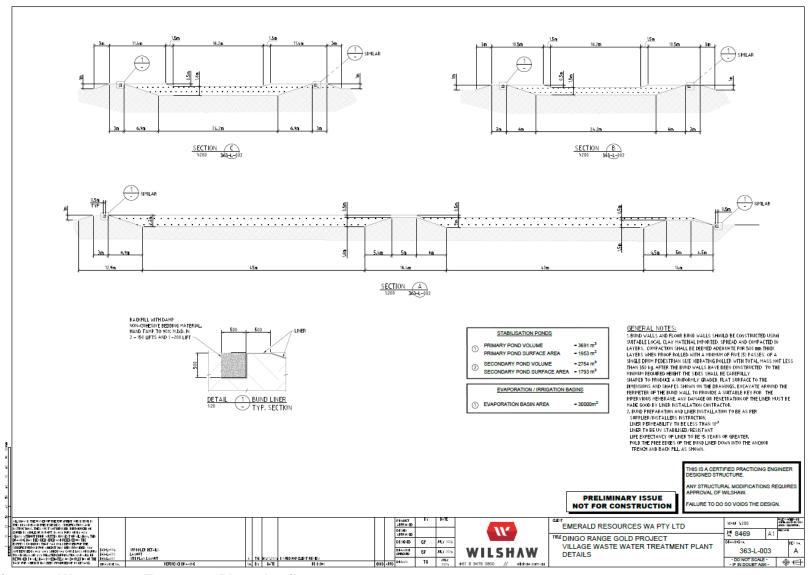


Figure 4: Wastewater Treatment Plant details

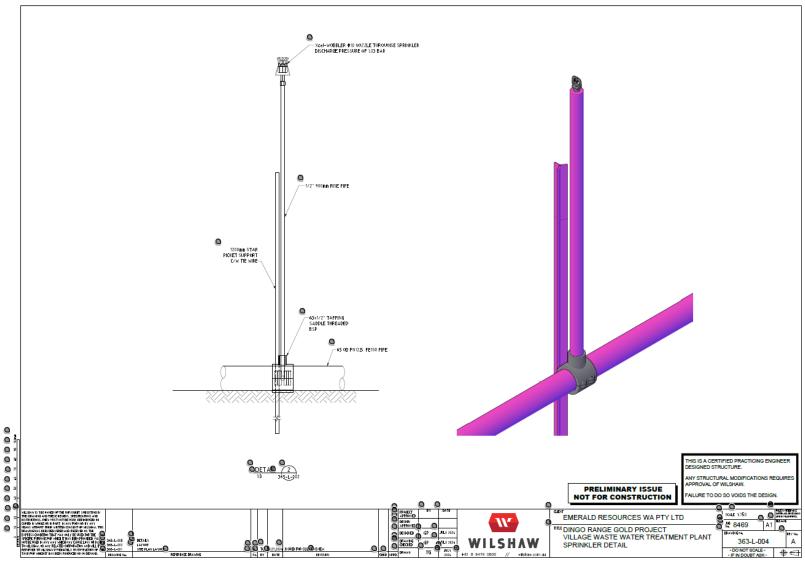


Figure 5: Wastewater treatment Plant sprinkler detail

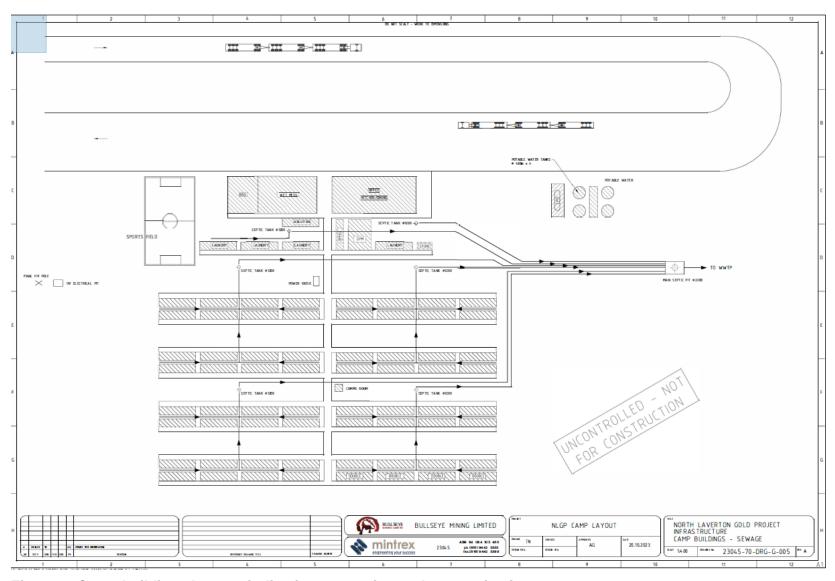


Figure 6: Camp buildings layout - indicating separation tank as septic pit

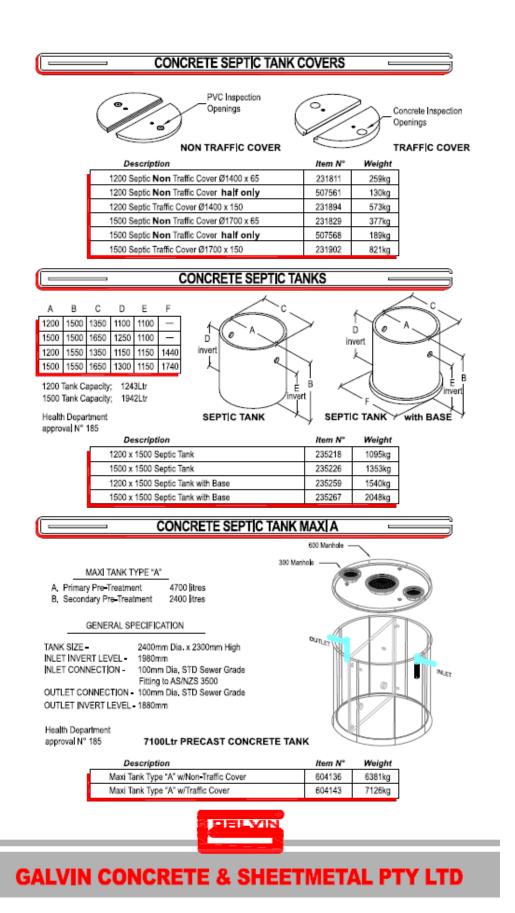


Figure 7: Septic tank dimensions

Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 6.

Table 6: Premises boundary coordinates (GDA2020)

	Easting	Northing	Zone
1.	345280.65356	6968564.08715	
2.	345545.28455	6968361.59332	
3.	354661.23204	6968507.64765	
4.	345473.27907	6969337.24231	51
5.	345813.86600	6969552.62391	
6.	345672.20180	6969764.07530	
7.	345332.58589	6969555.55977	