



Works Approval

Works approval number	W6723/2022/1
Works approval holder	Onslow Infracore Pty Ltd
ACN	612 668 201
Registered business address	20 Walters Drive, OSBORNE PARK WA 6017
DWER file number	DER2022/000357~1
Duration	22/02/2023 to 21/02/2026
Date of issue	22/02/2023
Date of amendment	29/04/2024
Premises details	North West Coastal Highway Temporary Camp Miscellaneous licenses L08/205, L08/215 and L08/216 Pastoral lease 3114/905 PEEDAMULLA WA 6710 As defined by the coordinates in Schedule 1

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production capacity
Category 54: Sewage facility: premises — (a) on which sewage is treated (excluding septic tanks); from which treated sewage is discharged onto land or into waters.	180 m ³ per day (combined sewage and RO wastewater)

This works approval is granted to the works approval holder, subject to the attached conditions, on 29 April 2024, by:

Rowena Beaton

Senior Environmental Officer, 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
22/02/2022	W6723/2022/1	Works approval granted.
02/11/2023	W6723/2022/1	Works approval amended to increase the combined throughput capacity to 180 m ³ per day.
29/04/2024	W6723/2022/1	Administrative amendment to extend TLO from 180 days to 299 days

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) Install the infrastructure and/or equipment;
 - (b) in accordance with the corresponding design and installation requirements;
 - (c) at the corresponding infrastructure location; and
 - (d) within the corresponding timeframe.

as set out Table 1.

Table 1: Design, construction and installation requirements

	Infrastructure	Design, construction and installation requirements	Infrastructure location
1.	Wastewater Treatment Plant (WWTP)	<ul style="list-style-type: none"> • 2 x 50 m³/day Sequential Batch Reactor (SBR) containerised modular systems • Comprising the following equipment: <ol style="list-style-type: none"> i. Balance pump and balance tank (50 kL) x 2 ii. Raw water tank (50 kL) x 3 iii. Sludge storage tank (50 kL) x 3 iv. RO Reject water storage tank (50 kL) v. Inlet bar screen. vi. Decant pump and sludge pump vii. Recirculation pump with online chlorine dosing. viii. Sodium hypochlorite dosing system. ix. Poly aluminium chloride dosing system. x. Irrigation tank and outlet xi. Irrigation pump xii. Sewerage pump station xiii. Control Panel • All above ground infrastructure to be located on compacted ground. The systems will be containerised, and all spills will be internally captured, retained, and managed to ensure no contamination to the environment. with a permeability of 1×10^{-9} m/s and be bunded to retain spills within the hardstand area. • Be able to receive and treat a combined sewage inflow of up to 180 m³/day. • Able to treat sewage to the following output standards: <ol style="list-style-type: none"> i. 5-day biochemical oxygen demand (BOD5) <20 mg/L. 	As per Schedule 1, Figure 2

	Infrastructure	Design, construction and installation requirements	Infrastructure location
		<ul style="list-style-type: none"> ii. pH 6.5 – 8.5. iii. Total suspended solids (TSS) <30 mg/L. iv. Total nitrogen (TN) < 30 mg/L. v. Total phosphorus (TP) <8 mg/L. vi. <i>E. coli</i> <1000 cfu/100 mL. vii. Residual free chlorine 0.2 mg/L to 2.0 mg/L. viii. Total dissolved solids (TDS) 2800 mg/L <ul style="list-style-type: none"> • Have-sealed connection points for pumping-out tank sludge for offsite disposal to a licensed waste facility. • Flow meters are required to be installed on the inlet and outlet side of the plant to record both inflows and outflows from the WWTPs. • Incorporate an alarm system of warning beacons, as well as audible and visual pump fault alarms, which will activate in the event of: <ul style="list-style-type: none"> i. pump faults. ii. high tank levels. iii. tank overflows. 	
2.	Irrigation spray field	<p>Irrigation spray field to meet the following specifications:</p> <ul style="list-style-type: none"> (a) Minimum 2.4 ha irrigation spray field with above ground sprinkler units. (b) Maintain a 5 m spray drift buffer from the edge of the sprinkler radius to the spray field boundary. (c) Ensure no ponding or pooling of blended effluent occurs. (d) Ensure that the discharge of blended effluent only occurs over the designated irrigation spray field. (e) Fenced with a vehicle access gate. (f) Warning signage to be installed on all sides of fencing advising the area is used for the disposal of treated wastewater. 	As per Schedule 1, Figure 3
3.	All infrastructure and equipment	<ul style="list-style-type: none"> (a) All sewage storage and treatment tanks, vessels, pipework, fittings and joins are to be constructed of impervious material and free from leaks and defects. (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. 	As per Schedule 1, Figure 2 and Figure 3

	Infrastructure	Design, construction and installation requirements	Infrastructure location
		<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 purpose prior to use.</p> <p>(d) Chemicals to be stored in accordance with Australian Standards AS1940-2004, AS3780-2008 and/or AS3833-2007 dependent on the type of chemical to be stored.</p>	

Compliance reporting

2. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being 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 engineer that the items of infrastructure and components 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 is only authorised to 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 condition 2 of this works approval.
5. All environmental commissioning activities undertaken for an item of infrastructure specified in Table 2 are only authorised to be carried out:
 - (a) in accordance with the corresponding commissioning requirements; and
 - (b) for the corresponding authorised commissioning duration as set in Table 2.

Table 2: Environmental commissioning requirements

#	Infrastructure	Commissioning requirements	Authorised commissioning duration
1.	WWTP	<ul style="list-style-type: none"> (a) WWTP to be free of leaks and/or defects; (b) Flow meters are maintained on the WWTP inlet and outlet to the irrigation area; (c) Sludge is contained within sealed sludge tanks prior to removal by a licensed Controlled Waste Carrier for disposal to a premises authorised by the department to accept the waste; and (d) All spills of wastewater or chemicals outside of a vessel / container are to be cleaned up immediately. 	For a period not exceeding 90 calendar days in aggregate from the date the Environmental Compliance Report was submitted to the CEO.
2.	Irrigation area and irrigation system ¹	<ul style="list-style-type: none"> (a) Not more than 180 m³ per day of blended effluent to be applied to the designated spray irrigation area. (b) Irrigation via sprinkler system spaced for even distribution. (c) Irrigation to be managed to prevent ponding and pooling of blended effluent on the ground surface of the irrigation spray field. (d) No blended effluent is permitted to run off or discharge beyond the irrigation spray field 	
3.	Reverse Osmosis (RO) plant	<ul style="list-style-type: none"> (a) Plant and associated pipelines to be free of any leaks and/or defects; and (b) Connected to a volumetric flow meter to monitor the daily volume of RO brines delivered to the WWTP irrigation tanks. 	

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

Table 3: Authorised discharge points during commissioning

Emission	Discharge point	Discharge point location
Treated and blended effluent	Sprinklers within the irrigation sprayfield	Irrigation sprayfield as specified in Schedule 1, Figure 3

Monitoring during environmental commissioning

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

Table 4: Emissions and discharge monitoring during environmental commissioning

Discharge point	Monitoring location	Parameter	Frequency	Averaging period	Unit
Irrigation spray field	WWTP outlet	<i>E. coli</i>	Weekly	Spot sample	cfu/100ml
		Thermotolerant coliforms			
		BOD ₅			
		Total Suspended Solids			mg/L
		Total Nitrogen			
		Total Phosphorous			
		Total Dissolved Solids			
		pH ¹	Daily or Continuous	N/A	mg/L
		Residual chlorine ¹	Daily or Continuous		pH Units
		Cumulative flow volume discharged to sprayfield ¹	Continuous		m ³

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 WWTPs in accordance with AS/NZS 5667.1-1998 Water Quality – Sampling; 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 1.
10. The works approval holder must ensure the Environmental Commissioning Report required by condition 9 of this works approval includes the following:
 - (a) a summary of the environmental commissioning activities undertaken, including date(s) for commencement of commissioning, timeframes and amount of wastewater processed;
 - (b) a summary of blended effluent monitoring results recorded in accordance with condition 7;
 - (c) copies of laboratory reports for blended effluent monitoring results recorded in accordance with condition 7;
 - (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;
 - (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 299 calendar days from the day the works approval holder meets the requirements of condition 11 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 12(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 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirements set out in Table 5.

Table 5: Infrastructure and equipment requirements during time limited operations

#	Infrastructure	Operational requirements	Infrastructure location
1	WWTPs	<ul style="list-style-type: none"> (a) WWTPs to be free of leaks and/or defects; (b) Flow meters are maintained on the WWTPs inlet and outlet to the irrigation area; (c) Sludge is contained within sealed sludge tanks prior to removal by a licensed Controlled Waste Carrier for disposal to a premises authorised by the department to accept the waste; and (d) All spills of wastewater or chemicals outside of a vessel / container are to be cleaned up immediately. 	As shown in Schedule 1, Figure 2 and Figure 3
2	Irrigation area and irrigation system ¹	<ul style="list-style-type: none"> (a) Not more than 180 m³ per day of blended effluent to be applied to the designated spray irrigation area. (b) Irrigation via sprinkler system spaced for even distribution. (c) Irrigation to be managed to prevent ponding and pooling of blended effluent on the ground surface of the irrigation spray field. (d) No blended effluent is permitted to run off or discharge beyond the irrigation spray field 	
3	Reverse Osmosis (RO) plant	<ul style="list-style-type: none"> (a) Plant and associated pipelines to be free of any leaks and/or defects. (b) Connected to a volumetric flow meter to monitor the daily volume of RO brines delivered to the WWTP irrigation tanks. (c) No more than 80 m³ per day of RO brine supplied to the WWTPs 	
4	Chemical storage	<ul style="list-style-type: none"> (a) Chemicals to be stored in accordance with Australian Standards AS1940-2004, AS3780-2008 and/or AS3833-2007 dependent on the type of chemical to be stored. 	

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 spray field as shown in Schedule 1, Figure 3.

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	(a) BOD ₅	20 mg/L
	(b) Total suspended solids	30 mg/L
	(c) Total dissolved solids	2 800 mg/L
	(d) Total nitrogen	30 mg/L
	(e) Total phosphorus	8 mg/L
	(f) Thermotolerant coliforms	1,000 cfu/100mL
	(g) Residual chlorine	2.0mg/L
	(h) 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 spray field	WWTP outlet	<i>E. coli</i>	Monthly	Spot sample	cfu / 100mL
		Thermotolerant coliforms			
		BOD ₅			
		Total suspended solids			mg/L
		Total nitrogen			
		Total phosphorus			
		Total dissolved solids			
		Residual chlorine			
		pH ¹			
	Cumulative flow volume discharged to the irrigation spray field ¹	Continuous	N/A	m ³	
RO brine pipeline outlet	Cumulative flow volume supplied to the WWTP				

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

- 17.** For the monitoring activity required by condition 16, the works approval holder must:
- record the results;
 - handle and preserve all water samples collected during the monitoring of the WWTP in accordance with Australian Standard 5667.1:1998 Water Quality – Sampling; and
 - 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 summary of the time limited operations, including date(s) for commencement of time limited operations, timeframes and amount of wastewater processed;
 - a summary of monitoring parameter results obtained during time limited operations under condition 16.
 - copies of laboratory reports for blended effluent monitoring results recorded in accordance with condition 16;
 - 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;
 - (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 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
AS 1940-2004	means Australian Standard 1940-2004 The storage and handling of flammable and combustible liquids.
AS 3780-2008	means Australian Standard 3780-2008 The storage and handling of corrosive substances.
AS/NZS 3833:2007	means Australian Standard/New Zealand Standard 3833:2007 The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers.
AS/NZS 5667.1-1998	means Australian Standard/New Zealand Standard 5667.1-1998 Water quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.
blended effluent	means treated wastewater from the wastewater treatment plant blended with RO brine reject.
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
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

Term	Definition
	environmental factors.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been installed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986 (WA).</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA).</i>
ha	hectare
kL	kilolitres
m ³	cubic metres
mg/L	milligrams per litre
mL	milliliter
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
premises	the premises to which this works approval applies, as specified at the front of this works approval 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.
qualified, competent engineer	means a person who: <ul style="list-style-type: none"> (a) holds a Bachelor's degree recognised by Engineers Australia; and (b) has a minimum of five years of experience working in a supervisory role in civil, structural, environmental or wastewater 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.
RO	Reverse Osmosis
spot sample	means a discrete sample representative at the time and place at which the sample is taken.
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.

Term	Definition
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

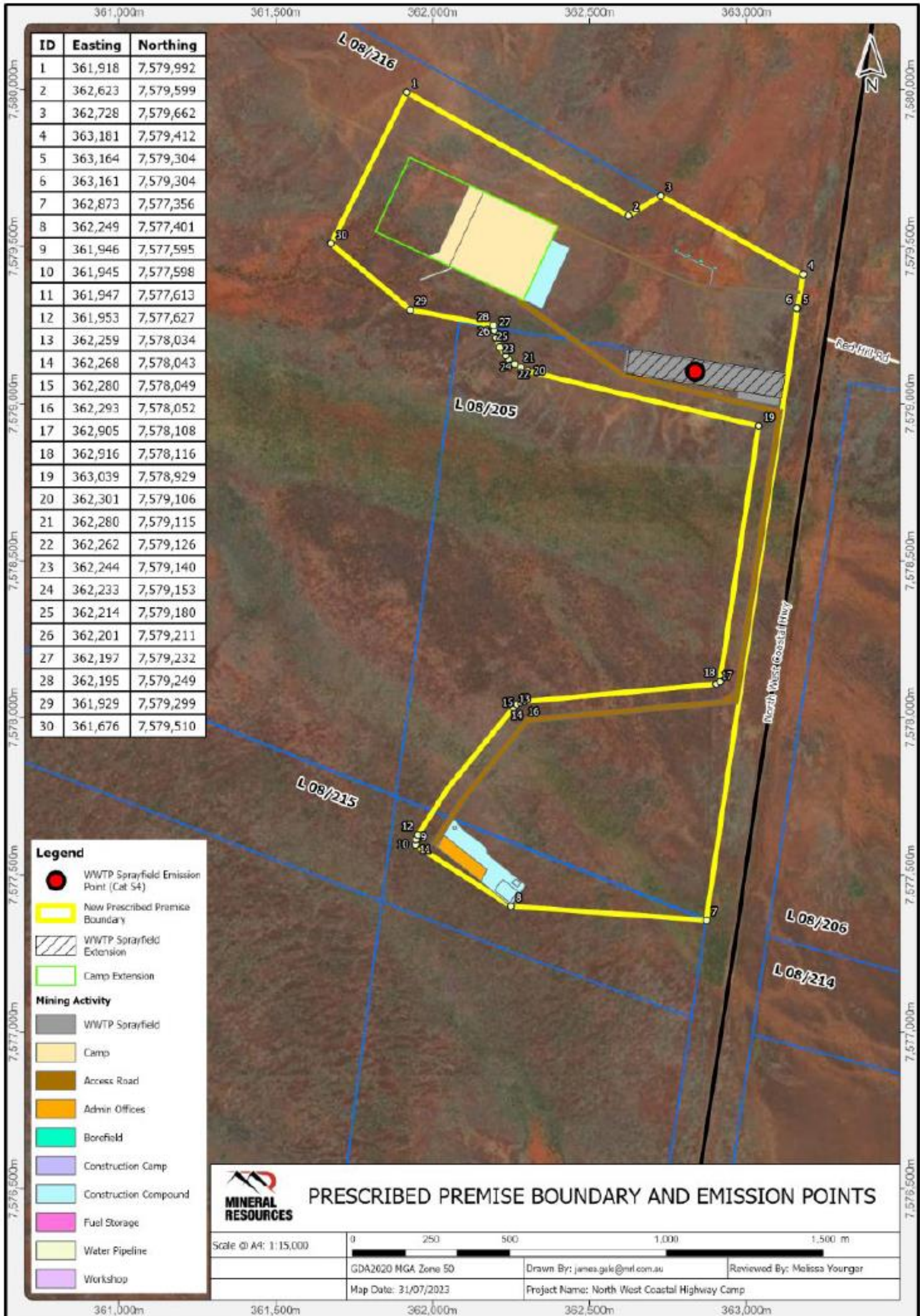


Figure 1: Map of the boundary of the prescribed premises boundary and emission points

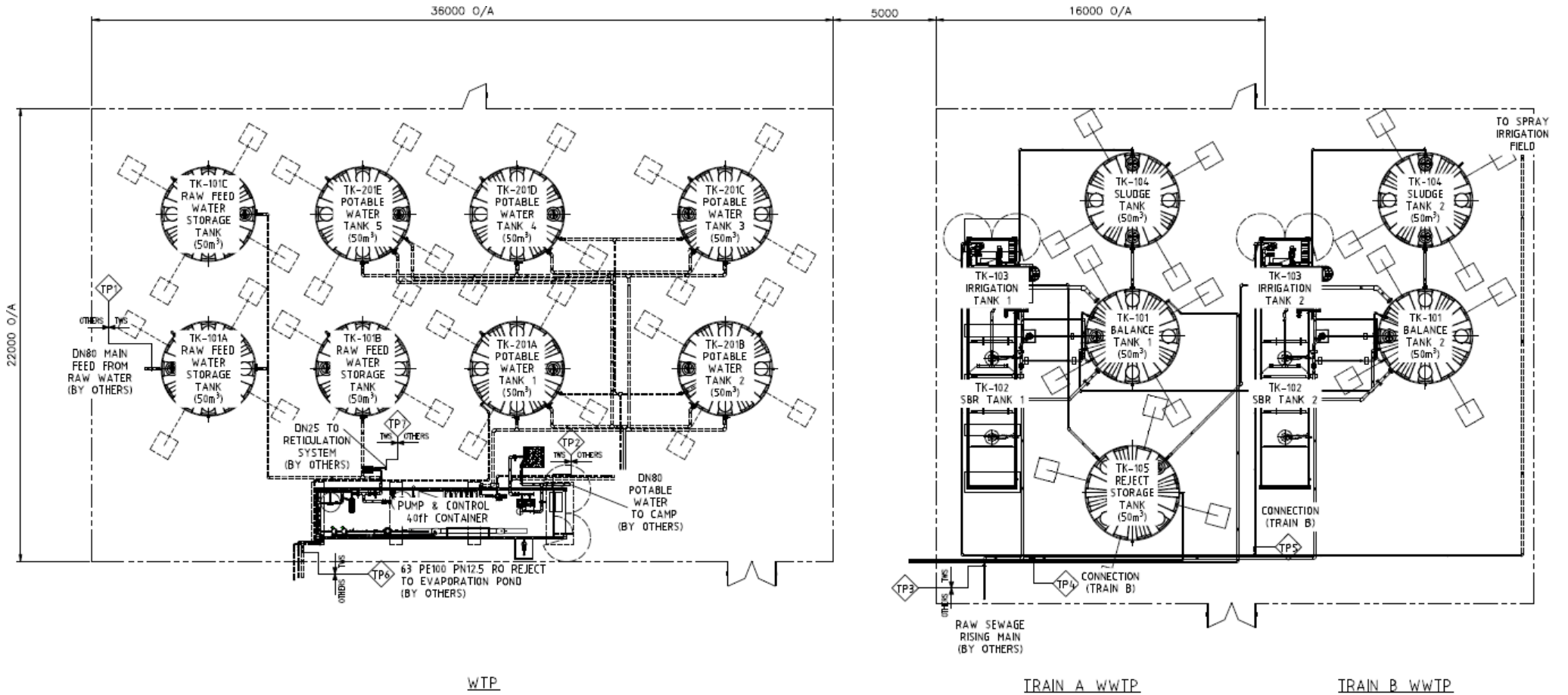


Figure 2: Indicative WWTP arrangement inclusive of RO infrastructure

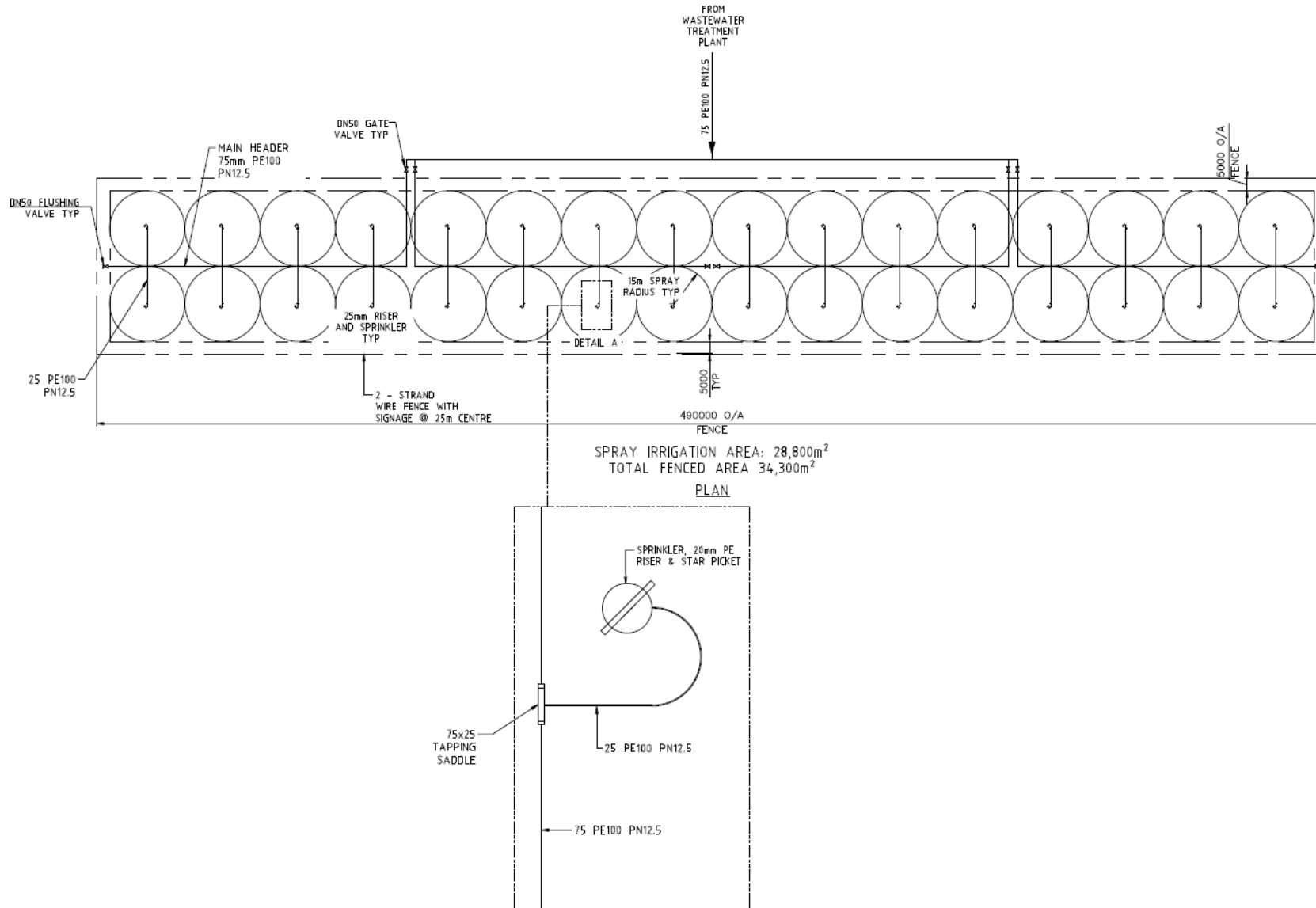


Figure 3: Indicative general arrangement of irrigation spray field

W6723/2022/1 (29 April 2024)

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