Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6680/2022/1
Works approval holder	Shire of East Pilbara
Registered business address	1 Kalgan Drive NEWMAN WA 6753
DWER file number	2013/002341-1
Duration	09/05/2024 to 09/05/2029
Date of issue	09/05/2024
Premises details	Newman Wastewater Treatment Plant Great Northern Highway Legal description - Lot 568 on Deposited Plan 418655 As defined by the Premises Map in Schedule 1 (delete if not applicable)

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production / design capacity**
Category 54: Sewage Facility Premises: Premises on which sewage is treated or from which treated sewage is discharged onto land or into waters.	3,600 m^3 per day

This works approval is granted to the works approval holder, subject to the attached conditions, on 9 May 2024, by:

Grace Heydon

Digitally signed by Grace Heydon
Date: 2024.05.09 15:13:38 +08'00'

Grace Heydon
A/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
21/07/2021	L6870/1993/12	Licence re-issue and expiry extended by five years
26/04/2016	L6870/1993/12	Amendment to licence REFIRE – Extend expiry date from 29 July 2016 to 29 July 2023. No update to licence format occurred
08/09/2016	L6870/1993/12	Amendment Notice 1 – Addition of a second clarifier to the licence
02/09/2020	L6870/1993/12	Licence amendment to include historical discharge of treated effluent to neighbouring BHP owned wetland area. The amendment also includes the addition of a groundwater monitoring condition. Amendment was granted in the form of a revised licence, including consolidation of Amendment Notice 1 issues on 08 September 2016.
15/08/2022	W6644/2022/1	Works approval to undertake construction works relating to upgrade works to the clarifier and associated infrastructure at the premises.
09/05/2024	W6680/2022/1	Works approval to undertake major upgrade works to the WWTP infrastructure to facilitate continued operation and cessation of discharge to the Emergency Discharge Point by 2027.

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 the critical containment infrastructure;;

(b) in accordance with the corresponding design and construction requirements; and

(c) at the corresponding infrastructure location

as set out in Table 1.

Table 1: Critical containment infrastructure design and construction requirements

Critical Containment Infrastructure	Design and construction/ installation requirements	Infrastructure location (Refer to Schedule 1, Figure 1)
3x 1 ML Treated wastewater storage tanks	• Install two new impervious 1 ML TWW storage tanks; • Refurbish existing 1 ML TWW storage tank and relocate north next to the two new storage tanks; • Designed to supply recycled water to Newman.	4 & 5
2x Treated wastewater Storage Ponds	• HDPE lined to achieve a permeability of less than $1x10^{-9}$ m/s or equivalent.	2
20x Sludge drying beds	• Constructed to have a total drying surface area of 5,200 m^2 • Each drying bed must be designed to maintain a minimum 300 mm operational freeboard. • Constructed as an impervious concrete bund holding a porous bed of sand and gravel. • Designed to allow drainage through the sand bed into a network of embedded drainage pipes to drain to the Return Liquor Pump well. • Concrete base to be constructed to achieve a	7

	permeability of less than $1x10^{-9}$ m/s or equivalent.	
Emergency Storage Pond (ESP)	• Existing ESP will be lined with a HDPE liner to achieve a permeability of less than $1x10^{-9}$ m/s or equivalent. • Designed to return raw wastewater overflows back to the inlet works for full treatment through the plant.	10

2. 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 2.

Table 2: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location (Refer to Schedule 1, Figure 1)
1.	Inlet works	• Install an inlet volumetric flow meter; • Install a new influent distribution box; • Above ground prefabricated screening system – Huber Microstrainer ROTAMAT Ro9-700-3 or equivalent; • Single duty below ground vortex grit removal system – Smith and Loveless PISTA Model 4.0 or equivalent in below ground concrete tank; • Associated foundations, platforms, stairs, piping, valving, appurtenances, electrical systems, instrumentation and control systems.	12
2.	Bioselector	• Install a new bioselector with the ability to provide a 6% anaerobic fraction of the total bioreactor sludge mass; • Install a new HDPE Pipe from inlet works outlet chamber and a new HDPE PRAS line will tie into the bioselector; • Install a HDPE return liquor line from the Return Liquor Pump Station directed to the bioselector outlet into final compartment.	9, 36
3.	Existing orbal bioreactor	• To be decommissioned/ taken offline permanently.	Not shown on Schedule 1, Figure 1

	Infrastructure	Design and construction / installation requirements	Infrastructure location (Refer to Schedule 1, Figure 1)
4.	Oxidation Ditch	• Install a new two-pass oxidation ditch designed to be fed mixed liquor from the final chamber of the bioselector; • Designed to be able to achieve ammonia nitrogen <1mg NH3-N/L and total nitrogen TN <4.5 mg-N/L concentrations when leaving the oxidation ditch; • Install two 90 kW duty/standby vertical shaft, slow speed surface aerators or equivalent at each end of the oxidation ditch; • Install two duty/assist variable thrust, submersible banana blade propulsion mixers, or equivalent, in the centre of one of the ditch channels. • Install one dissolved oxygen probe downstream of each aerator.	39
5.	Clarifier Distribution Chamber	• Designed to allow mixed liquor to be discharged from the oxidation ditch via an underflow baffle to the Clarifier Distribution Chamber, flowing through a stilling chamber before overflowing into two equal length weirs that split the flow evenly between Clarifier 1 and Clarifier 2; • Install two HDPE pipes to gravity feed the liquor from the Clarifier Distribution Chamber to the two secondary Clarifiers.	26 & 27
6.	Secondary Clarifiers	• Install a new 18.3 m diameter secondary clarifier (Clarifier No.2) to join the existing 18.3 m diameter secondary clarifier (Clarifier No.1), designed to accept mixed liquor from the oxidation ditch Clarifier Distribution Chamber to flocculate and settle suspended solids; • Designed to allow the removal of settled solids from the floor by the RAS Pumps; • Designed to allow surface scum to be scraped from the liquid surface of both secondary clarifiers into skimming boxes, to then be gravity fed into a central Scum Pit (existing). Scum is then to be pumped onto the Sludge Drying Beds; • Refurbish the existing secondary clarifier and install the following: - Centre feed column - Flocculation well - Fibreglass v-notch weirs - Rotating access walkway with handrails - Skimmings collection assembly	Clarifier No.1 = 26 Clarifier No.2 = 27

	Infrastructure	Design and construction / installation requirements	Infrastructure location (Refer to Schedule 1, Figure 1)
		- Manifold mounting ring on centre column - 'Tow-Bro' style sludge suction header • The new secondary clarifier (Clarifier No. 2) must be installed to have a sloping floor with side wall depth of 4.5 m and in-board effluent; • Designed to allow sludge scraped to the center well be removed through a below floor pipe connected to the RAS Pump; • Clarifier No.2 must be equipped with an Energy Dissipating Inlet, a flocculation well and Stamord baffles.	
7.	Return Activated Sludge (RAS) Pumping Stations	• Install/maintain a dedicated RAS Pumping Station for each clarifier; • Upgrade the existing RAS pumping station from Clarifier No.1 to two 4 kW variable speed self-priming centrifugal pumps; • Designed so the operation of the RAS pumps will be automated and operate continuously. Designed to achieve peak instantaneous flow of 200 L/s.	35 & 38
8.	Secondary Effluent Pit (SEP)	• Install a new SEP designed to accommodate inflows from both clarifiers, TWW storage pond return flows and emergency clarifier bypass flows; • Install new secondary effluent pumps for the SEP; • Decommission and dispose of the existing SEP.	11
9.	Tertiary Filtration	• Install two Amiad 8" Sigma Pro Multi Screen polymeric self-cleaning 200 µm filters, or equivalent to allow for tertiary filtration prior to transfer to the TWW storage tank; • These filters are to be relocated from the existing TWW tank to closer to the sludge drying beds.	30
10.	Treated Wastewater (TWW) Storage Tanks	• Install two new 1 ML TWW storage tanks; • Refurbish existing 1 ML TWW storage tank and relocate north next to the two new storage tanks; • Designed to supply recycled water to Newman.	4 & 5
11.	TWW Storage Ponds	• Install/ construct a new TWW storage pond (Lower Pond) next to existing TWW storage pond (Upper Pond); • Each pond to be HDPE lined to achieve permeability of less than $1x10^{-9}$ m/s or equivalent; • The Upper Pond is to be designed to allow gravity fed by a new HDPE overflow pipe from the SEP, it	2

	Infrastructure	Design and construction / installation requirements	Infrastructure location (Refer to Schedule 1, Figure 1)
		can also be gravity fed from the clarifiers; • The Lower Pond will be connected to the Upper Pond via a pipe and valving arrangement; • Designed to allow TWW from the ponds to be returned to the SEP for tertiary filtration, chlorination and transfer to the irrigation system. • Designed to allow total wastewater storage of 10,800 kL (TWW ponds and tanks combined).	
12.	TWW Transfer Pump Station	• Install two new TWW Transfer Pumps designed to deliver TWW from the storage tanks to a header tank which supplies the shires irrigation system.	1 & 31
13.	Waste Activated Sludge (WAS) pumping station	• Install two duty/standby 3 kW variable speed self-priming centrifugal pumps, or equivalent. • To be sized to be able to meet a minimum Sludge Retention Time (SRT) of 15 days by wasting a daily volume of 255 kL/d in a minimum of 8 hours.	32
14.	Scum collection and transfer	• Install a new HDPE scum discharge gravity pipe from Clarifier No.2 to tie into the existing Scum Pit; • Install a new HDPE discharge pressure main designed to allow skimmings from the existing 3.15 kW submersible pump to the sludge drying beds.	28
15.	Gravity Thickener	• Refurbish the existing clarifier and retrofit as a gravity thickener designed to be capable to thicken WAS (0.3-0.35% DS) from the oxidation ditch bioreactor to approximately 1.2% DS; • Designed to operate continuously and include a feed bypass to the sludge drying beds downstream.	29
16.	Thickened Sludge Transfer Pumps	• Install and maintain duty/standby 4 kW helical rotor positive displacement thickened sludge transfer pumps; • Designed to allow sludge to be withdrawn from the thickener and pumped to the sludge drying beds.	32
17.	Sludge Drying Beds	• Construct/ install 20 new sludge drying beds with a total drying surface area of 5,200 m^2; • Each drying bed to be constructed with a 300 mm freeboard; • Designed with the capacity to produce 1.4 tonnes of sludge cake per day maximum; • Each bed will consist of a water tight concrete bund and a porus bed of sand; • Designed to allow wastewater to drain through the	7

	Infrastructure	Design and construction / installation requirements	Infrastructure location (Refer to Schedule 1, Figure 1)
		sand bed into a network of embedded drainage pipes to drain to the Return Liquor Pump well; • Concrete base and bunding must meet permeability of less than $1x10^{-9}$ m/s or equivalent.	
18.	Return Liquor Pump Station	• Install new return liquor pump station to accept subnatant from the sludge drying beds and supernatant from the gravity thickener and return it to the final compartment of the bioselector; • The Reactor Liquor Pit will be a wet well with its coping level matching that of the SDBs and hydraulically linked to the drying beds subnatant collection system; • Fully automated based on a level setpoint in the wet well; • A new HDPE pipe on the discharge side of the return liquor pump station returns the return liquor to the bioselector.	9
19.	Emergency Storage Pond (ESP)	• Relining of existing 5.3 ML ESP with HDPE to ensure a permeability of less than $1x10^{-9}$ m/s or equivalent; • ESP designed to capture emergency overflows – unscreened sewage bypassed from the inlet works, partially screened sewage, or screened and degritted raw sewage bypassing the bioreactor; • Designed to return wastewater back to the inlet works for full treatment; • Maintain two emergency storage pond pumps to transfer the emergency overflows upstream of the inlet screens into the inlet chamber via a HDPE pipe; • the ESP pumps are able to turn over/recirculate wastewater and assist to bring raw unscreened/gritted wastewater back up into suspension for return to the inlet works.	10
20.	Chlorination System	• Installation of a prefabricated chlorination plant comprising of: - Transportable building, reinforced concrete base – designed to achieve full gas containment in case of leak; - Gas room containing two 920 kg gas drums in duty/standby arrangement on trolleys incorporating weigh scales; - Chlorinator room containing two trains or recirculation pump, eductor and automatic	6

	Infrastructure	Design and construction / installation requirements	Infrastructure location (Refer to Schedule 1, Figure 1)
		chlorinator for dosing the chloring gas; - Electrical and control room; - Chlorine gas leak detection system will detect gas leaks, raise audible and visual alarms and transmit an alarm signal via Site Main Switchboard dialler or similar; - A windsock and appropriate signage. • Designed to dose the TWW on discharge to the irrigation scheme at a rate of 2 mg/L; • Ensure a 30 m buffer zone to the nearest public access in accordance with AS 2927:2019.	
21.	Stormwater infrastructure	• The WWTP shall be bunded to capture any water runoff from the premises as well as any wastewater spills from ruptured pipes;	N/A
22.	Hydrocarbon and chemical storage	• Hydrocarbons will be stored in bunded areas or secondary containment infrastructure meeting a permeability of less than $1x10^{-9}$ m/s; • The storage areas to be appropriately labelled; • Spill response equipment to be provided on site. • Chemicals will be stored in designated bunded hazardous material storage areas with the following controls: - Meet the volume and storage requirements for each substance; - Display relevant dangerous goods classification; - Physically isolate incompatible materials; - Be compliant with relevant regulations and Australian Standards; - Liquid chemicals to be stored with secondary containment meeting a permeability of less than $1x10^{-9}$ m/s or equivalent; - Display Material Safety Data Sheets for each substance stored.	N/A

3. The Works Approval Holder must manage potential emissions during construction by:

(a) Wetting down soils prior to excavating or demolition;

(b) Wetting any temporarily stockpiled soils/ materials and storing soils/materials inside a bunded area; and

(c) Visually inspecting excavated soils or demolished materials for asbestos or ACM, and removing any found to contain asbestos or ACM from the Premises to an appropriately licenced landfill.

Compliance reporting

4. The works approval holder must within 30 calendar days of the infrastructure or equipment required by conditions 1 and 2 being constructed and/or installed:

(a) undertake an audit of their compliance with the requirements of conditions 1 and 2; and

(b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

5. The Environmental Compliance Report required by condition 4, must include as a minimum the following:

(a) certification by a civil or wastewater engineer that the items of infrastructure or component(s) thereof, as specified in conditions 1 and 2, have been constructed in accordance with the relevant requirements specified in conditions 1 and 2;

(b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in conditions 1 and 2; and

(c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

6. The works approval holder must within 30 calendar days of the Critical Containment Infrastructure identified by condition 1 being constructed prepare and submit to the CEO a Critical Containment Infrastructure Report.

7. The Critical Containment Infrastructure Report required by condition 6 must include as a minimum the following:

(a) certification by a civil or wastewater engineer that each item of critical containment infrastructure or component thereof, as specified in condition 1, has been built and installed in accordance with the requirements specified in condition 1;

(b) as constructed plans and a detailed site plan showing the location and dimensions for each item of critical containment infrastructure or component thereof, as specified in condition 1;

(c) photographic evidence of the installation of the infrastructure;

(d) 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

8. The works approval holder may only commence commissioning for the infrastructure identified in condition 9:

(a) where the CEO has notified the works approval holder that the Critical Containment Infrastructure Report as required by condition 6 meets the requirements of that condition; or

(i) where at least 30 business days have passed after the Critical

Containment Infrastructure Report as required by condition 6 has been submitted to the CEO; and

(b) where the Environmental Compliance report has been submitted for the infrastructure outlined in condition 2 in accordance with condition 4.

9. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 3 may only be carried out:

(a) in accordance with the corresponding commissioning requirements; and

(b) for the corresponding authorised commissioning duration.

Table 3: Environmental commissioning requirements

	Infrastructure	Commissioning requirements	Authorised commissioning duration
1	Upgraded WWTP	(a) Not more than 3,600 m^3/day wastewater to be treated by the upgraded WWTP[1]; (b) Volumetric flow meters are maintained on the WWTP inlet and outlet; (c) Sludge is contained within the sludge drying beds prior to removal by a licenced waste carrier for disposal to a licensed disposal facility; (d) Spills of wastewater or chemicals outside of a vessel/container are cleaned up immediately	For a period not exceeding 60 calendar days in aggregate.

Note 1: No additional discharge to Emergency Discharge Point is approved other than is currently conditioned in Licence L6870/1993/12 or any subsequent revisions of that licence.

10. During environmental commissioning, the works approval holder must ensure that the emission(s) specified in Table 4, are discharged only from the corresponding discharge point(s) and only at the corresponding discharge point location(s).

Table 4: Authorised discharge points during commissioning

	Emission	Discharge point	Discharge point location
1	Treated wastewater	Emergency Discharge Point	Schedule 1, Figure 3
2		Newman Recycled Water Reuse Scheme	Schedule 1, Figure 4

11. During the environmental commissioning period, the works approval holder must demonstrate that treated wastewater for each of the discharge points listed in Table 5 meets the required criteria in Table 5 within a single sample when monitored in accordance with condition 12.

Table 5: Water quality criteria for environmental commissioning

	Discharge point	Parameter	Unit	Value
1.	Emergency Discharge Point;	Chemical Oxygen Demand (COD)	mg/L	<40
2.	Newman Recycled Water Reuse	Biochemical Oxygen Demand		<20

	Discharge point	Parameter	Unit	Value
	Scheme	(BOD)		
3.		Total Suspended Solids (TSS)		<30
4.		Total Dissolved Solids (TDS)		<1,200
5.		Total Nitrogen (TN)		<10
6.		Total Kjeldahl Nitrogen (TKN)		5-10
7.		Nitrate-N + Nitrite-N		5-10
8.		Total phosphorus		<5
9.		pH	pH units	6 – 8
10		*E.coli*	cfu/100mL	<1,000

Monitoring during environmental commissioning

12. The works approval holder must monitor emissions during environmental commissioning in accordance with Table 6.

Table 6: Emissions and discharge monitoring during environmental commissioning

Discharge point	Monitoring location	Parameter	Frequency	Averaging Period	Unit
Emergency Discharge Point; and Newman Recycled Water Reuse Scheme	Schedule 1, Figure 2	Chemical Oxygen Demand (COD)	Weekly	Spot sample	mg/L
		Biochemical Oxygen Demand (BOD)			
		Total Suspended Solids (TSS)			
		Total Dissolved Solids (TDS)			
		Total Nitrogen (TN)			
		Total Kjeldahl Nitrogen (TKN)			
		Nitrate-N + Nitrite-N			
		Total phosphorus			
		pH			pH units
		E.coli			cfu/100mL

13. The works approval holder must record the results of all monitoring activity required by condition 12.

Environmental commissioning Report

14. 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 3.

15. The works approval holder must ensure the Environmental Commissioning Report required by condition 14 of this works approval includes the following:

    (a) a summary of the environmental commissioning activities undertaken, including timeframes and amount of wastewater processed;

    (b) demonstration of compliance with water quality criteria in accordance with condition 11;

    (c) the point-source emissions monitoring results recorded in accordance with condition 12;

    (d) a summary of the environmental performance of each item of infrastructure as constructed or installed, which at minimum includes records detailing the environmental commissioning of the upgraded plant and any associated infrastructure

    (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

16. The works approval holder may only commence time limited operations for an item of infrastructure identified in conditions 1 and 2:

    (a) where the infrastructure does require commissioning, the Environmental Commissioning Report for that item of infrastructure as required by condition 14 has been submitted to the CEO;

17. The works approval holder may conduct time limited operations for an item of infrastructure specified in conditions 1 and 2 (as applicable):

    (a) for a period not exceeding 90 calendar days from the day the works approval holder meets the requirements of condition 16 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 17(a).

Time limited operations requirements and emission limits

18. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 7 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 7.

Table 7: Infrastructure and equipment requirements during time limited operations

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Upgraded WWTP	(a) Not more than 3,600 m^3/day wastewater to be treated by the upgraded WWTP[1]; (b) Volumetric flow metres are maintained on the WWTP inlet and outlet; (c) Sludge is contained within the sludge drying beds prior to removal by a licenced waste carrier for disposal to a licensed disposal facility; (d) Spills of wastewater or chemicals outside of a vessel/container are cleaned up immediately;	Within the Premises Boundary

Note 1: No additional discharge to Emergency Discharge Point is approved other than is currently conditioned in Licence L6870/1993/12 or any subsequent revisions of that licence.

19. During time limited operations, the works approval holder must ensure that the emission(s) specified in Table 8, are discharged only from the corresponding discharge point(s) and only at the corresponding discharge point location(s).

Table 8: Authorised discharge points

	Emission	Discharge point	Discharge point location
1.	Treated wastewater	Emergency Discharge Point	Schedule 1, Figure 3
2.		Newman Recycled Water Reuse Scheme	Schedule 1, Figure 4

20. During time limited operations, the works approval holder must ensure that the emissions from the discharge point listed in Table 9 do not exceed the corresponding limit(s) as a rolling three-monthly average when monitored in accordance with condition 19.

Table 9: Emission and discharge limits during time limited operations

	Discharge point	Parameter	Unit	Limit
1.	Emergency Discharge Point;	Chemical Oxygen Demand (COD)	mg/L	30
2.	Newman Recycled Water Reuse Scheme	Biochemical Oxygen Demand (BOD)		5
3.		Total Suspended Solids (TSS)		10
4.		Total Dissolved Solids (TDS)		1,000

	Discharge point	Parameter	Unit	Limit
5.		Total Nitrogen (TN)		5
6.		Total Kjeldahl Nitrogen (TKN)		2.4
7.		Nitrate-N + Nitrite-N		3.5
8.		Total phosphorus		5
9.		pH	pH units	6 - 8
10		*E.coli*	cfu/100mL	1,000

Monitoring during time limited operations

21. The works approval holder must monitor emissions during time limited operations in accordance with Table 10.

Table 10: Emissions and discharge monitoring during time limited operations

Discharge point	Monitoring location	Parameter	Frequency	Averaging Period	Unit
Emergency Discharge Point; and Newman Recycled Water Reuse Scheme	Schedule 1, Figure 2	Chemical Oxygen Demand (COD)	Fortnightly	Spot sample	mg/L
		Biochemical Oxygen Demand (BOD)			
		Total Suspended Solids (TSS)			
		Total Dissolved Solids (TDS)			
		Total Nitrogen (TN)			
		Total Kjeldahl Nitrogen (TKN)			
		Nitrate-N + Nitrite-N			
		Total phosphorus			
		pH			pH units
		E.coli			cfu/100mL

22. The works approval holder must record the results of all monitoring activity required by condition 21.

Compliance reporting

23. 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.

24. The works approval holder must ensure the report required by condition 23 includes the following:

(a) a summary of the time limited operations, including timeframes and amount of wastewater processed;

(b) a summary of monitoring results obtained during time limited operations under conditions 21 and 22.

(c) summary of the environmental performance of all infrastructure as constructed or installed (as applicable), which includes records detailing the monitoring results;

(d) a review of performance and compliance against the conditions of the works approval and the Environmental Commissioning Report; 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

(f) The outcome of the Shire's RFQ looking into the Reuse Study, including a full water balance for premises and the Newman Town Recycled Water Reuse Scheme.

Records and reporting (general)

25. 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.

26. 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 conditions 1 and 2;

(b) any maintenance of infrastructure that is performed in the course of complying with conditions 9 and 18;

(c) monitoring programmes undertaken in accordance with conditions 12 and 21; and

(d) complaints received under condition 25.

27. The books specified under condition 26 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 11 have the meanings defined.

Table 11: 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 *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
critical containment infrastructure	means the items of infrastructure listed in condition 1.
Critical Containment Infrastructure Report	means a report to satisfy the CEO that works of critical containment infrastructure have been constructed in accordance with the works approval.
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.
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.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).

Term	Definition
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.
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

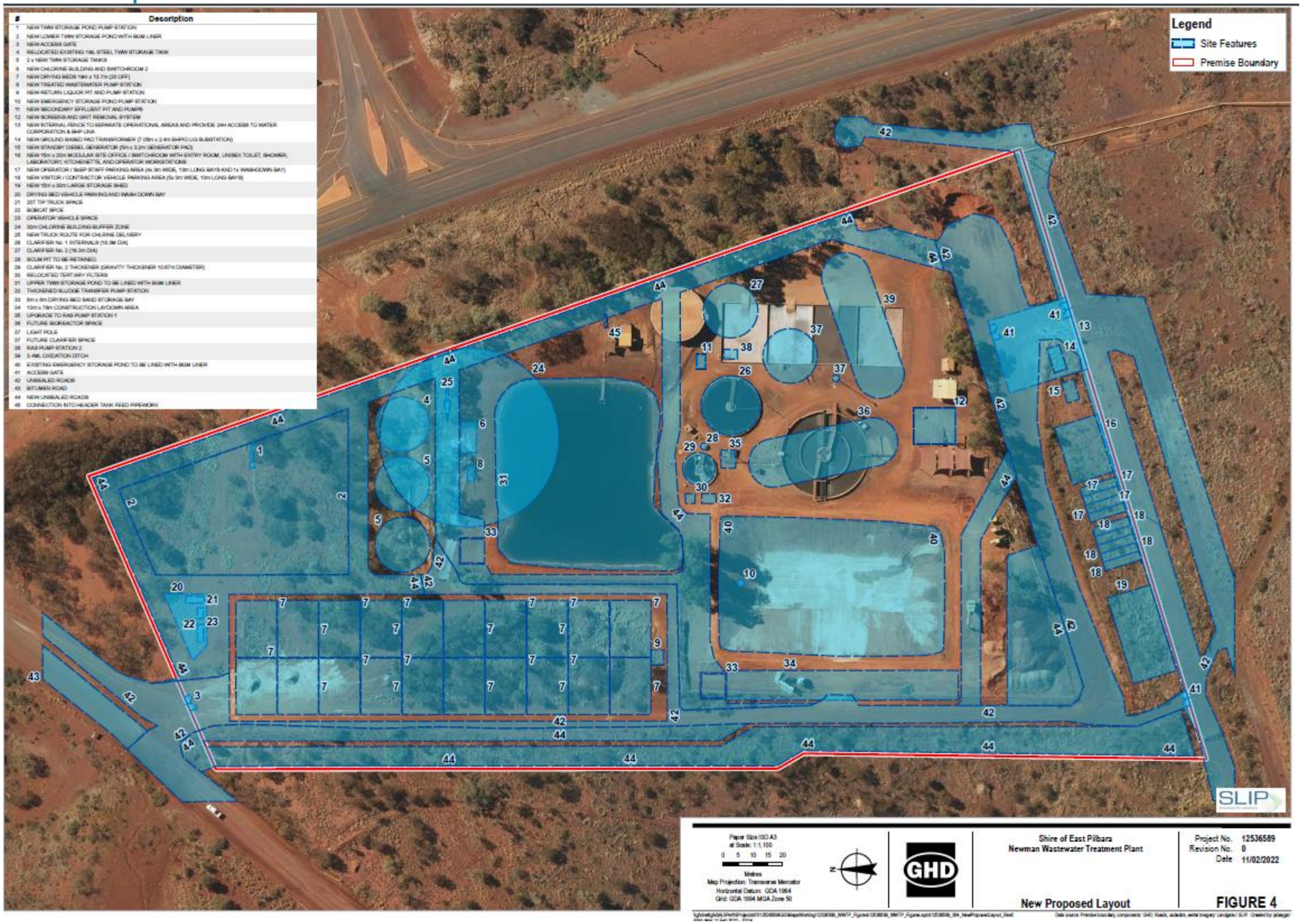

Figure 1: Map of the boundary of the prescribed premises

Sampling locations

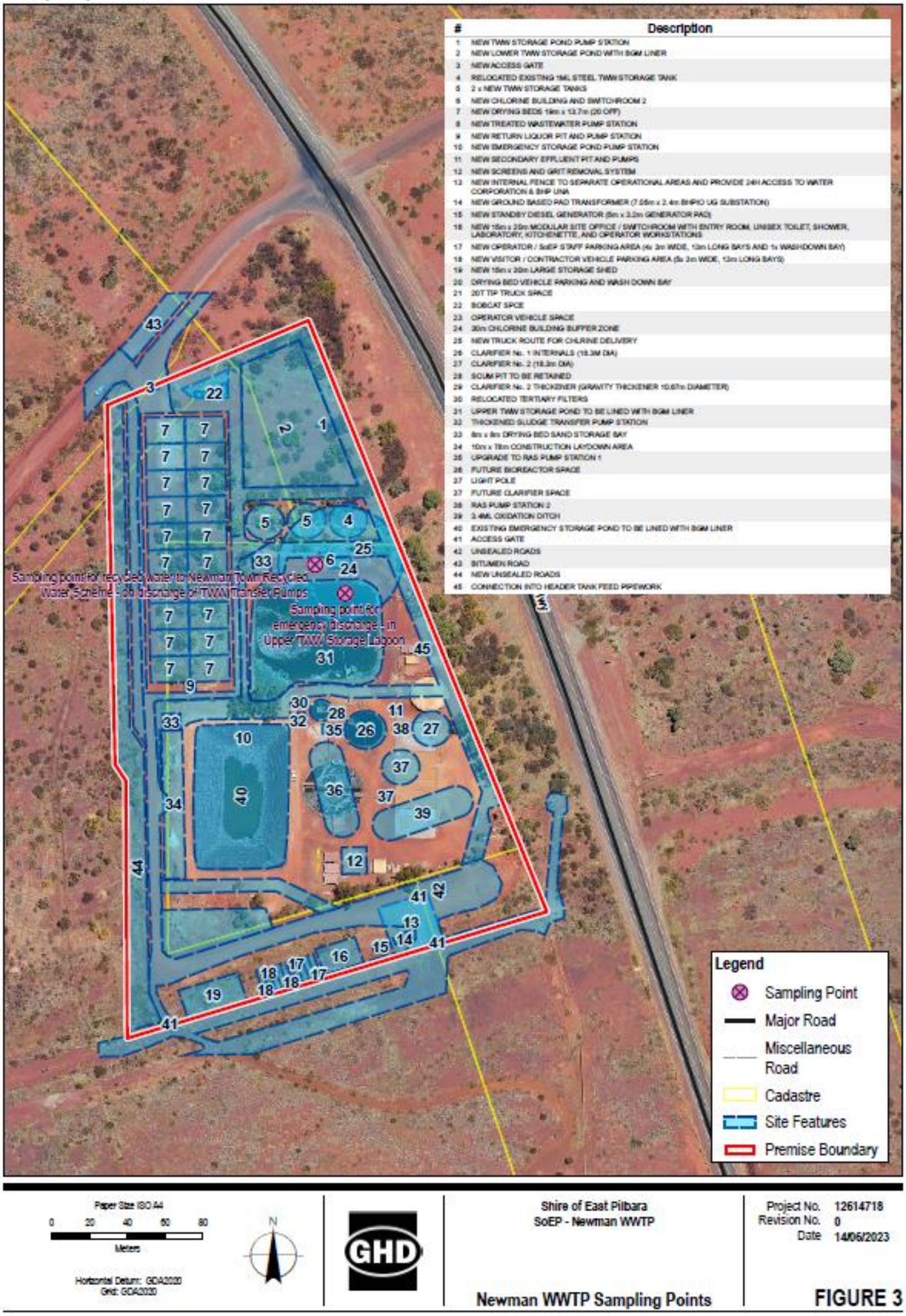

Figure 2: Map indicating the sampling points

Discharge Points

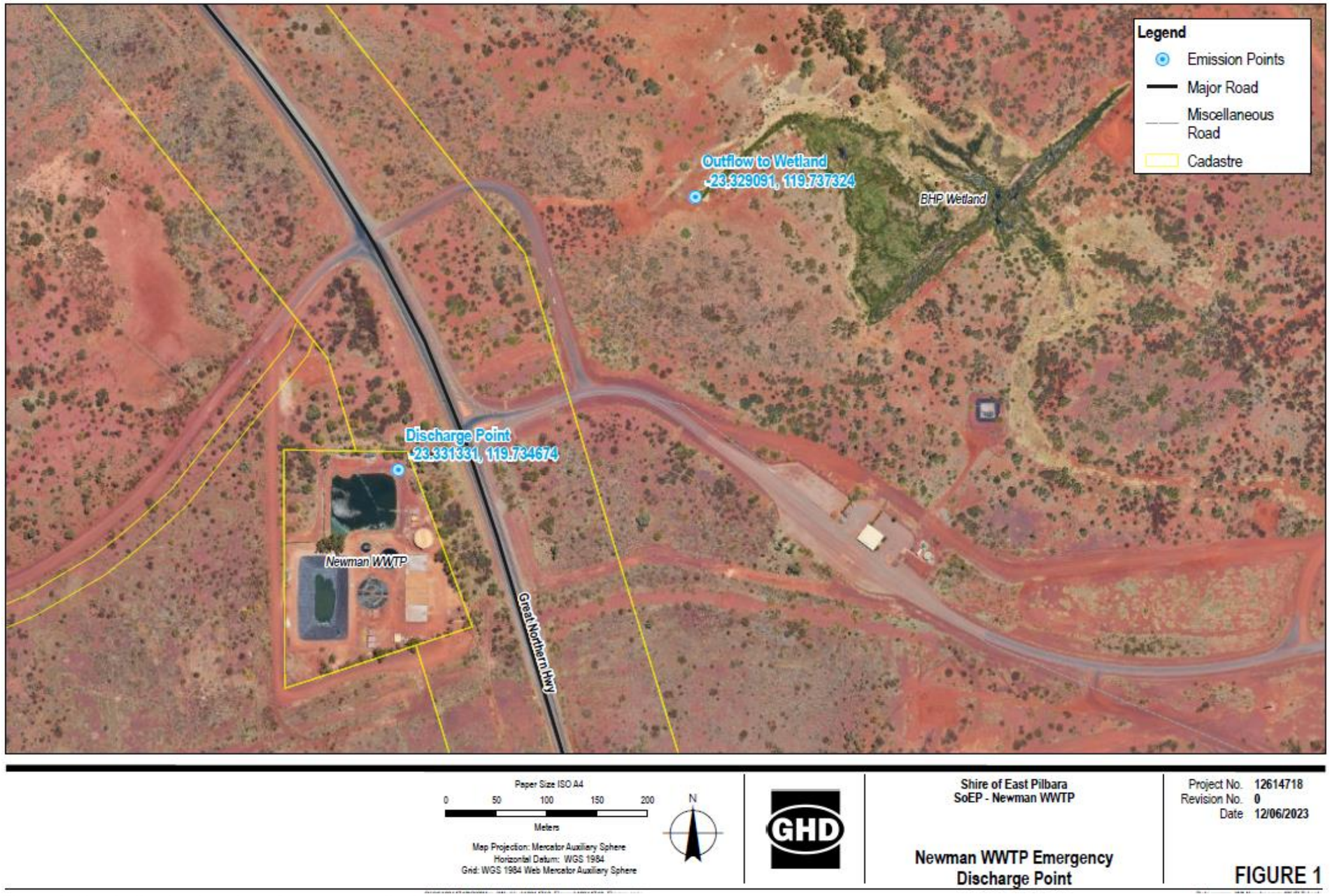

Figure 3: Map indicating location of emergency discharge points

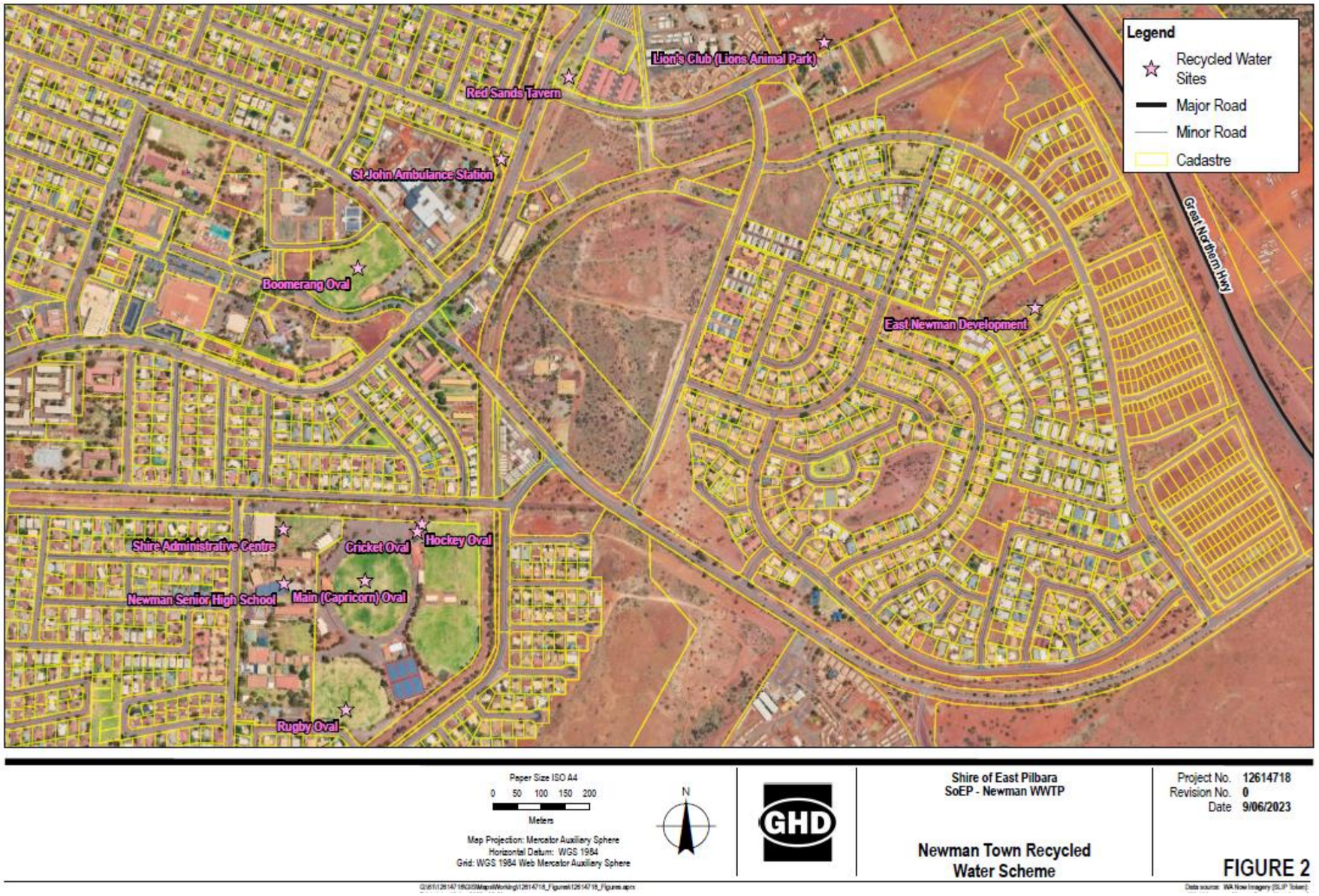

Figure 4: Map indicating discharge points for the Newman Town Recycled Water Scheme