



Works Approval

Works approval number	W6939/2024/1
Works approval holder	Crimson Metals Pty Ltd
ACN	169 977 155
Registered business address	Level 3 40 Kings Park Road WEST PERTH WA 6005
DWER file number	DWERVT15028~3
Duration	20/09/2024 to 19/09/2027
Date of issue	20/09/2024
Premises details	Mount Gibson Gold Project WWTP Legal description: Mining tenements M59/772, G59/72, L59/53 As defined by the premises maps attached in Schedule 1 to the issued works approval.

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 64: Class II or III Putrescible Landfill Site	340 tonnes per annum
Category 85: Sewage Facility	70 cubic meters per day

This works approval is granted to the works approval holder, subject to the attached conditions, on 20 September 2024, by:

**SENIOR ENVIRONMENTAL OFFICER
INDUSTRY REGULATION**

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

Works approval history

Date	Reference number	Summary of changes
20/09/2024	W6939/2024/1	Works approval granted.

Interpretation

In this works approval:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this works approval:
 - (i) if dated, refers to that particular version; and
 - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

Works approval conditions

The works approval holder must ensure that the following conditions are complied with:

Construction phase

Infrastructure and equipment

1. The works approval holder must:
 - (a) construct and/or install the infrastructure and/or equipment;
 - (b) in accordance with the corresponding design and construction / installation requirements; and
 - (c) at the corresponding infrastructure location as set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	Wastewater Treatment Plant (WWTP) and pipelines	<p><u>Two stabilization ponds (primary and secondary):</u></p> <p>(a) Lined with 1.6 mm thick high-density polyethylene (HDPE).</p> <p>(b) Must have dimensions as specified in Schedule 1, Figure 4, including an external and internal embankment slope of no steeper than 1 in 3.</p> <p>(c) Designed to enable a minimum 400 mm operational freeboard.</p> <p>(d) The primary stabilisation pond designed to overflow into the secondary pond.</p> <p>(e) Primary pond to be designed with a volumetric holding capacity of at least 3,239 m³.</p> <p>(f) Secondary pond to be designed with a volumetric holding capacity of at least 2,404 m³.</p> <p>(g) Designed to treat effluent to meet the following water quality criteria:</p> <ul style="list-style-type: none"> • pH 6.5 – 8.5 pH units; • BOD <30 mg/L; • TSS <40 mg/L; • Total Nitrogen <30 mg/L; • Total Phosphorus <7.5 mg/L • <i>E.Coli</i> <100,000 cfu/100mL; • Chlorine residual 0.2-2 mg/L and; • Total Dissolved Solids <1,000 mg/L 	Pipeline and ponds as shown in Schedule 1: Maps, and Figure 3

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		<p>(h) A monitoring point outlet and volumetric flow meter must both be installed on inflow pipeline to primary pond and outflow pipeline from secondary pond with capacity to continuous monitor water flow volumes.</p> <p>(i) Suitably sized HDPE pipelines to be installed within an open trench along the routes specified in Schedule 1, Figure 2.</p>	
2.	Irrigation spray field	<p>a) Spray field area must be at least 2.4 ha.</p> <p>b) Reticulation (pipelines) to be installed in accordance with the layout in Schedule 1, Figure 3.</p> <p>c) Sprinklers to must be positioned to ensure even distribution of wastewater.</p>	As shown in Schedule 1: Maps Figure 3
3.	Class II or III Putrescible Landfill Site	<p>a) Each trench is to have maximum dimensions of 70 m long, 20 m wide and 4 m deep.</p> <p>b) The earthen bund must be at least 2 m high covering three sides of the landfill to divert surface water flows away from the landfill and prevent stormwater from coming into contact with waste.</p> <p>c) Regular waste covering must be implemented.</p>	As shown in Schedule 1: Maps Figure 2

Compliance reporting

2. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:
 - (a) undertake an audit of their compliance with the requirements of condition 1; and
 - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:
 - (a) certification by a suitably qualified 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, Table 1;
 - (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1, Table 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 13 (as applicable):
 - (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 10 for that item of infrastructure; or
 - (b) until such time as a 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 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.	WWTP ponds and pipelines	a) Treated effluent meets the following water quality criteria before the end of time-limited operations: <ul style="list-style-type: none"> • pH 6.5 – 8.5 pH units • BOD <30 mg/L • TSS <40 mg/L • Total Nitrogen <30 mg/L; • Total Phosphorus <7.5 mg/L • <i>E.Coli</i> <100,000 cfu/100mL • Chlorine residual 0.2-2 mg/L • Total Dissolved Solids <1,000 mg/L b) Volumetric flow meters are operational and accessible on the WWTP pond inlet and outlet to the irrigation sprayfield. c) Inner pond banks are to be kept free of vegetation. d) Maintain a minimum 400 m freeboard in both the primary and secondary pond. e) Weekly inspections to assess integrity of pond banks, pond liner and raw and treated effluent pipelines.	As shown in Schedule 1: Maps Figure 3

	Site infrastructure and equipment	Operational requirement	Infrastructure location
2.	Irrigation sprayfield	a) Irrigation must be managed to prevent ponding and pooling of effluent in the ground surface of the irrigation discharge area. b) No more than 70 m ³ of treated effluent to be discharged per day.	As shown in Schedule 1: Maps Figure 3
3	Class II landfill facility	a) Only the following waste types are authorised to be disposed to the landfill trenches: <ul style="list-style-type: none"> • Inert Waste Type 1 • Inert Waste Type 2 • Clean Fill • Uncontaminated Fill • Putrescible Waste b) Record volumes of waste deposited during time limited operations. c) Waste within the landfill must be covered at weekly with at least 200 mm so that no waste is left exposed. d) Regular waste covering must be implemented.	As shown in Schedule 1: Maps Figure 2

Emissions and discharges

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

Table 3: Authorised discharge point

Emission	Discharge point	Discharge point location
Treated effluent from WWTP stabilisation ponds	Irrigation spray field sprinklers	As shown in Schedule 1: Maps Figure 3

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	Method
Irrigation spray field sprinklers	Flow meter to irrigation field	Volumetric flow rate	Continuous when online	Daily	m ³ /day	-
	WWTP stabilisation pond outlet	pH	Monthly	Spot sample	pH units	Sample collection and preservation as per AS/NZS 5667.1; analysis as per AS/NZS 5667.10
		Biochemical oxygen demand (BOD)			mg/L	
		Total suspended solids (TSS)			mg/L	
		Total nitrogen			mg/L	
		Total phosphorous			mg/L	
		<i>E.coli</i>			cfu / 100mL	
		Chlorine Residual			mg/L	
		Total Dissolved Solids (TDS)			mg/L	

9. For the monitoring activity required by condition 8, the works approval holder must:
- (a) record the results; and
 - (b) have analysis conducted by a laboratory with current National Association of Testing Authorities (NATA) accreditation for the parameters specified.

Time limited operations 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:
 - (i) Daily WWTP treated waste discharged to the irrigation field; and
 - (ii) Waste deposited into the landfill.
 - (b) a summary of monitoring results obtained during time limited operations under condition 8.
 - (c) a summary of the environmental performance of each item of infrastructure or equipment as installed, which at minimum includes:
 - (i) a comparison of the treated effluent monitoring results against discharge limits specified in condition 1;
 - (ii) assessment of the spray irrigation field performance against operational requirements in condition 6;
 - (d) 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 conditions 6;
 - (c) monitoring programmes undertaken in accordance with conditions 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 have the meanings defined.

Table 1: Definitions

Term	Definition
AS 5667.1	means Australian Standard 5667.1 Water quality - Sampling
AS 5667.10	means Australian Standard 5667.10 Water quality - Sampling Guidance on sampling of waste waters
BOD ₅	5-day Biochemical Oxygen Demand
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
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 <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	<i>Environmental Protection Act 1986 (WA)</i> .
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i> .
ha	Hectare
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

Term	Definition
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 in Schedule 1 to this works approval
Prescribed premises	has the same meaning given to that term under the EP Act.
Spot sample	means a discrete sample representative at the time and place at which the sample is taken
Suitably qualified civil or structural engineer	<p>means a person who:</p> <ul style="list-style-type: none"> (a). holds a Bachelor of Engineering degree recognised by Engineers Australia; and (b). has a minimum of five years of experience working in a supervisory role of geotechnical engineering; and (c). is employed by an independent third party external to the Works Approval Holder's business; <p>or is otherwise approved in writing by the CEO to act in this capacity.</p>
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).

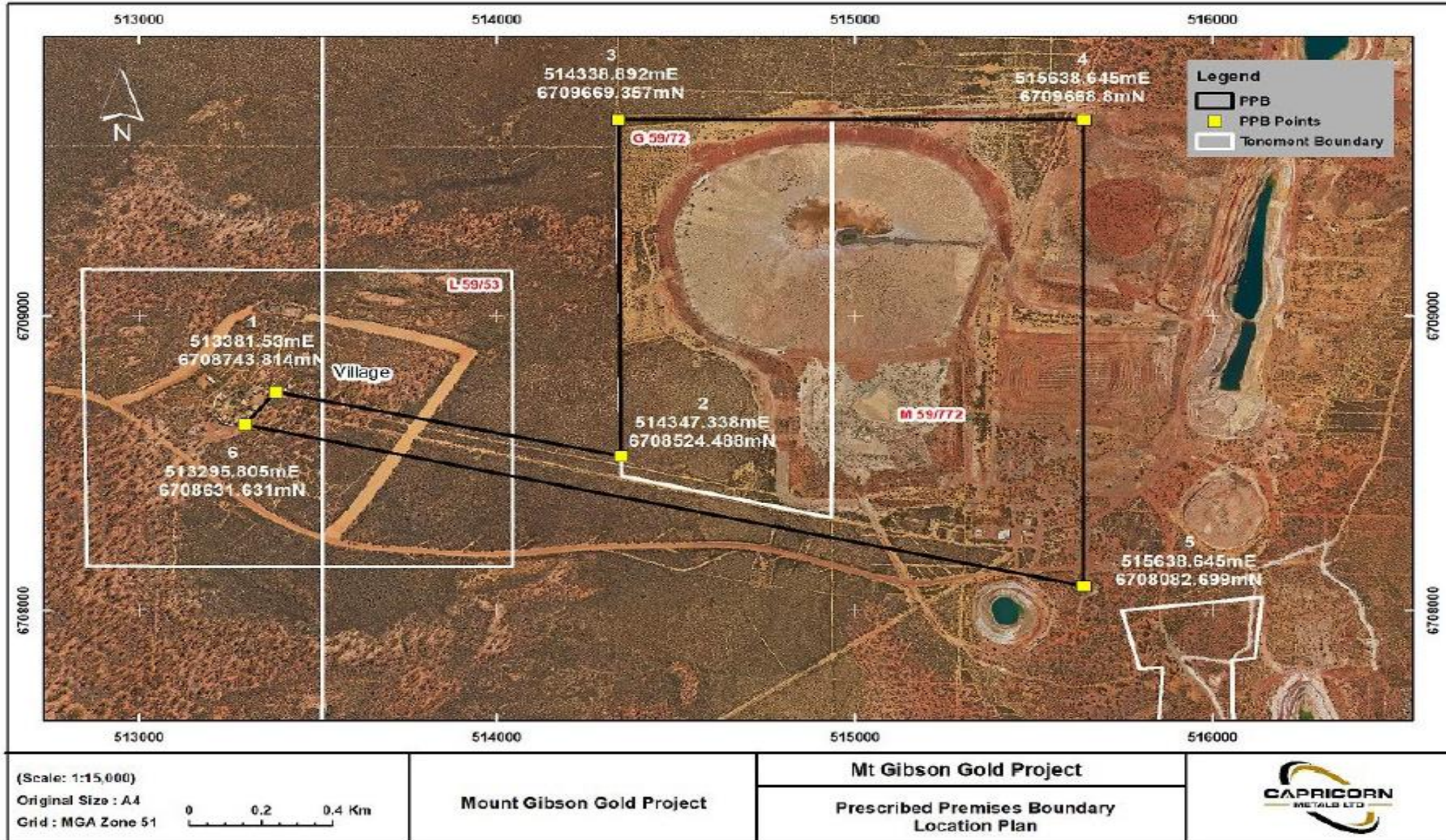


Figure 1: Map of the boundary of the prescribed premises

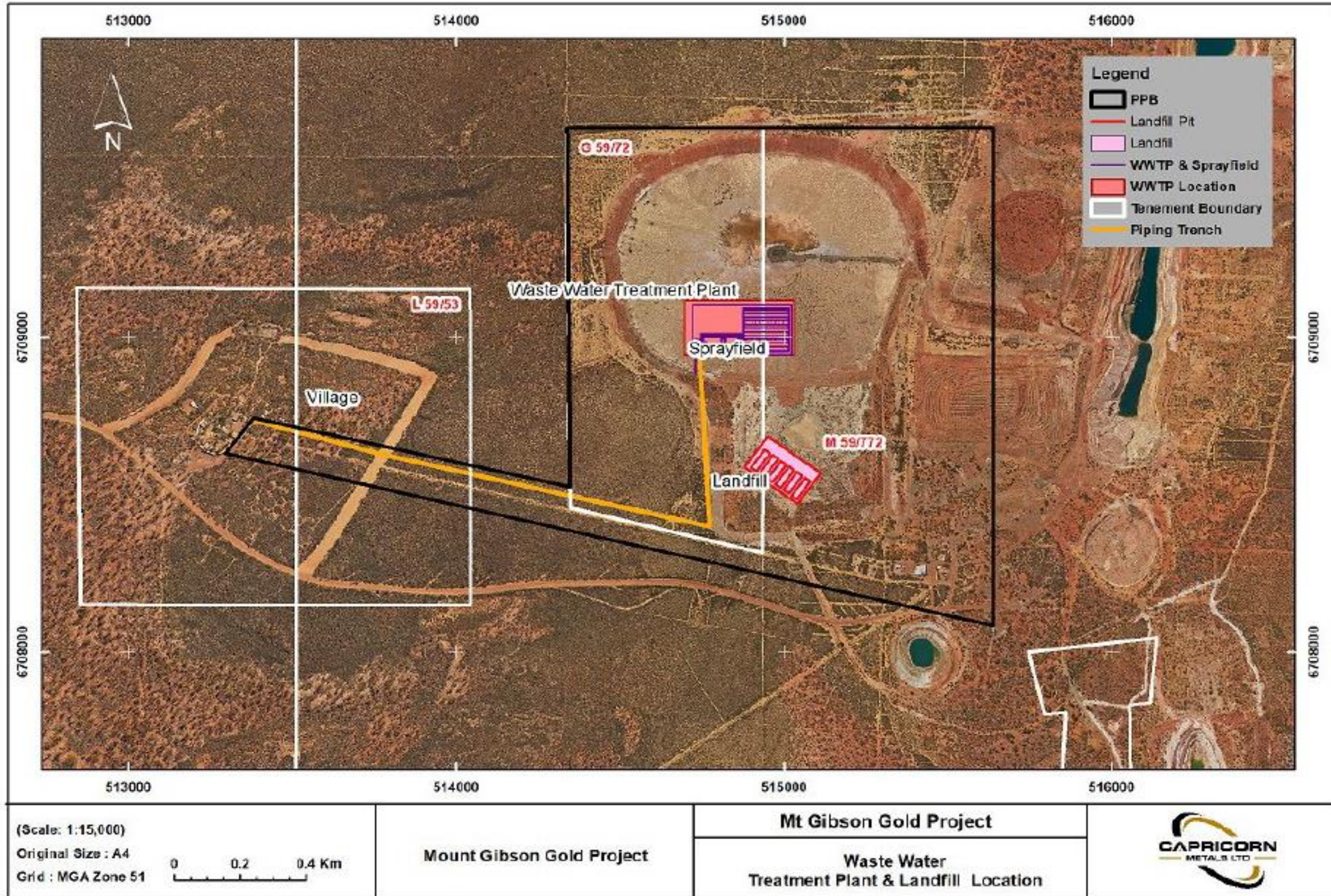


Figure 2: Key infrastructure, including the WWTP, village to WWTP raw sewage pipelines, irrigation sprayfield and landfill trenches

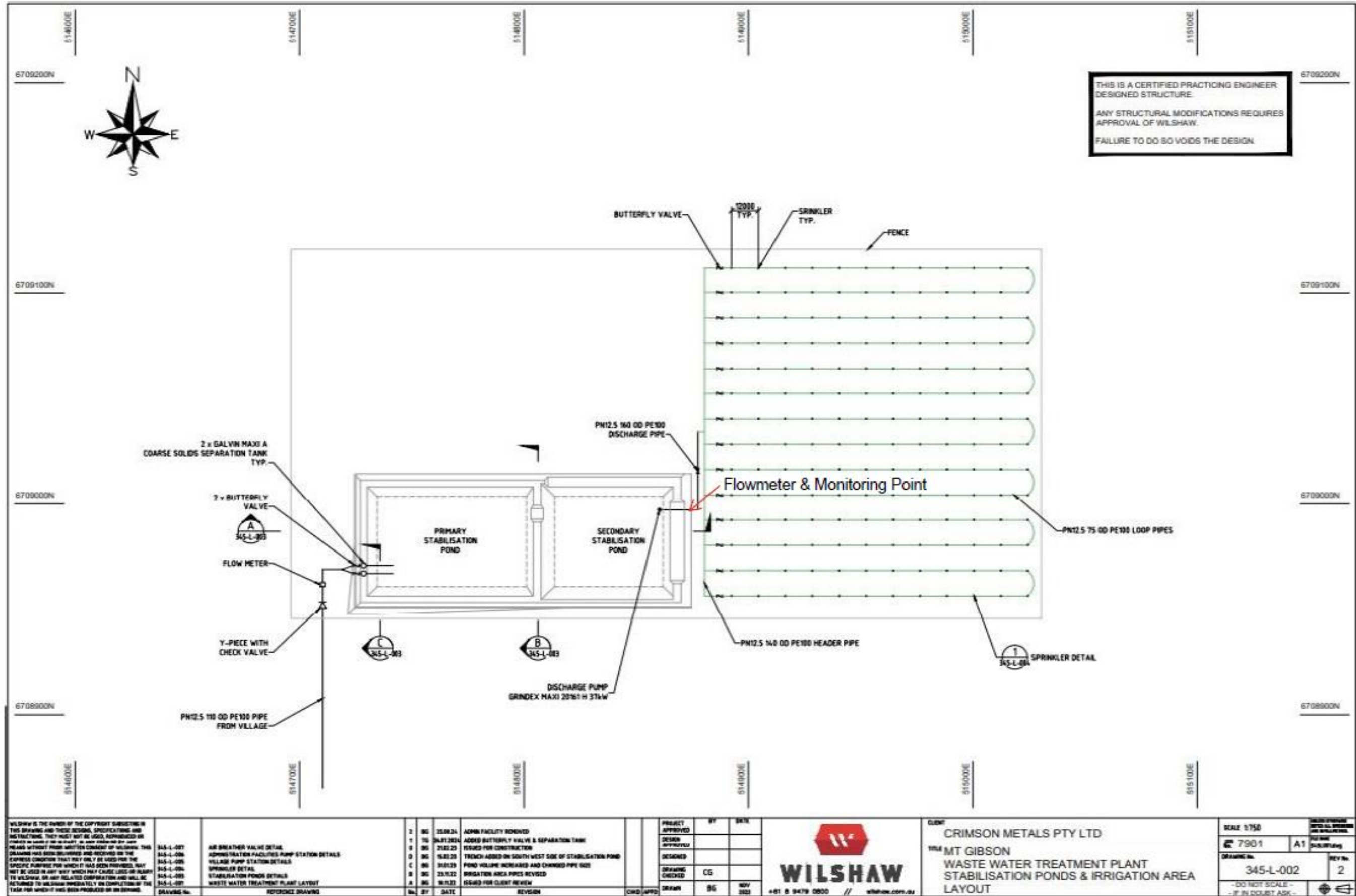


Figure 3: Layout of WWTP stabilisation ponds and irrigation area

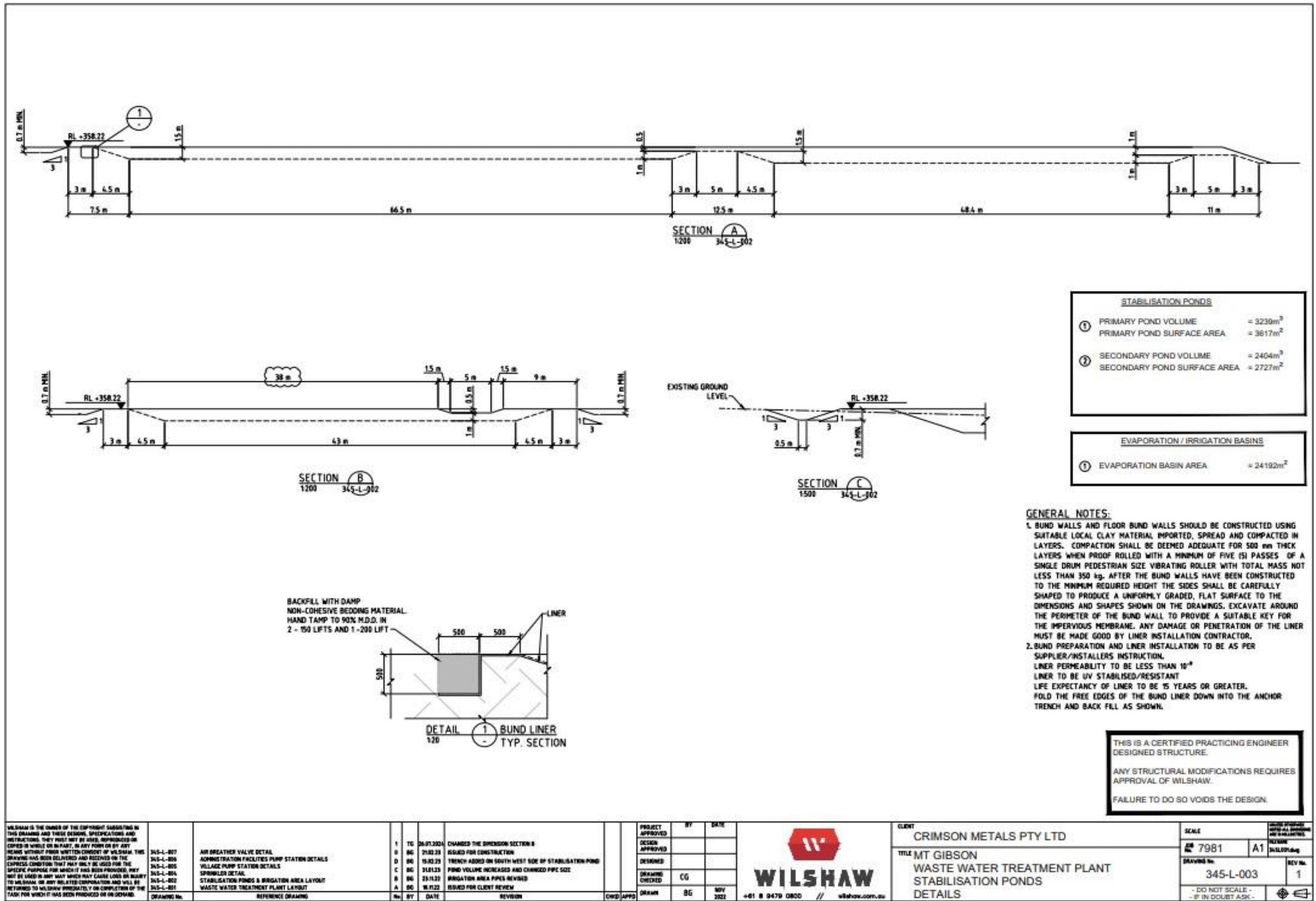


Figure 4: Design of WWTP stabilisation pond liners and embankments

Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 2.

Table 2: Premises boundary coordinates (GDA2020)

	Easting (m)	Northing (m)
1.	513381.53	6708743.814
2.	514347.338	6708524.488
3.	514338.892	6709669.357
4.	515638.645	6709668.8
5.	515638.645	6708082.699
6.	513295.805	6708631.631