Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6603/2021/1
Works approval holder	Big Bell Gold Operations Pty Ltd
ACN	090 642 809
Registered business address	Level 6, 197 St Georges Tce Perth, WA, 6000
DWER file number	DER2021/000500
Duration	28/02/2022 to 18/02/2030
Date of issue	28/02/2022
Date of Amendment	26/06/2024
Premises details	Big Bell Project - Cue Gold Operations Mining Tenement M20/98 and M20/197

Prescribed premises category description (Schedule 1, ***Environmental Protection Regulations 1987***)	**Assessed production / design capacity**
Category 6: Mine dewatering	193,000 tonnes per annual period

This works approval is granted to the works approval holder, subject to the attached conditions,
On 26 June 2024, by:

Timothy Moran
Digitally signed by Timothy Moran
Date: 2024.06.26 12:06:16 +08'00'

TIMOTHY MORAN

MANAGER, RESOURCE INDUSTRIES
INDUSTRY REGULATION

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

Works approval history

Date	Reference number	Summary of changes
28/02/2022	W6603/2021/1	Works approval granted.
26/06/2024	W6603/2021/1	Works approval amendment to extend the expiry date from 27/02/2025 to 18/02/2030.

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.	Dewatering and discharge pipeline(s) from the Accelerator and Indicator open pits to the interconnected water storage tanks, and to the final discharge point Flow meter's installed	• Four water tanks at each area, each of 32,000L capacity • Constructed of 110mm PN6.3 HDPE • Installed in v-drains within corridors that capture spillage or direct spillage to the open pit or the final discharge location (ephemeral watercourse).	Shown in Schedule 1 Figure 1.
2.	Turkeys nests	*If required* 30m x 30m x 3m with capacity of 2,700 m^3 at each of the Accelerator and Indicator project areas	Shown Schedule 1 Figure 1.
3.	Dewater pipeline at final discharge point (ephemeral watercourses) Flow meter installed	• The discharge pipeline to be capped and a series of holes made in the side of the pipe immediately prior to the discharge point to diffuse flow, such that it minimises scouring and/or erosion of the land/drainage surface • The outflow point and the final lengths of the discharge pipeline to be positioned on a clean fresh rock layer (or similar material) to diffuse flow, such that it minimises scouring and/or erosion of the land/drainage surface. • A series of rock bunds (or similar infrastructure) along the discharge area (drainage line), such that they: ○ slow the rate of water flow; and • trap suspended solids from runoff from the discharge area.	Shown Schedule 1 Figure 1.

	Infrastructure	Design and construction / installation requirements	Infrastructure location
4.	Mobile equipment (e.g. vehicles, heavy equipment, generators and dewatering pumps)	• Store environmentally harmful materials in secured, covered, impervious and bunded areas. • Bunded areas to have a minimum capacity of 110% of the largest container stored within it, or 25% of the volume of all containers, whichever is the larger. • Maintain all mobile equipment as per manufacturer's specifications. • Keep suitably stocked spill response equipment close to where spills may occur.	N/A

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 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 4 (as applicable):

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 4 for that item of infrastructure; or

(b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*.

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

No.	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Series of water storage tanks	• An inspection is required for visual integrity of the water storage tanks each 12 hour shift. • A written log is required to be maintained for each inspection, with the record of each inspection signed by the responsible person.	Shown in. Schedule 1 Figure 1.
2.	Dewatering/discharge pipelines and v-drain	• An inspection is required for visual integrity of the pipeline and bunding each 12 hour shift. • A written log is required to be maintained for each inspection, with the record of each inspection signed by the responsible person. • Weekly maintenance of v-drains along entire pipeline to maintain capacity. Removal of any accumulated sediment/debris, prior to and following significant rainfall events.	

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

Table 3: Authorised discharge points

No.	Emission	Discharge point	Discharge point location
1.	Mine dewater	Dewatering discharge pipes	Final discharge point (ephemeral watercourses) as shown in Schedule 1, Figures 2 and 3.

8. During time limited operations, the works approval holder must ensure that the emissions from the discharge point listed in Table 4 do not exceed the corresponding limit(s) when monitored in accordance with condition 9.

Table 4: Emission and discharge limits during time limited operations

No.	Discharge point	Parameter	Limit
1.	Accelerator dewatering discharge pipe	Volumetric flow rate	0.0031 m^3/s averaged over a 24 hour period
2.	Indicator dewatering discharge pipe	Volumetric flow rate	0.0091 m^3/s averaged over a 24 hour period

Monitoring during time limited operations

9. The works approval holder must monitor emissions during time limited operations in accordance with Table 5.

10. The works approval holder must conduct monitoring during time limited operations in accordance with Table 6.

11. The works approval holder must ensure that all non-continuous sampling undertaken pursuant to conditions 9 and 10 are undertaken by a holder of a current accreditation from the National Association of Testing Authorities (NATA) for the methods of sampling relevant to the corresponding relevant parameter (unless indicated otherwise in Table 5).

12. The works approval holder must record the results of all monitoring activities required by conditions 9 and 10.

Table 5: Emissions and discharge monitoring during time limited operations

Monitoring location	Parameter[1]	Units	Frequency[3]	Sampling Method
Dewatering discharge pipe for Accelerator and Indicator	Volumetric flow rate	m^3/s	Continuous	AS/NZS 5667.1
	Cumulative volume of water from dewatering	kL	Monthly[2]	-
	pH[2]	pH units	Weekly	AS/NZS 5667.1
	Electrical conductivity[2] at 25°C	µS/cm	Monthly	AS/NZS 5667.1
	Total dissolved solids (TDS)	mg/L		
	Total Suspended Solids (TSS)			
	Total Recoverable Hydrocarbons (TRH)			
	Bicarbonate (HCO_3)			
	Calcium (Ca)			
	Carbonate (CO_3)			
	Chlorine (Cl)			
	Magnesium (Mg)			
	Potassium (K)			
	Sodium (Na)			
	Sulphate (SO4)			
	Aluminium (Al)			
	Antimony (Sb)			
	Arsenic (As)			
	Barium (Ba)			
	Beryllium (Be)			
	Boron (B)			

Monitoring location	Parameter[1]	Units	Frequency[3]	Sampling Method
	Cadmium (Cd)			
	Chromium (Cr III)			
	Chromium (Cr VI)			
	Cobalt (Co)			
	Copper (Cu)			
	Iron (Fe)			
	Lead (Pb)			
	Manganese (Mn)			
	Mercury (Hg)			
	Molybdenum (Mo)			
	Nickel (Ni)			
	Nitrate (NO_3)			
	Selenium (Se)			
	Silicon (Si)			
	Thallium (TI)			
	Uranium (U)			
	Vanadium (V)			
	Zinc (Zn)			

Note [1]: Level of detection is required to be sufficient to enable a comparison with ANZECC & ARMCANZ (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality.
Note [2]: In-field non-NATA accredited analysis permitted.
Note [3]: Monitoring should occur during periods when the discharge point is flowing.

Table 6: Other monitoring during time limited operations

Monitoring location	Type of monitoring	Scope of monitoring	Frequency of monitoring
Discharge point and along the ephemeral watercourse	Photograph the area around discharge location and immediately downstream of discharge, so can be compared to subsequent and/or previous photographs.	Identify introduction of weeds	Weekly (when dewatering in operation)
		Identify presence of algae/algal bloom	
Discharge point and along the ephemeral watercourse	Vegetation monitoring using on-ground assessment of vegetation	Monitor changes in vegetation condition and health	Monthly[1] (when dewatering in operation)
	Physical inspection/monitoring (with GPS) of the wetting front downstream of discharge	Record extent of discharge flows Record erosion impacts	Weekly (when dewatering in operation)

Note [1]: Monthly monitoring is undertaken at least 15 days apart.

Specified actions

13. Discharge regime must be reduced to 50% if during monitoring it is noted that:

(a) algal blooms present

(b) vegetation quality decreases

(c) discharge footprint is bigger than 0.7 ha for Accelerator and 2 ha for Indicator

(d) soil erosion outside prescribed premises

Compliance reporting

14. 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 90 calendar days before the expiration date of the works approval, whichever is the sooner.

15. The works approval holder must ensure the report required by condition 14 includes the following:

(a) a summary of the time limited operations, including timeframes and amount of mine dewatering from Accelerator and Indicator pits and dewater discharged at the final discharge point (ephemeral watercourse);

(b) a tabulated and graphical summary of mine dewater monitoring results obtained during time limited operations under conditions 9 and 10

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

(i) volume (in m^3 or kL) of mine dewater water discharged to the final discharge point (ephemeral watercourse);
(ii) vegetation monitoring conducted in line with condition 10;
(iii) the wetting front monitoring conducted in line with condition 10;
(iv) final discharge point (ephemeral watercourse) monitoring photographs including a summary and assessment of weeds present and identification of any algae blooms; and
(v) a summary of any measures undertaken to treat and/or remove weeds and reduce the risk of animal ingestion of algal bloom toxins.

(d) change in discharge regime in line with condition 13 specifying timelines and impacts;

(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

16. 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.

17. The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:

(a) the works conducted in accordance with condition 1;

(b) any maintenance of infrastructure that is performed in the course of complying with condition 6;

(c) monitoring programmes undertaken in accordance with conditions 9, 10 and 12; and

(d) complaints received under condition 16.

18. The books specified under condition 17 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 7 have the meanings defined.

Table 7: Definitions

Term	Definition
ACN	Australian Company Number
applicant	Big Bell Gold Operations Pty Ltd
AS/NZS 2033	means the Australian Standard AS/NZS 2033: Installation of polyethylene pipe systems.
AS/NZS 4129	means the Australian Standard AS/NZS 4129: Fittings for polyethylene (PE) pipes for pressure applications.
AS/NZS 4130	means the Australian Standard AS/NZS 4130: Polyethylene (PE) pipes for pressure applications.
AS/NZS 4131	means the Australian Standard AS/NZS 4131: Polyethylene (PE) compounds for pressure pipes and fittings.
AS/NZS 5667	means the Australian Standard AS/NZS 5667: Water quality – sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples as amended from time to time
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
Condition	a condition to which this works approval is subject under section 62 of the EP Act.
Delegated Officer	an officer delegated under section 20 of the EP Act.
department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
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.

Term	Definition
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).
kL	kilolitres
L/s	litres per second
m^3/s	cubic meters per second
NATA	National Association of Testing Authorities
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: Maps to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
suitably qualified engineer	means a person who: (a) holds a Bachelor of Engineering recognised by the Institute of Engineers; and (b) has a minimum of five years of experience working in the area of civil engineering or is otherwise approved by the CEO to act in this capacity.
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.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in the map below.

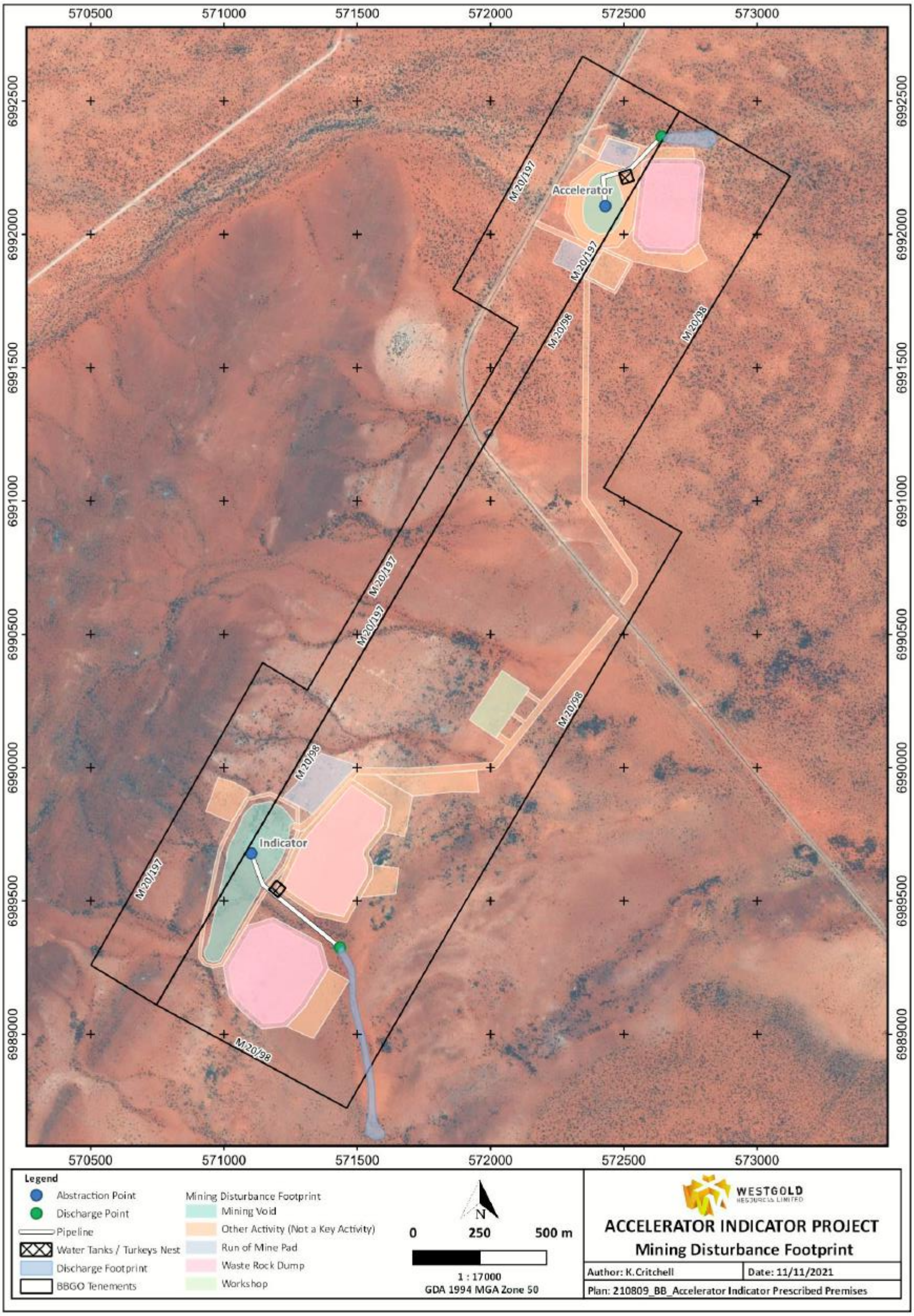

Figure 1: Map of the boundary of the prescribed premises.

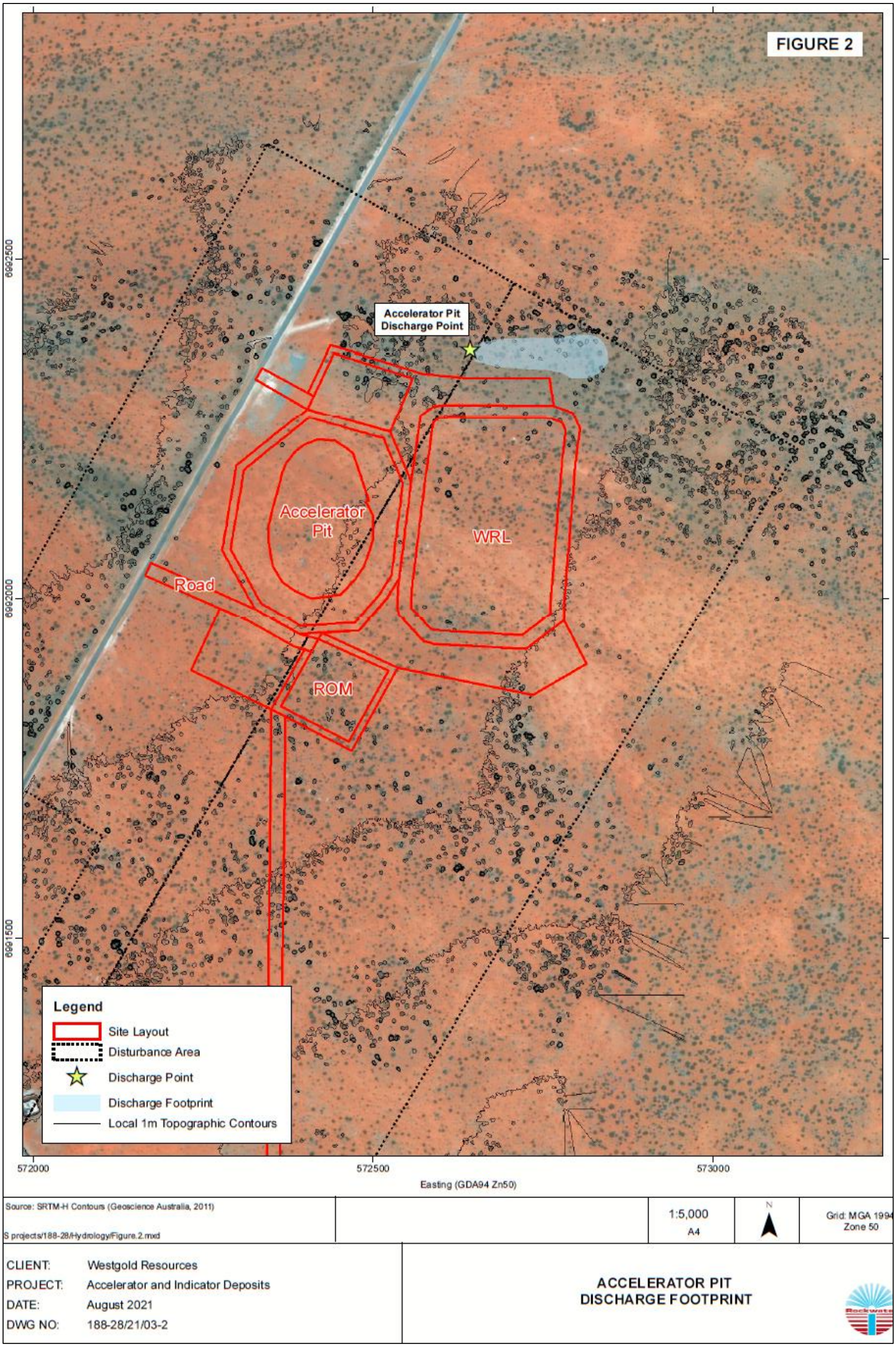

Figure 2: Accelerator authorised discharge point and approved discharge footprint

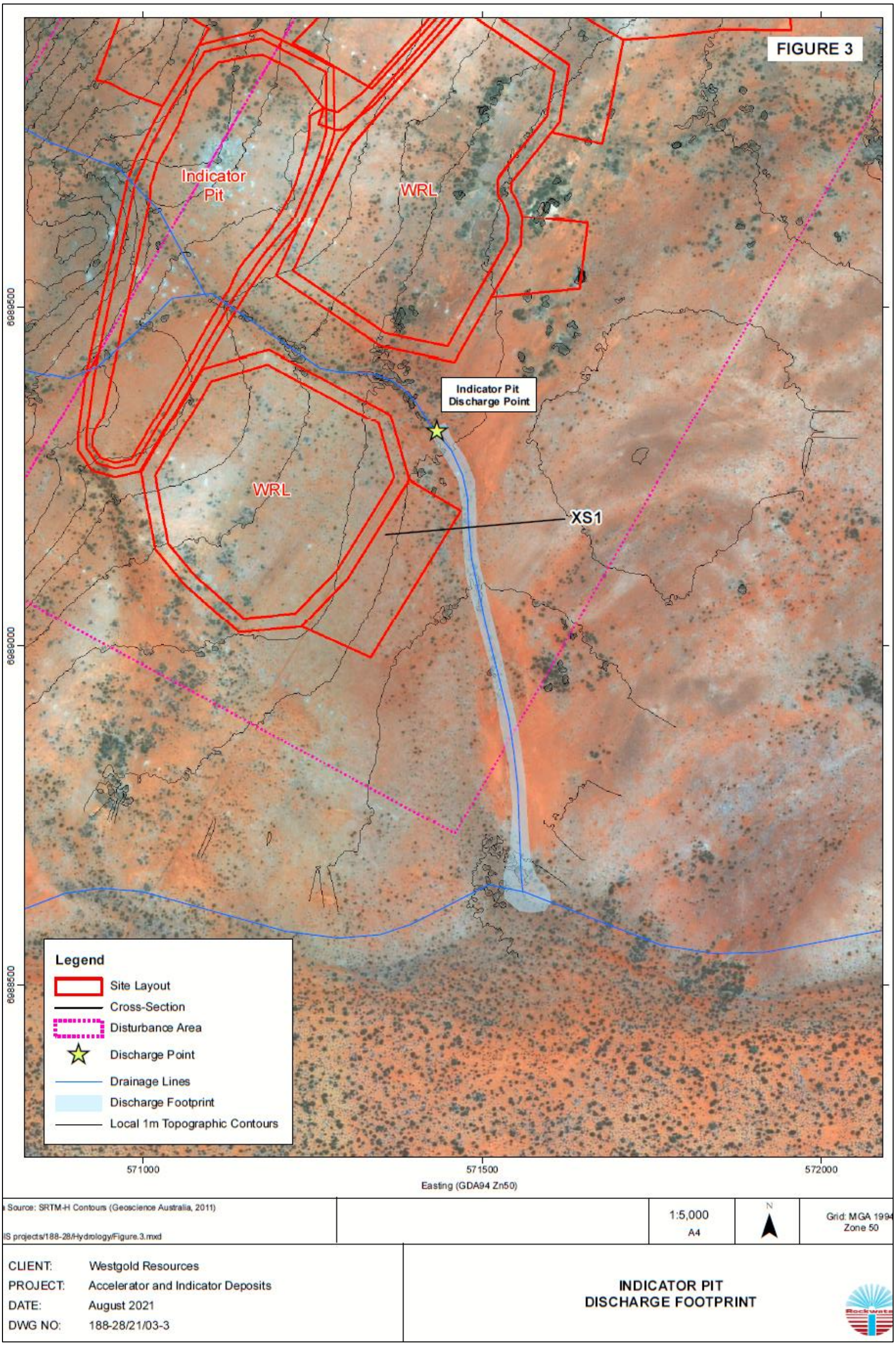

Figure 3: Indicataor authorised discharge point and approved discharge footprint

Schedule 2: Premises boundary

The premises boundary is defined by the coordinates in Table 8.

Table 8: Premises boundary coordinates

Easting	Northing
571459	6988722
570746	6989109
570500	6989258
571883	6989459
572225	6990043
571312	6990289
571144	6990392
572489	6990494
572636	6990757
572715	6990881
572424	6991049
572102	6991649
571859	6991793
573124	6992218
572708	6992462
572344	6992667