Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L9247/2020/1
Licence holder	Beacon Mining Pty Ltd
ACN	603 853 916
Registered business address	144 Vivian Street BOULDER WA 6432
DWER file number	DER2020/000120
Duration	17/09/2020 to 17/09/2032
Date of issue	17/09/2020
Date of amendment	19/10/2023
Premises details	Jaurdi Gold Project Mining tenements: M16/115, M16/529, M16/34, L16/120, M16/365 and part of M16/204 SHIRE OF COOLGARDIE WA as depicted in premise map in Schedule 1.

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production / design capacity**
Category 5: Processing or beneficiation of metallic or non-metallic ore	750,000 tonnes per annual period
Category 89: Putrescible landfill site	<5,000 tonnes per annual period

This amended licence is granted to the licence holder, subject to the attached conditions, on 19/10/2023, by:

Christine Pustkuchen
Digitally signed by Christine Pustkuchen
Date: 2023.10.19 18:04:49 +08'00'

A/Manager, Resource Industries
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

Date	Reference number	Summary of changes
05/09/2018	W6150/2018/1	Works approval granted to construct processing plant and two in-pit tailings storage facilities.
17/09/2020	L9247/2020/1	Licence granted.
20/08/2021	L9247/2020/1	Licence amended to include the Panther Pit TSF as a discharge point for tailings.
15/08/2022	L9247/2020/1	Licence amended to include Jaurdi Tailings Storage Facility and tailings pipelines and return water pipelines.
19/10/2023	L9247/2020/1	Licence amended to add Lost dog in-pit TSF panel 2/4, tailings pipelines and return water pipelines, 8 monitoring/recovery bores, 8 shallow monitoring bores and surface water management infrastructure.

Interpretation

In this licence:

(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 licence:

  (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 licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

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

Infrastructure and equipment

1. The licence holder must ensure that the site infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

Table 1: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location

Processing plant	• **Mobile crushing plant**:
	  ○ Dust covers must be maintained on the chute.
	  ○ Water sprays must be used on the crushing plant.
	• **ROM pad and Stockpiles**:
	  ○ Water sprays must be used on the stockpiles.
	  ○ Fog suppression sprays must be used on the primary feed hopper, discharge chute and stockpile.
	• **CIL circuit**:
	  ○ Concrete bunding must be maintained such that there is capacity to hold 110% of the capacity of the largest tank in the bunded area.
	  ○ Concrete sumps and pumps within the bunding must be maintained such that spilled material may be returned to the process stream.
	• **Stormwater drains**
	  ○ Drains must be positioned such that contaminated stormwater outside of the areas contained by bunding is diverted to the stormwater dam.
		Schedule 1: Maps
		
		Figure 1 and Figure 2

Processing and raw water dams	• A freeboard of at least 300 mm must be maintained in the dams.	Schedule 1: Maps Figure 2
Tailings storage facilities Black Cat in-pit TSF Lost Dog Panel 1 in-pit TSF Panther Pit in-pit TSF Jaurdi TSF Lost Dog Panel 2/ 4 in-pit TSF	• A freeboard of at least 700 mm from the lowest point of the pit rim must always be maintained. • 5 monitoring bores must be maintained around the Black Cat in-pit TSF. • 7 monitoring bores must be maintained around the Lost Dog Panel 1 in-pit TSF. • 5 monitoring bores must be maintained around the Panther in-pit TSF. • 8 monitoring/recovery bores must be maintained around the Jaurdi TSF. • 8 shallow (8 m) monitoring bores must be	Schedule 1: Maps Figure 3, Figure 4, Figure 5, Figure 6, and Figure 7

	maintained around the Jaurdi TSF. • 8 monitoring/recovery bores must be maintained around the Lost Dog Panel 2 and 4 in-pit TSF. • 8 shallow (8 m) monitoring bores must be maintained around the Lost Dog Panel 2 and 4 in-pit TSF.	
Pipelines carrying tailings and return water from tailings facilities	• Telemetry must be maintained such that leaks may be detected and automated shutdown to minimise spills/leaks. • Inspections of the tailings and return water pipelines and associated containment structures must be completed at least once per shift to detect any leaks or discharges. • Tailings delivery and return water lines to be within a bunded corridor to capture any potential spills resulting from leaks or pipeline rupture	Schedule 1: Maps Figure 1, Figure 3, Figure 5, Figure 6, and Figure 7
Surface water Management Infrastructure	• Diversion drain 1 to be located extending from north of Jaurdi TSF, past the western side of the site to south of the Lost Dog Panel 4 Pit. • Length of the Diversion drain 1 to be approximately 2.6 km with 3-10m wide and up to 0.6m deep. • Diversion drain 2 to be located extending from north of TSF, past the east, discharging to an existing shallow flow path • Length of the Diversion drain 2 to be approximately 0.8 km with 3m wide and up to 0.3m deep. • Associated levees to be maintained to prevent ingress of floodwater to the site.	Schedule 1: Maps Figure 11 and labelled as: Diversion 1, Diversion 2 and Levees
Landfill trenches	• Each landfill trench must be no larger than 30 metres long, 5 metres deep and 10 metres wide. • The base of the landfill trenches must be 5 metres or greater above the groundwater table. • The site must be maintained such that surface water runoff is diverted away from the landfill and contaminated runoff is contained on the landfill area. • Separate trenches must be established for the putrescible waste and the waste tyres. • Signage must be maintained to indicate the active trench for disposal of waste and the waste accepted in each trench. • Each trench must be capped after the final disposal into it by greater than 1 metre of clean fill.	Schedule 1: Maps Lost Dog Waste landform Figure 8

2. The licence holder must ensure that all pipelines containing environmentally hazardous substances are provided with secondary containment adequate to contain any spill for a period equal to the time between routine inspections.

Operation

3. The licence holder must ensure that the waste types specified in Table 2 are only subjected to the corresponding processes, subject to the corresponding process limits and/or specifications.

Table 2: Waste processing

Waste type	Process(es)	Process limits and/or specifications[1,2]
Inert Waste Type 1, putrescible waste and clean fill of the following kind: • Office wastes, including cardboard • Inert building rubbish • Clean fill from building or associated excavations • Timber, including pallets • Plastic wrapping	Disposal only to putrescible waste landfill trench in Lost Dog Waste Landform of waste from: construction/operation activities, accommodation camp, offices, workshop and processing plant	Less than 5,000 tonnes per annual period is to be disposed of at the landfill. The waste must be covered weekly with dense, inert and incombustible material. Any windblown waste must be collected on a weekly basis and returned to the active landfill trench or otherwise appropriately contained. The top level of disposed waste must not exceed 500 mm from the top of any part of a trench.
Inert Waste Type 2: Tyres only	Disposal only to tyre disposal landfill trench in Lost Dog Waste Landform 1.	None specified.
Hydrocarbon contaminated soils	Disposal / treatment only to the bioremediation pad situated within the Lost Dog Waste Landform or taken offsite for disposal to an authorised facility.	Bioremediation pad must be bunded to divert clean stormwater away and capture contaminated runoff.

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.
Note 2: Additional requirements for the acceptance and landfilling of controlled waste (including tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

Emissions and discharges

4. The licence holder must ensure that the emissions specified in Table 3 are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

Table 3: Authorised discharge points

Emission	Discharge point	Discharge point location
Tailings	Black Cat in-pit TSF	As shown on Schedule 1 Maps, Figure 3
	Lost Dog Panel 1 in-pit TSF	As shown on Schedule 1 Maps, Figure 4
	Panther Pit in-pit TSF	As shown on Schedule 1 Maps, Figure 5
	Jaurdi TSF	As shown on Schedule 1 Maps, Figure 6
	Lost Dog Panel 2 and 4 in-pit TSF	As shown on Schedule 1 Maps, Figure 7

Monitoring

5. The licence holder must ensure that:

(a) monitoring is undertaken in each monthly period such that there are at least 15 days in between the days on which samples are taken in successive months; and

(b) monitoring is undertaken in each quarterly period such that there are at least 45 days in between the days on which samples are taken in successive quarters.

6. The licence holder must monitor the groundwater for concentrations of the parameters listed in Table 4:

(a) at the corresponding monitoring location;

(b) in the corresponding unit;

(c) at no less that the corresponding frequency;

(d) for the corresponding averaging period; and

(e) using the corresponding method,

as set out in Table 4.

Table 4: Monitoring of ambient concentrations

<table>
<tr><th rowspan="2">Parameter</th><th rowspan="2">Monitoring location</th><th rowspan="2">Unit</th><th rowspan="2">Frequency</th><th rowspan="2">Averaging period</th><th colspan="2">Method</th></tr>
<tr><th>Sampling</th><th>Analysis</th></tr>
<tr><td>Standing water levels</td><td rowspan="10">Black Cat in-pit TSF monitoring bores (Error! Reference source not found.):
BCTSFMB01, BCTSFMB02, BCTSFMB03, BCTSFMB04, BCTSFMB05

Lost Dog Panel 1 in-pit TSF monitoring bores (Error! Reference source not found.)
LDTSFMB01, LDTSFMB02, LDTSFMB03, LDTSFMB04, LDTSFMB05, LDTSFMB06, LDTSFMB07

Panther in-pit TSF monitoring bores: (Error! Reference source not found.)
PTSFMON01, PTSFMON02, PTSFMON03,</td><td>mbgl</td><td rowspan="3">Monthly</td><td rowspan="3">Spot sample</td><td rowspan="10">Spot sample in accordance with AS/NZS 5667.11</td><td rowspan="3">Field readings</td></tr>
<tr><td>pH – field reading</td><td>-</td></tr>
<tr><td>Conductivity</td><td>µS/cm</td></tr>
<tr><td>Standing water levels</td><td>mbgl</td><td rowspan="7">Quarterly</td><td rowspan="7">Spot sample</td></tr>
<tr><td>pH</td><td>-</td><td rowspan="7">By laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters</td></tr>
<tr><td>Weak acid dissociable cyanide</td><td rowspan="6">mg/L</td></tr>
<tr><td>Total cyanide</td></tr>
<tr><td>Total dissolved solids</td></tr>
</table>

	PTSFMON04, PTSFMON05 **Jaurdi TSF** JTSFMB1, JTSFMB1A, JTSFMB2, JTSFMB2A, JTSFMB3, JTSFMB3A, JTSFMB4, JTSFMB4A, JTSFMB5, JTSFMB5A, JTSFMB6, JTSFMB6A, JTSFMB7, JTSFMB7A, JTSFMB8, JTSFMB8A **Lost Dog Panel 2/4 in-pit TSF monitoring bores (Figure 7)** LDTSFMB09, LDTSFMB10, LDTSFMB11, LDTSFMB12, LDTSFMB13, LDTSFMB14, LDTSFMB15, LDTSFMB16					

7. The licence holder must record the results of all monitoring activity required by condition 6.

8. Subject to conditions 9 and 10, the licence holder must submit to the CEO a written report within 60 days of an exceedance where ambient concentrations:

(a) at the monitoring location listed in Table 5;

(b) for the corresponding parameter in Table 5; and

(c) exceed the corresponding trigger value in Table 5,

when monitored in accordance with condition 6.

Table 5: Ambient water quality trigger values

Monitoring location	Parameter	Trigger value
Lost Dog Panel 1 in-pit TSF monitoring bores: LDTSFMB01, LDTSFMB02, LDTSFMB03, LDTSFMB04, LDTSFMB05, LDTSFMB06, LDTSFMB07	Standing water level	Less than or equal to 6 mbgl
Jaurdi TSF JTSFMB1, JTSFMB1A, JTSFMB2, JTSFMB2A, JTSFMB3, JTSFMB3A, JTSFMB4, JTSFMB4A, JTSFMB5, JTSFMB5A, JTSFMB6, JTSFMB6A,		Less than or equal to 7 mbgl

JTSFMB7, JTSFMB7A, JTSFMB8, JTSFMB8A		
Lost Dog Panel 2/4 in-pit TSF monitoring bores: LDTSFMB09, LDTSFMB10, LDTSFMB11, LDTSFMB12, LDTSFMB13, LDTSFMB14, LDTSFMB15, LDTSFMB16		Less than or equal to 6 mbgl

9. The licence holder must include the following information in the report referred to in condition 8 in relation to any exceedances of any of the trigger values identified in that condition:

(a) the nature, volume, and characteristics of the emissions or ambient concentrations exceedance;

(b) the time and date when the exceedance occurred;

(c) whether any environmental impact occurred as a result of the exceedance and, if so, what that impact was and where the impact occurred;

(d) the details of the management action taken pursuant with condition 10 in response to the exceedance;

(e) the details and result of any investigation undertaken into the cause of the exceedance;

(f) the details of any action or specified measures that have been taken, or will be taken, to prevent the exceedance occurring again and for the purpose of minimising the likelihood of pollution or environmental harm; and

(g) Report the expected timeframe that the exceedance will be resolved.

10. The licence holder must, in the event of a parameter in condition 8 exceeding the corresponding trigger value specified in condition 8, undertake the management action that corresponds with the relevant parameter and monitoring locations within the corresponding timeframe as specified in condition 8.

Table 6: Management actions required in the event of trigger value exceedance

Monitoring location	Parameter	Management action	Timeframe
Lost Dog Panel 1 in-pit TSF monitoring bores: LDTSFMB01, LDTSFMB02, LDTSFMB03, LDTSFMB04, LDTSFMB05, LDTSFMB06, LDTSFMB07	Standing water level	Prepare and implement effective management of groundwater mounding in the vicinity of the Lost Dog Panel 1 in-pit TSF.	Within 60 days of the exceedance of the trigger level
Jaurdi TSF JTSFMB1, JTSFMB1A, JTSFMB2, JTSFMB2A, JTSFMB3, JTSFMB3A, JTSFMB4, JTSFMB4A, JTSFMB5, JTSFMB5A, JTSFMB6, JTSFMB6A, JTSFMB7, JTSFMB7A, JTSFMB8, JTSFMB8A		Commence pumping from bores within the area.	Within 30 days of the exceedance
		Construct a seepage recovery trench at the location shown in Schedule 1, Figure 9, labelled 2 m Deep Seepage Recovery Trench. The seepage recovery trench shall be constructed as detailed in Schedule 1, Figure 10, cross section labelled Seepage Recovery Trench – Details.	Within 90 days of the exceedance

		The sump shall be included in the seepage recovery trench at the location shown in Schedule 1, Figure 9, labelled Seepage Recovery Trench 1:50. The sump shall be constructed as detailed in Schedule 1, Figure 10, cross section labelled Seepage Recovery Trench 1:100.	
Lost Dog Panel 2/4 in-pit TSF monitoring bores: LDTSFMB09, LDTSFMB10, LDTSFMB11, LDTSFMB12, LDTSFMB13, LDTSFMB14, LDTSFMB15, LDTSFMB16		Commence pumping from groundwater recovery bores surrounding the TSF	Within 30 days of the exceedance

11. The licence holder must not use bores for compliance monitoring as per condition 6 if they are being actively pumped for groundwater or seepage recovery.

12. The licence holder must undertake monitoring of the water balance for Black Cat in-pit TSF, Lost Dog in-pit TSF panel 1, Panther in-pit TSF, Jaurdi TSF and Lost dog in-pit TSF panel 2/4 each monthly period, and (as a minimum) record the following information:

(a) site rainfall;

(b) evaporation rate;

(c) decant water recovery volumes;

(d) volume of tailings deposited; and

(e) estimate of seepage losses.

Records and reporting

13. The licence holder must record the following information in relation to complaints received by the licence 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 licence holder to investigate or respond to any complaint.

14. The licence holder must:

(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

(b) prepare and submit to the CEO by no later than 30 days after the end of that annual period an Annual Audit Compliance Report in the approved form.

15. The licence holder must submit to the CEO by no later than 30 days after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 7, and which provides information in accordance with the corresponding requirement set out in Table 7.

Table 7: Annual Environmental Report

Condition	Requirement
6	(a) Tabulated groundwater monitoring data results and time series graphs for each monitoring well showing concentrations of all parameters over a 4 year period. (b) Laboratory data sheets for quarterly monitoring in accordance with condition **Error! Reference source not found.**. (c) An interpretation of monitoring data results including comparison to historical trends.
12	(a) A tabulated data summary of monitoring results (b) An interpretation of monitoring data results including comparison to historical trends.
13	Complaints summary.

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

(a) the calculation of fees payable in respect of this licence;

(b) any maintenance of infrastructure that is performed in the course of complying with condition 1 of this licence;

(c) monitoring programmes undertaken in accordance with condition 6 of this licence; and

(d) complaints received under condition 13 of this licence.

17. The books specified under condition 16 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 licence holder for the duration of the licence; and

(d) be available to be produced to an inspector or the CEO as required.

Definitions

In this licence, the terms in Table 8 have the meanings defined.

Table 8: Definitions

Term	Definition
ACN	Australian Company Number.
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 (R2016) Water quality – sampling – guidance on sampling groundwater, as amended from time to time.
annual period	a 12 month period commencing from 1 October until 30 September of the immediately following year.
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
CIL	Carbon-in-leach
Department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
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.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
Inert Waste Type 1	has the meaning defined in the Landfill definitions.
Inert Waste Type 2	has the meaning defined in the Landfill definitions.

JTSFMB	Jaurdi Tailings Storage Facility Monitoring Bore
Landfill Definitions	means the document titled “Landfill Waste Classification and Waste Definitions 1996” published by the Chief Executive Officer of the Department of Environment as amended from time to time.
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
LDTSFMB	Lost Dog Tailings Storage Facility Monitoring Bore
LDTSFP24	Lost Dog in-pit Tailings Storage Facility panel 2/4
m	metre(s)
mm	millimetre(s)
mbgl	means metres below ground level.
µS/cm	micro siemens per centimetre.
mg/L	milligrams per litre.
monthly period	means a one-month period commencing from the second day of a month until the first day of the immediately following month.
NATA	National Association of Testing Authorities, Australia.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map Figure 1 in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
putrescible	has the meaning defined in the Landfill definitions.
quarterly	means the 4 inclusive periods from 1 April to 30 June, 1 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March.
ROM	Run of Mine.
Schedule 1	means Schedule 1 of this Licence unless otherwise stated.
spot sample	means a discrete sample representative at the time and place at which the sample is taken.

TSF	Tailings storage facility.
Uncontaminated fill	Means: (a) inert waste type 1 (excluding asphalt and biosolids) (b) neutralised acid sulfate soil as defined in the Landfill Waste Classification and Waste Definitions 1996 (as amended 2019).
waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in the map below (Error! Reference source not found.**).**

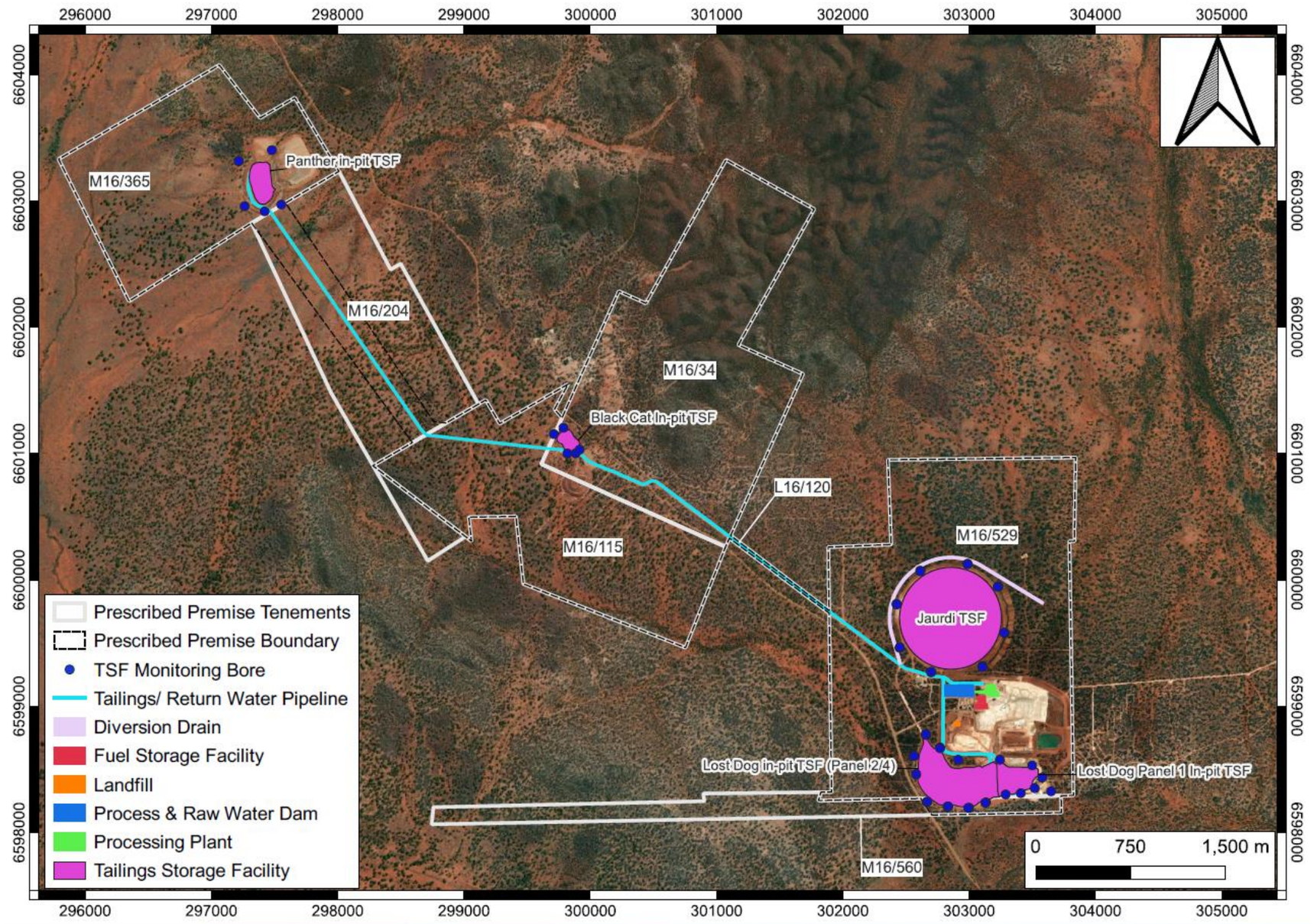

Figure 1: Map of the boundary of the prescribed premises

The layout of the processing plant is shown below (Figure 2).

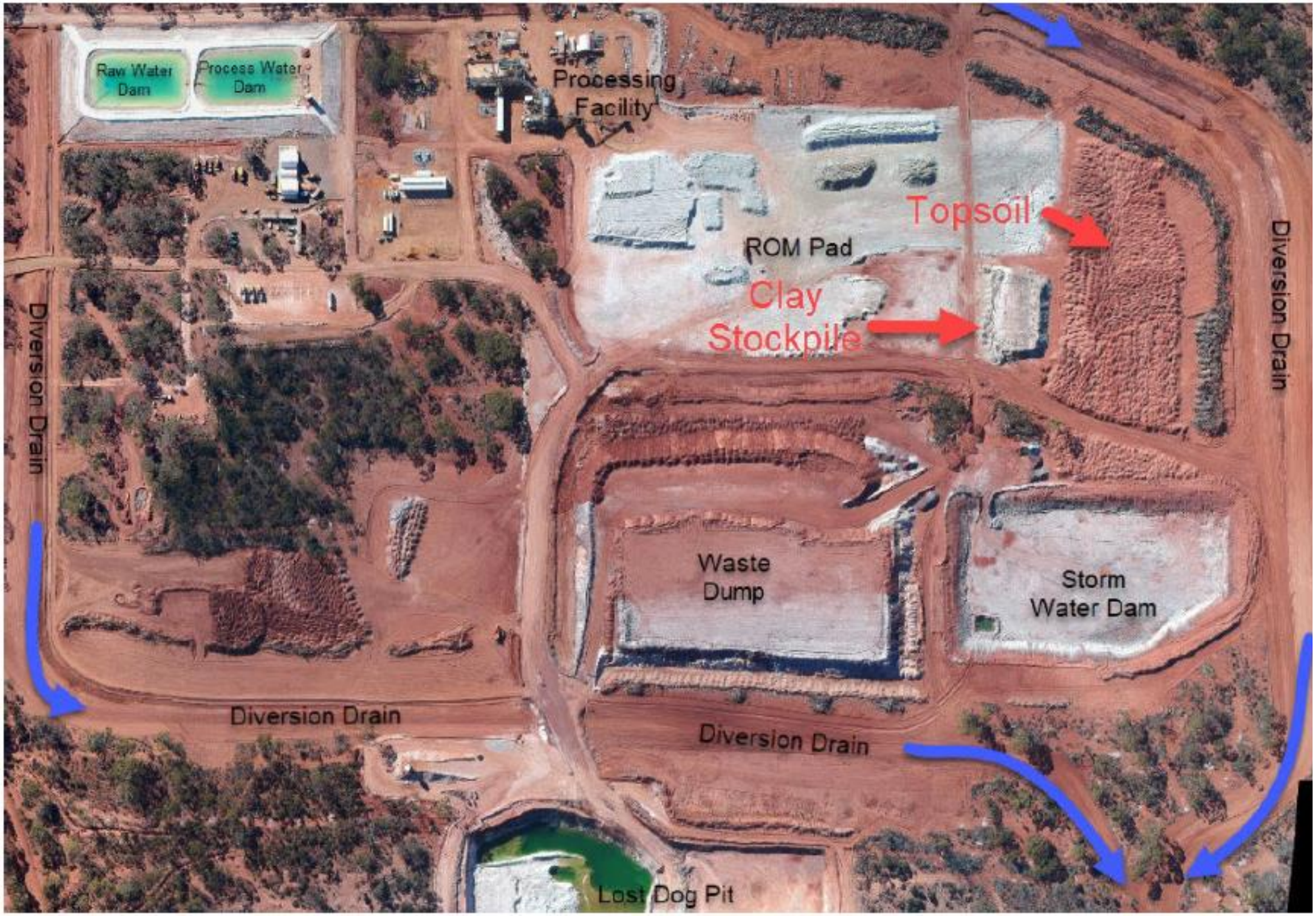

Figure 2: Processing plant layout

Maps of monitoring bore locations

The monitoring bores and tailings/return water pipeline for the Black Cat in-pit TSF is shown below (Figure 3).

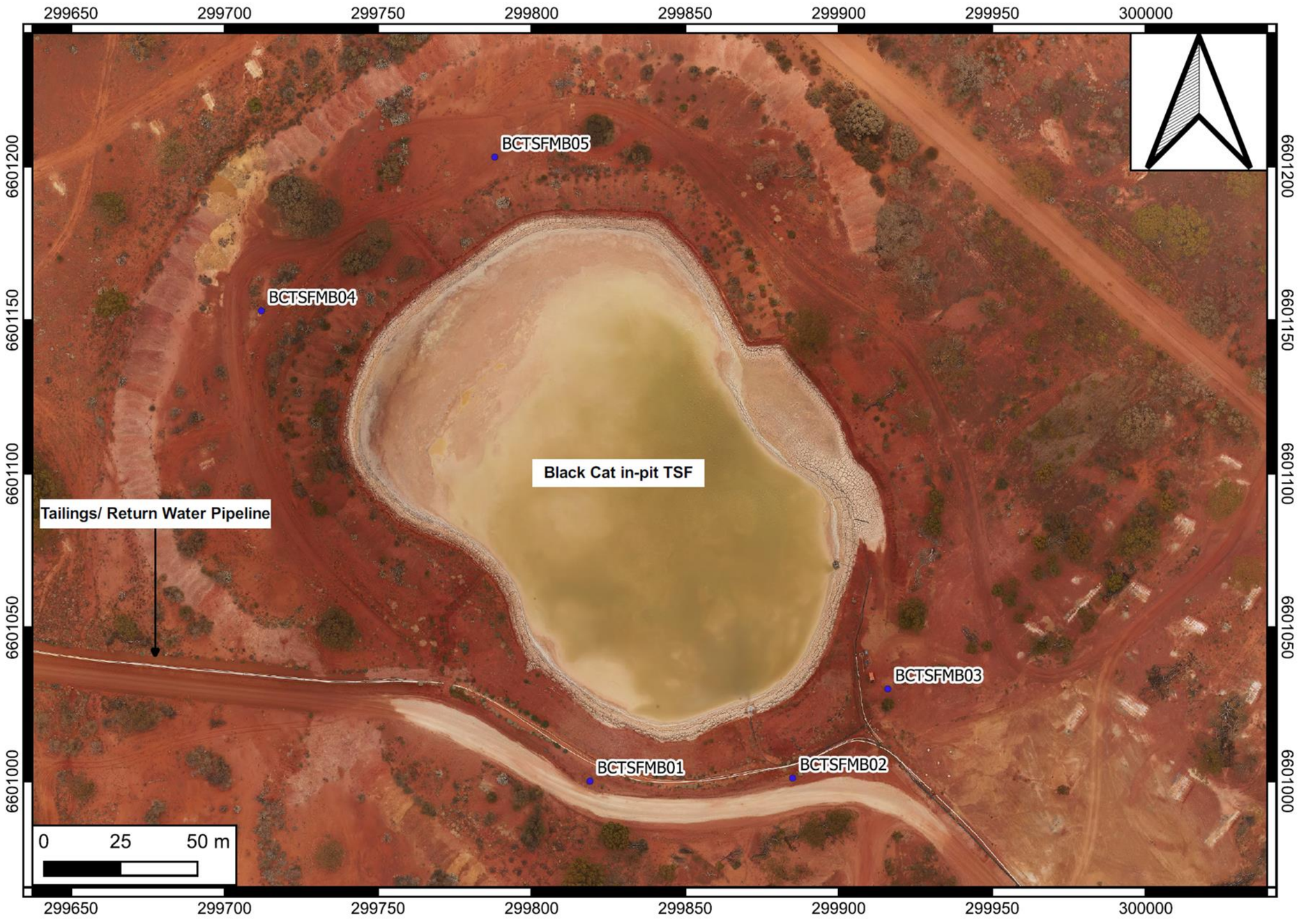

Figure 3: Black Cat in-pit TSF monitoring bores with Tailings/Return Water Pipeline

The monitoring bores for Lost-Dog in-pit TSF is shown below (Figure 4).

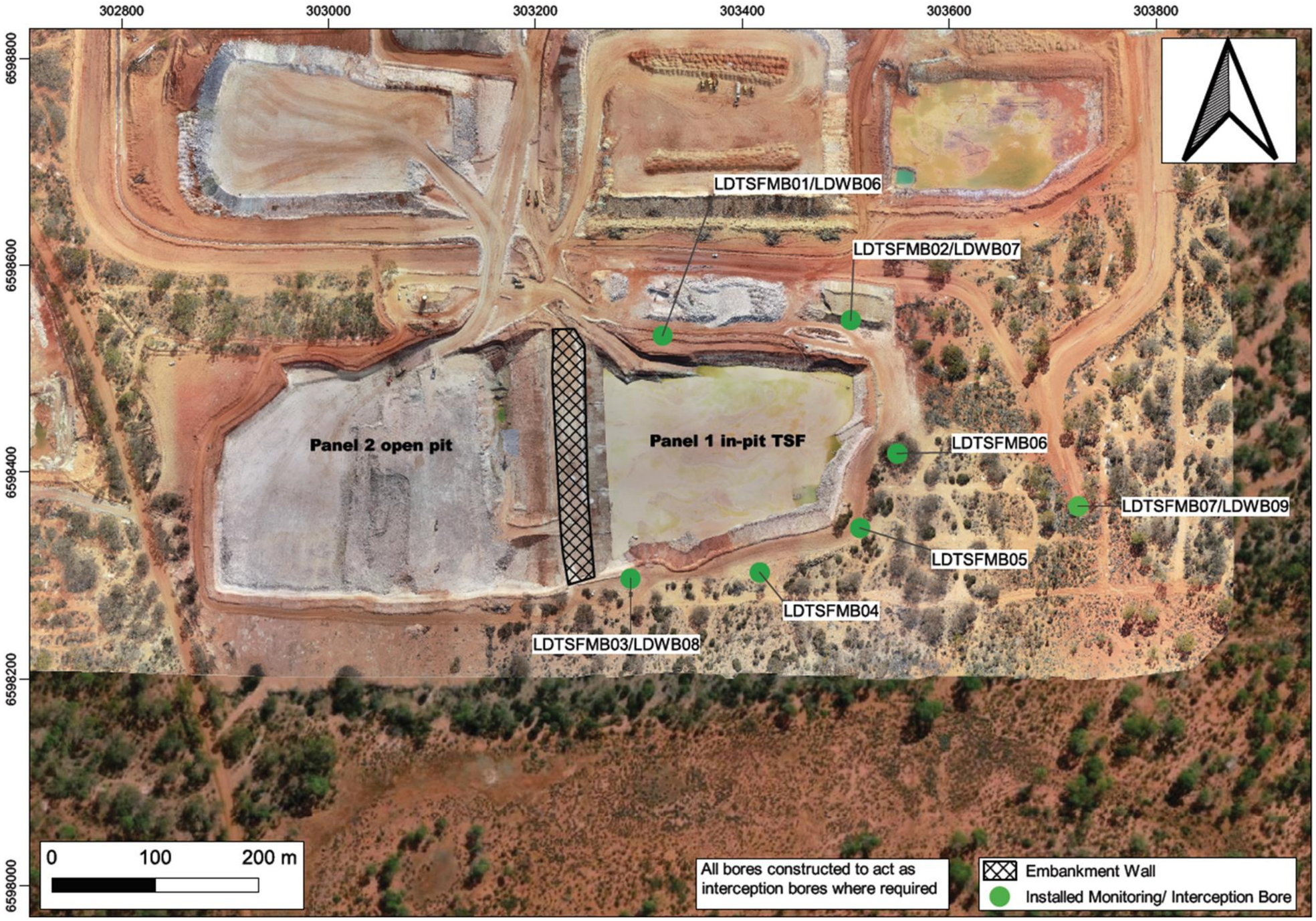

Figure 4: Lost Dog in-pit TSF monitoring bores

The monitoring bores and tailings/return water pipeline for Panther in-pit TSF is shown below (Figure 5).

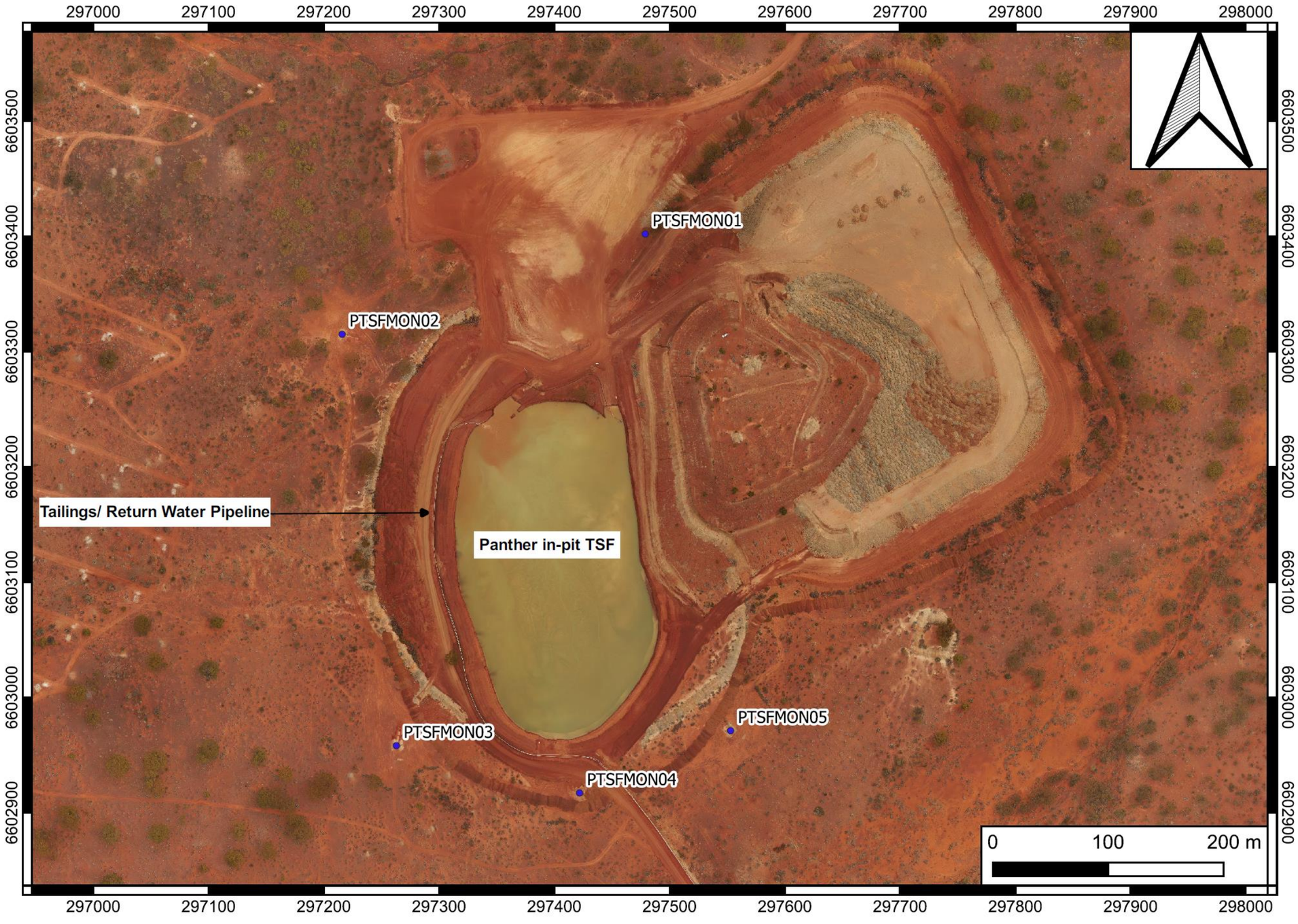

Figure 5: Panther in-pit TSF monitoring bores with Tailings/Return Water Pipeline

The monitoring/recovery and shallow monitoring bores (A) for the Jaurdi TSF is shown below (Figure 6).

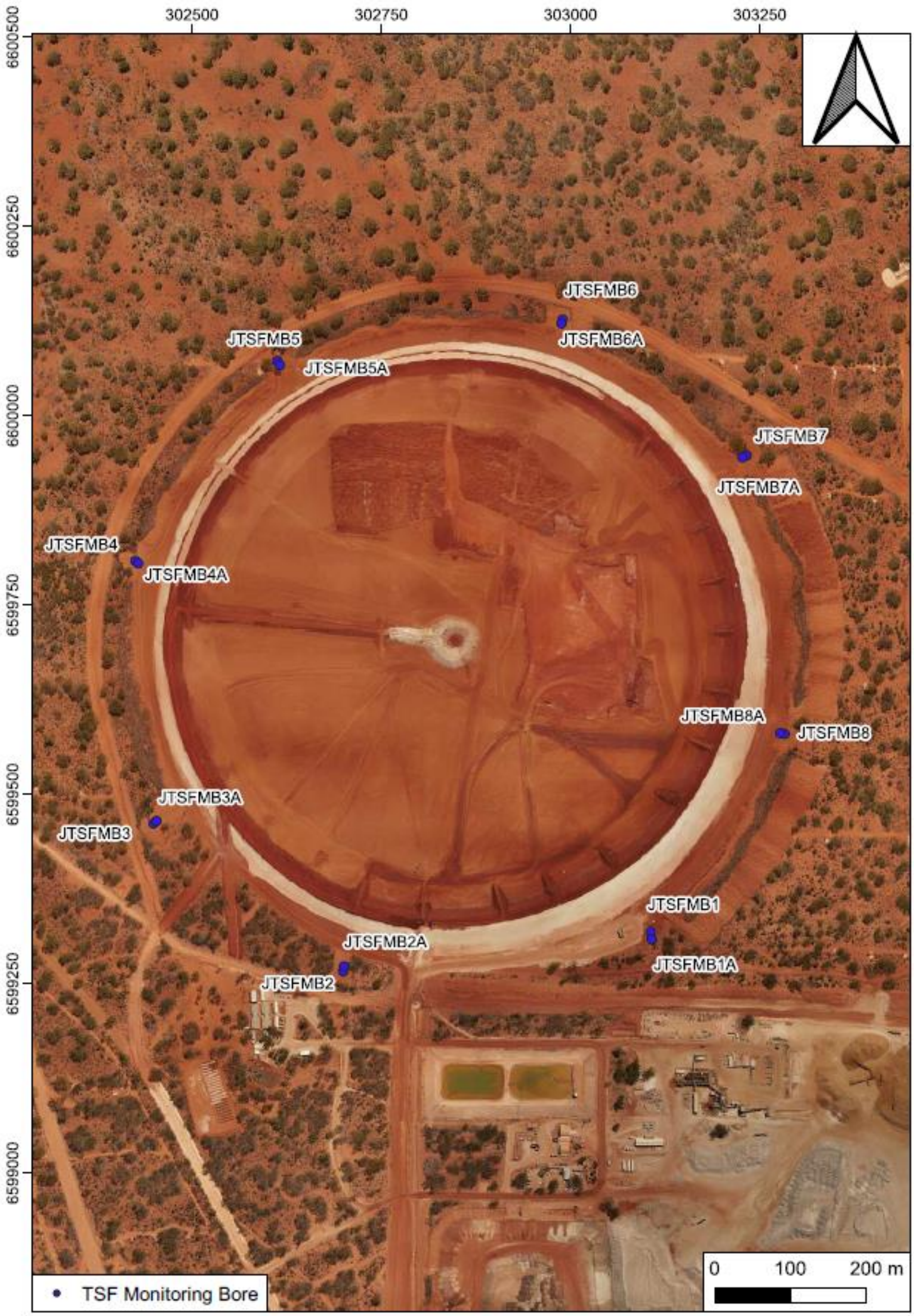

Figure 6: Jaurdi TSF monitoring bores

The monitoring/recovery and shallow monitoring bores (A) for the Lost dog in-pit TSF Panel 2/4 is shown below (Figure 7).

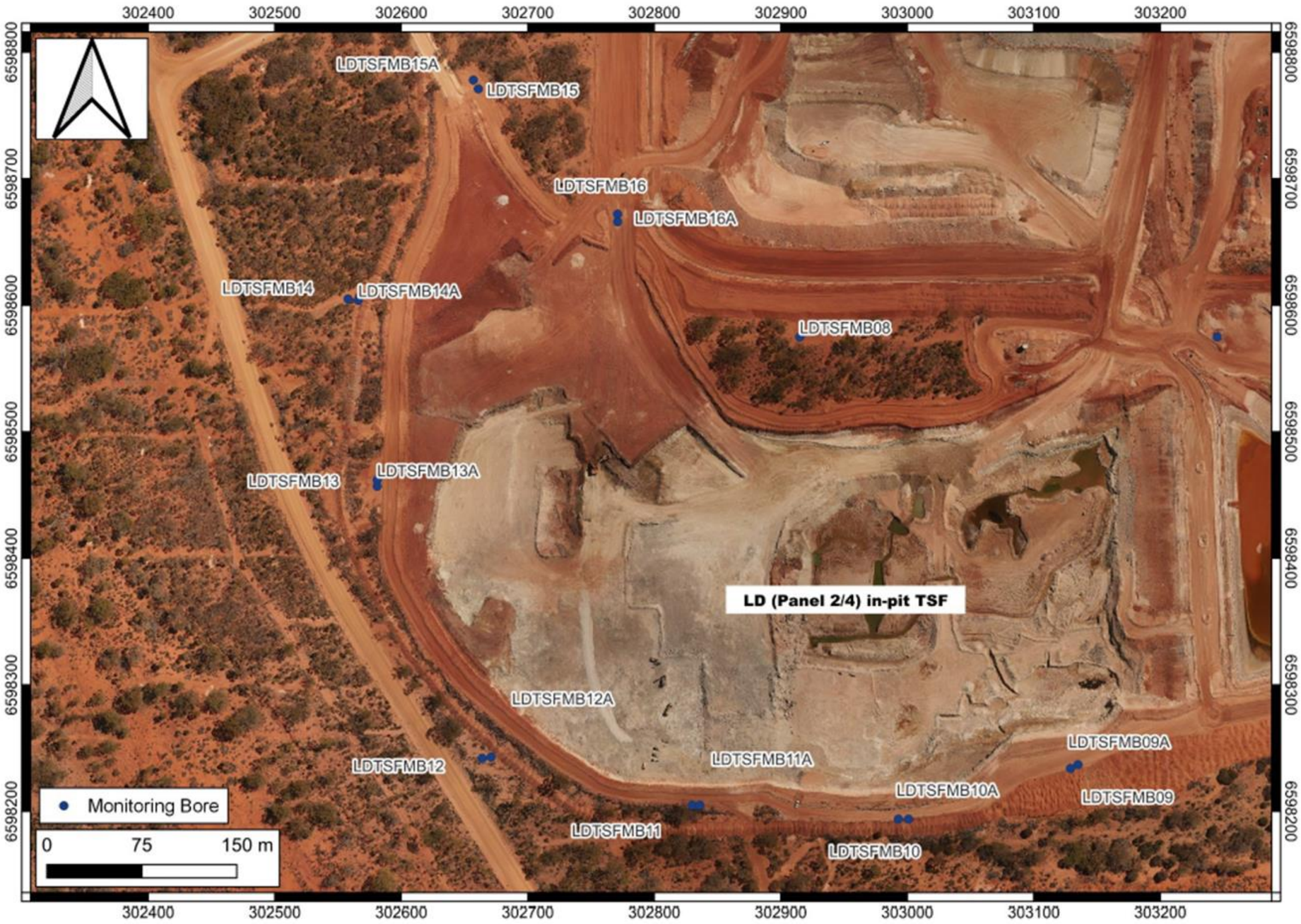

Figure 7: Lost dog in-pit TSF panel 2/4 monitoring bores

The landfill trenches are shown below (Figure 8).

Figure 8: Premises Landfill trenches

The General arrangement of the Jaurdi TSF is shown below in Figure 9.

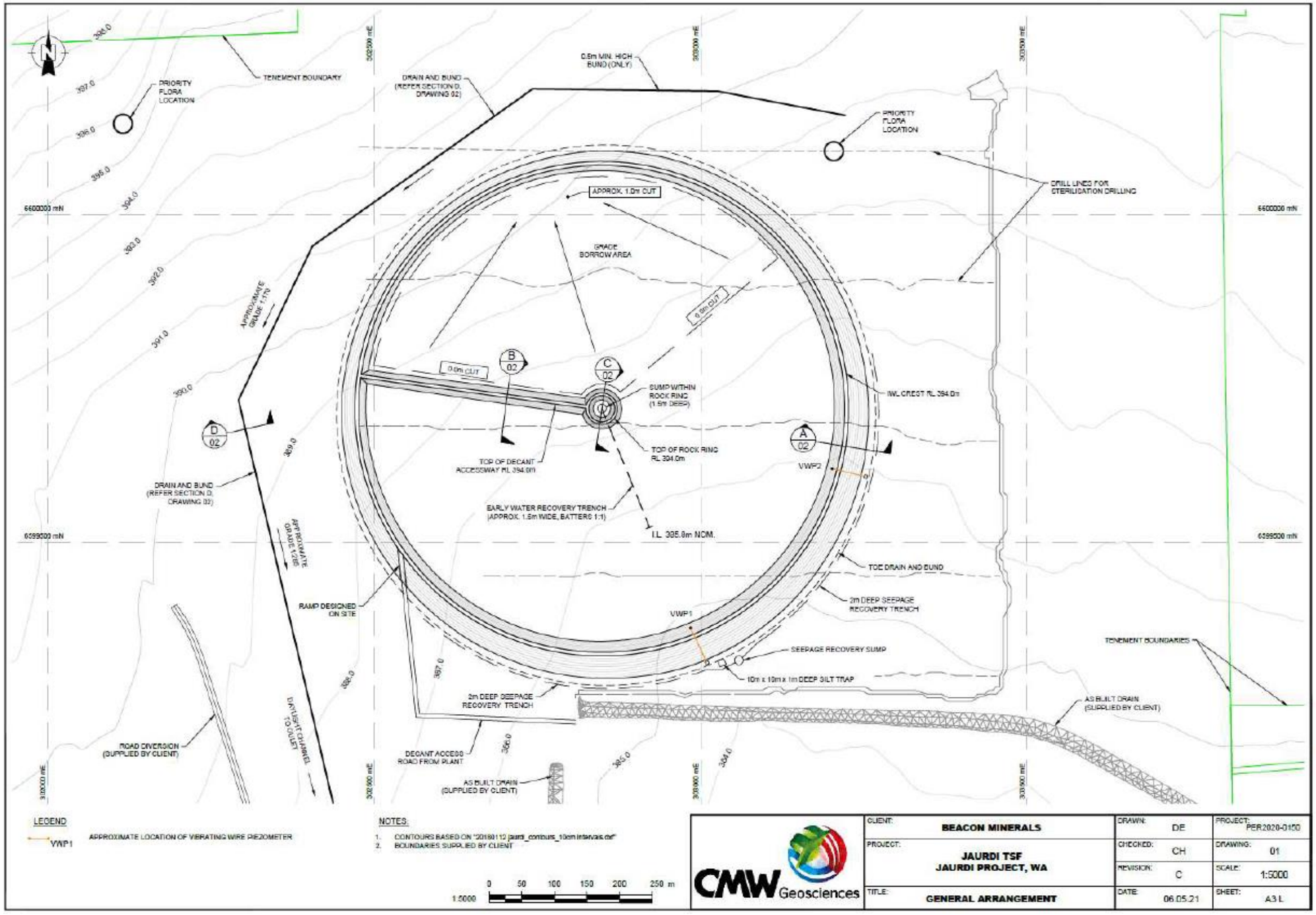

Figure 9: General arrangement of tailings storage facility

The construction details of the Jaurdi TSF are shown in Figure 10 below.

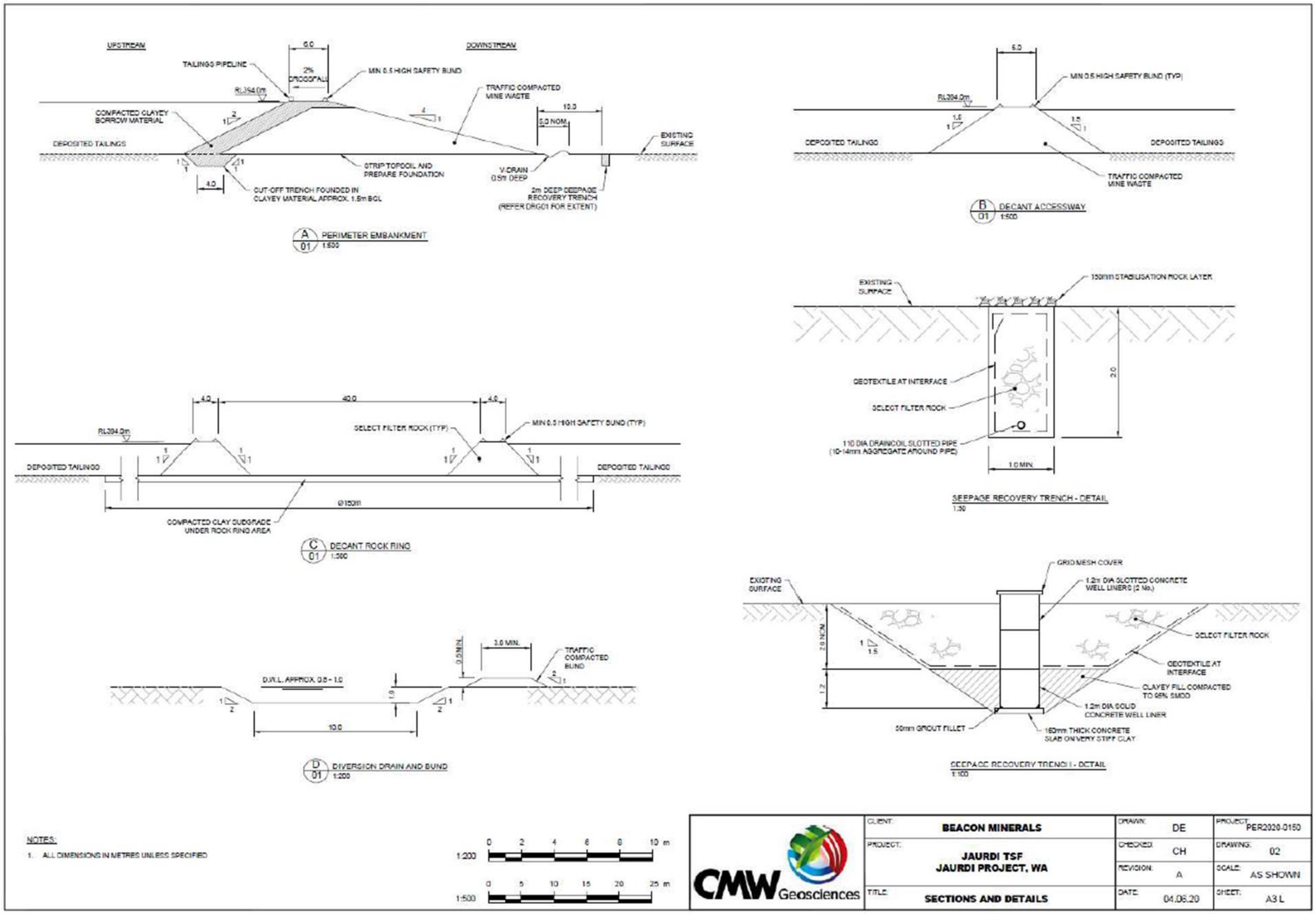

Figure 10: Details of construction

The Surface water management infrastructure is shown below in Figure 11.

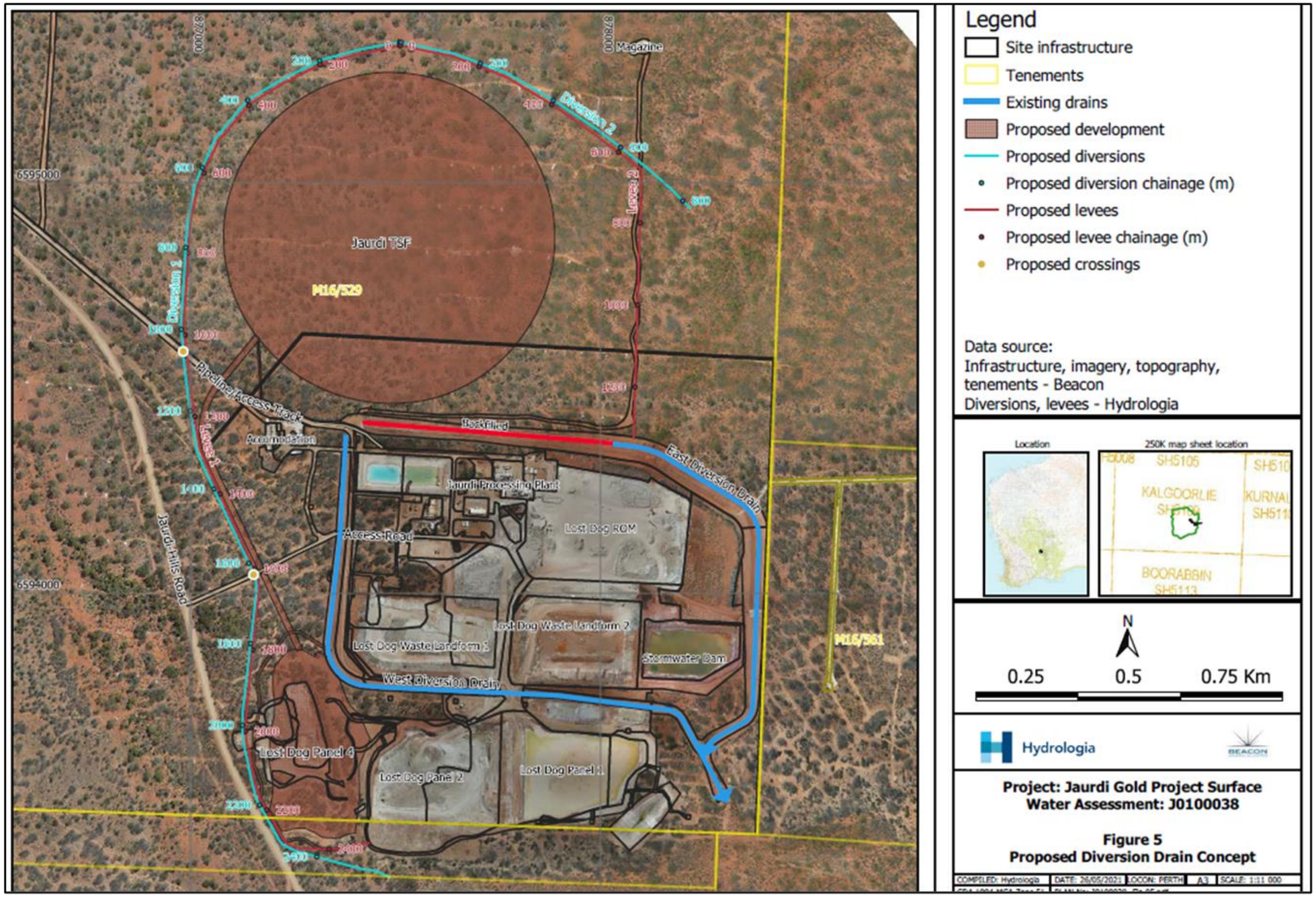

Figure 11: Surface water management infrastructure within the Jaurdi gold project