



<b>Works approval number</b>	W6585/2021/1
<b>Works approval holder</b>	Black Cat (Bulong) Pty Ltd
<b>ACN</b>	620 898 044
<b>Registered business address</b>	Level 3, 52 Kings Park Road WEST PERTH, WA, 6005
<b>DWER file number</b>	DER2021/000439
<b>Duration</b>	13/12/2021 to 12/12/2025
<b>Date of amendment</b>	8 February 2022
<b>Premises details</b>	Imperial Majestic Mine Mining tenement M25/350 As defined in Schedule 1

<b>Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)</b>	<b>Assessed production / design capacity</b>
Category 5: Processing or beneficiation of metallic or non-metallic ore	800,000 tonnes per annum
Category 6: Mine dewatering	1,000,000 kL per annum

This works approval is granted to the works approval holder, subject to the attached conditions, on 8 February 2022 by:

**Lauren Edmands**

**A/SENIOR MANAGER – RESOURCE INDUSTRIES**

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

## Works approval history

Date	Reference number	Summary of changes
13/12/2021	W6585/2021/1	Works approval granted.
8/02/2022	W6585/2021/1	Works approval amended: changes to WAD limit and requirement for decant monitoring

## 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
  - (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
- (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:

## General

1. The works approval holder must manage dust generation at the premises by:
  - (a) wetting down unsealed roads, exposed areas and dust generating construction activities with a water truck
  - (b) limiting all vehicle traffic within the premises to speeds of less than 40 km/hr.
2. Where the works approval holder uses saline water for dust suppression during both construction and time limited operations activities, the water must be applied to avoid damage to native vegetation (such as from over-spraying or runoff).

## Construction phase

### Infrastructure and equipment (critical containment infrastructure – tailing storage facility)

3. The works approval holder must:
  - (a) construct all critical containment infrastructure
  - (b) in accordance with the corresponding design and construction requirements
  - (c) at the corresponding infrastructure location.
 as set out in Table 1

**Table 1 Critical containment infrastructure design and construction requirements**

	Infrastructure	Design and construction requirements (tailings storage facility)	Infrastructure location
1.	Tailings Storage Facility Starter embankment (cells 1 and 2)	<ul style="list-style-type: none"> <li>Height of TSF starter embankment 9 m:               <ul style="list-style-type: none"> <li>Cell 1 (RL 348.5 m AHD); and</li> <li>Cell 2 (RL 345.5 m AHD).</li> </ul> </li> <li>Constructed within mining tenement M25/350.</li> <li>Each cell constructed with capacity of 1 mega tonne (Mt) (total 2 Mt for both cell 1 and 2).</li> <li>Total footprint of 42 hectares (ha).</li> <li>Constructed to provide a minimum 0.7 metre (m) total freeboard (including an allowance for the 1% annual exceedance probability [AEP] 72-hour rain event) above the normal operating pond.</li> </ul>	As shown in Figure 1 and Figure 2 of Schedule 1
2.	Foundation preparation	<ul style="list-style-type: none"> <li>Grout and cap all known existing drill holes located within the TSF foundation.</li> <li>Grout and decommission all known existing wells located within the TSF foundation in accordance with ASTM D5299/D5299M-18 Decommissioning of Groundwater Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities.</li> <li>Ensure that a minimum of 0.5 m deep clay layer remains above any residual and weathered rock layers.</li> </ul>	

	Infrastructure	Design and construction requirements (tailings storage facility)	Infrastructure location
3.	Cut – off trench	<ul style="list-style-type: none"> <li>A cut-off trench to 1 m below ground level included within embankment design, for the entire embankment perimeter.</li> <li>As per drawing PER2021-0141-03 (Figure 4 of Schedule 1).</li> </ul>	
4.	Underdrainage system	<ul style="list-style-type: none"> <li>Comprise underdrainage lines grading to an underdrainage sump located near the northeast corners of both TSF1 and TSF2 as per drawing PER2021-01414-02 (Figure 3 of Schedule 1) and PER2021-0141-04 (Figure 5 of Schedule 1)</li> </ul>	
5.	In-situ compacted clay liner	<ul style="list-style-type: none"> <li>Constructed with an inner compacted clay liner (minimum 300 mm thick) with a low permeability liner with a hydraulic conductivity of <math>1 \times 10^{-9}</math> m/s</li> <li>Testing of the compacted clay liner to confirm permeability must be completed at a rate of one test per hectare.</li> <li>Constructed as specified in drawing PER2021-0141-03 (Figure 4 of Schedule 1)</li> </ul>	
6.	Water reclamation	<ul style="list-style-type: none"> <li>Pump off decant water system with central “rock ring” decant within each cell; and</li> <li>Water recovery system to have capacity of <math>\geq 90</math> tph</li> <li>Constructed as specified in drawings PER2021-0141-02 (Figure 3 of Schedule 1).</li> </ul>	
7.	Pipelines carrying tailings and decant return water	<ul style="list-style-type: none"> <li>Pipelines fitted with flow meters and telemetry pressure transmitters to allow remote monitoring and flow control.</li> <li>The system must be set to trigger an operator alarm and automatic shut-off of pumping systems should a variation in flow rates by more than 5% for 10 minutes or more than 10% for two minutes be detected.</li> <li>Tailings pipeline located within bunds to contain spillage/leaks.</li> <li>Pipelines must be located within a bund of sufficient capacity to completely contain any spills from pipeline leakage or breach for a period equal to the time between routine inspections. The works approval holder must provide evidence of such capacity within the Critical Containment Infrastructure Report as required by Condition 6.</li> <li>Constructed as per PER2021-0141-07 (Figure 7 of Schedule 1).</li> </ul>	
8.	Vibrating wire piezometers (VWP)	<ul style="list-style-type: none"> <li>6 VWP to be installed around the entire TSF perimeter as shown in Figure 6 and Figure 8 of Schedule 1.</li> </ul>	

	Infrastructure	Design and construction requirements (tailings storage facility)	Infrastructure location
		<ul style="list-style-type: none"> <li>VWP to have instrument readout stations (to download data to a central storage location).</li> </ul>	

### Infrastructure and equipment (non-critical containment infrastructure)

4. The licence holder must construct and/or install the infrastructure listed in Table 2, in accordance with;
- the corresponding construction requirement / installation requirement; and
  - at the corresponding infrastructure location;
- as set out in Table 2.

**Table 2 Design and construction/installation requirements**

	Infrastructure	Design and construction requirements	Infrastructure location
1	Gold processing plant and associated infrastructure	<ul style="list-style-type: none"> <li>Gold processing plant comprises the following infrastructure and equipment: <ul style="list-style-type: none"> <li>Run of mine (ROM) pad</li> <li>Crushing circuit – primary jaw crusher and secondary cone crusher</li> <li>Mill and cyclone</li> <li>Carbon in leach (CIL) and absorption circuit</li> <li>Elution and gold recovery circuit.</li> </ul> </li> <li>Plant area to be constructed upon a compacted pad <math>\geq 300</math> mm above natural surface.</li> <li>Reagents, dangerous goods, and diesel to be stored in concrete bunded areas in accordance with AS1940 and AS1692 in accordance with the <i>Dangerous Goods Safety Act 2004</i>.</li> <li>A surface water bund to be installed to divert stormwater away from operational areas</li> </ul> <p>Layout of the processing plant to be in accordance with Figure 2 in Schedule 1.</p>	As shown in Figure 1 and Figure 2 of Schedule 1
2	Process water pond	<ul style="list-style-type: none"> <li>HDPE lined (1.0 mm minimum) with a low permeability liner of <math>1 \times 10^{-9}</math> m/s and designed to contain a one in one hundred-year 72 hours ARI rainfall event.</li> <li>Minimum 300 mm freeboard</li> </ul>	
3	Stormwater pond	<ul style="list-style-type: none"> <li>Dimensions 65 m X 230 m X 4 m deep.</li> <li>3 m deep to spillway.</li> <li>Constructed with a compacted clay base.</li> <li>Able to contain a one in one hundred-year 72 hours ARI rainfall event.</li> </ul>	

## Construction of groundwater monitoring wells

5. The works approval holder must design, construct, and install new groundwater monitoring wells in accordance with the requirements specified in Table 3.

**Table 3 Groundwater monitoring well construction requirements**

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
Groundwater monitoring well(s): MB-05 MB-06 MB-07 AND A minimum of one monitoring well along the southern prescribed premises boundary (south of the exploration yard)	<p><u>Well design and construction:</u> Designed and constructed in accordance with <i>ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores</i>. Well screens must target the part, or parts, of the aquifer most likely to be affected by contamination<sup>1</sup>. Where temporary/seasonal perched features are present, wells must be nested, and the perched features individually screened.</p> <p><u>Logging of borehole:</u> Soil samples must be collected and logged during the installation of the monitoring wells. A record of the geology encountered during drilling must be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS1726. Any observations of staining/odours or other indications of contamination must be included in the bore log.</p> <p><u>Well construction log:</u> Well construction details must be documented within a well construction log to demonstrate compliance with ASTM D5092/D5092M-16. The construction logs shall include elevations of the top of casing position to be used as the reference point for water-level measurements, and the elevations of the ground surface protective installations.</p> <p><u>Well development:</u> All installed monitoring wells must be developed after drilling to remove fine sand, silt, clay and any drilling mud residues from around the well screen to ensure the hydraulic functioning of the well. A detailed record should be kept of well development activities and included in the well construction log.</p>	Monitoring well as shown in Figure 6 and Figure 8 of Schedule 1  AND  One monitoring well along the southern prescribed premises boundary (south of the exploration yard)	Must be constructed, developed (purged) and determined to be operational no later than 30 calendar days prior to the commencement of time limited operations under condition 15.

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
	<p><u>Installation survey:</u> The vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor.</p> <p><u>Well network map:</u> A well location map (using aerial image overlay) must be prepared and include the location of all monitoring wells in the monitoring network and their respective identification numbers.</p>		

*Note<sup>1</sup>: refer to Section 8 of Schedule B2 of the Assessment of Site Contamination NEPM for guidance on well screen depth and length.*

### Compliance reporting (critical containment infrastructure)

6. The works approval holder must within 30 calendar days of the Critical Containment Infrastructure identified by condition 3 being constructed:
  - (a) undertake an audit of their compliance with the requirements of condition 3; and
  - (b) prepare and submit to the CEO a Critical Containment Infrastructure Report on that compliance.
7. The Critical Containment Infrastructure Report required by condition 6 must include as a minimum the following:
  - (a) certification by a suitably qualified geotechnical engineer that each item of critical containment infrastructure or component thereof, as specified in condition 3, has been built and installed in accordance with the requirements specified in condition 3;
  - (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 3;
  - (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;
  - (e) a Quality Control / Quality Assurance Certificate from an independent third party which demonstrates that the in-situ compacted clay liner meets the requirements specified in Condition 3, Table 1.

### Compliance reporting (non-critical containment infrastructure)

8. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 4 being constructed and/or installed:
  - (a) undertake an audit of their compliance with the requirements of condition 4 and
  - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
9. The Environmental Compliance Report required by condition 8, must include as a minimum the following:
  - (a) certification by a suitably qualified geotechnical or civil engineer that the items of infrastructure or component(s) thereof, as specified in condition 4, have been constructed in accordance with the relevant requirements specified in condition 4;
  - (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 4; and
  - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

### Compliance reporting (monitoring wells)

10. The works approval holder must, within 60 calendar days of the monitoring bores being constructed, submit to the CEO a bore construction report evidencing compliance with the requirements of condition 5.

### Environmental commissioning phase

11. The works approval holder may only commence environmental commissioning of an item of infrastructure listed in condition 12 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with condition 4 of this works approval.
12. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 4 may only be carried out:
  - (a) in accordance with the corresponding commissioning requirements; and
  - (b) for the corresponding authorised commissioning duration.

**Table 4 Environmental commissioning requirements**

	Infrastructure	Commissioning requirements	Authorised commissioning duration
1	Gold processing plant and associated infrastructure	Bunds and sumps shall be leak tested.  Process control alarms for loss of containment shall be tested	For a period not exceeding 5 calendar days in aggregate.
2	Pipelines (tailings and return water) between processing plant and tailings facility	Pipelines shall be tested.  All flow meters to be calibrated.  All pressure meters to be calibrated.	



## Environmental commissioning reporting

13. 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 4.
14. The works approval holder must ensure the Environmental Commissioning Report required by condition 13 of this works approval includes the following:
  - (a) a summary of the environmental performance of each item of infrastructure or equipment as constructed or installed (as applicable), which at minimum includes records detailing the:
    - (i) hydro-testing of pipelines
    - (ii) calibration of flow meters and pressure transmitters
    - (iii) commissioning of the process control system.
  - (b) a review of the works approval holder's performance and compliance against the conditions of this works approval; and
  - (c) 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

15. The works approval holder may only commence time limited operations for an item of critical containment infrastructure identified in condition 3 where the CEO has notified the works approval holder that the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 6 meets the requirements of that condition.
16. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 4:
  - (a) where the item of infrastructure is not authorised to undertake environmental commissioning, the Environmental Compliance Report as required by condition 8 has been submitted by the works approval holder for that item of infrastructure
  - (b) where the item of infrastructure is authorised to undertake environmental commissioning under condition 11, the Environmental Commissioning Report for that item of infrastructure as required by condition 13 has been submitted by the works approval holder.
17. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 19 (as applicable):
  - (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of both conditions 15 and 16 for those items 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. Only tailings sourced from Bulong (Myhree pit) and the Imperial Majestic mine are permitted to be deposited into TSF, tailings from a different source are not permitted to be deposited into TSF.
19. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 5 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 5.

**Table 5 Infrastructure and equipment requirements during time limited operations**

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Tailings storage facility (cells 1 and 2)	<ul style="list-style-type: none"> <li>Only one TSF cell to be used for deposition during time limited operations</li> <li>To be maintained as per the design and construction/installation requirements in condition 3 Table 1</li> <li>Maintain a minimum operating freeboard of 0.7 m</li> <li>During time limited operations, the decant pool area is to be equal to or less than 5% of the total tailings surface area.</li> <li>Decant pond weak acid dissociable cyanide (WAD) target of 50mg/L and upper limit of 100mg/L</li> <li>Visual inspections every 12 hours and prior to and following significant rainfall events to check: <ul style="list-style-type: none"> <li>Freeboard capacity</li> <li>Location and size of the decant pond (expressed as a total percentage of the surface area of the TSF)</li> <li>Change in seepage conditions or sudden change in water level</li> <li>Signs of erosion</li> <li>Observations of fauna interacting with the TSF.</li> </ul> </li> </ul>	TSF as shown in Figure 1 and Figure 2 of Schedule 1
2.	Pipelines carrying tailings and decant return water.	<ul style="list-style-type: none"> <li>To be maintained as per the design and construction/installation requirements in condition 3 Table 1.</li> <li>Visual inspections every 12 hours when in operation to check the integrity of pipelines and bunding.</li> <li>Weekly inspection of flow metres, leak detection telemetry and automatic shut-off systems.</li> </ul>	As shown in Figure 1 and Figure 2 of Schedule 1
3.	Vibrating wire piezometers (VWPs)	<ul style="list-style-type: none"> <li>Weekly inspections to ensure integrity of VWPs and to ensure telemetry data</li> </ul>	As shown in Figure 8 of Schedule 1

	Site infrastructure and equipment	Operational requirement	Infrastructure location
		is downloading to a central storage location.	
4.	Gold processing facility and associated infrastructure	<ul style="list-style-type: none"> <li>Stormwater to be managed so that contaminated or potentially contaminated stormwater is captured to prevent release into the environment.</li> <li>Dust suppression to be used on crushing circuit as required.</li> </ul>	As shown in Figure 1 and Figure 2 of Schedule 1
5.	Process water pond	<ul style="list-style-type: none"> <li>Weekly inspection to ensure HDPE liner integrity.</li> <li>Maintain a minimum operating freeboard of 300 mm.</li> </ul>	As shown in Figure 1 and Figure 2 of Schedule 1
6.	Stormwater pond	<ul style="list-style-type: none"> <li>Weekly inspection to ensure HDPE liner integrity.</li> <li>Receives clean stormwater only</li> <li>Capacity to be maintained by periodic excavation as required</li> </ul>	As shown in Figure 1 and Figure 2 of Schedule 1
7.	Imperial pit	<ul style="list-style-type: none"> <li>300 mm minimum freeboard to be maintained</li> </ul>	As shown in Figure 1 and Figure 2 of Schedule 1

## Emissions and discharges

20. The works approval holder must ensure that the emissions specified in Table 6, are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

**Table 6 Authorised discharge point**

Emission	Discharge point	Discharge point location
Waste fines (tailings)	TSF (cell 1 and 2)	TSF as shown in Figure 1 and Figure 2 of Schedule 1
Mine dewater from Majestic Pit	Imperial pit	As shown in Figure 1 and Figure 2 of Schedule 1
Clean stormwater only	Stormwater pond	As shown in Figure 1 and Figure 2 of Schedule 1
Clean stormwater only	Stormwater pond discharge point	As shown in Figure 9 of Schedule 1

## Tailings characterisation

21. During the first 60 calendar days of time limited operations, the works approval holder must collect at least 10 individual representative tailings samples (including pore-water) to determine the likely behavior of elements under a range of leaching conditions, to include, but not limited to:

- (a) testing for the contaminants listed in Table 7; and

- (b) testing using the LEAF Test Method 1313 pH dependant leaching test (US EPA, 2017).

All test results shall be collated in excel format and provided in a report to the CEO no more than 60 calendar days after sample collection.

**Table 7: Tailings characterisation parameters**

Stream	Contaminants	Unit
Tailings leachate	Acrylamide Aluminium (Al) Antimony (Sb) Arsenic III (As III) Arsenic V (As V) Beryllium (Be) Boron (B) Cadmium (Cd) Calcium (Ca) Chromium III (Cr III) Chromium VI (Cr VI) Cobalt (Co) Copper (Cu) Iron (Fe) Lead (Pb) Magnesium (Mg) Manganese (Mn) Mercury (Hg) Molybdenum (Mo) Nickel (Ni) Nitrate (NO <sub>3</sub> ) Nitrite (NO <sub>2</sub> ) Potassium (K) Selenium (Se) Silver (Ag) Sodium (Na) Sulphate (SO <sub>4</sub> <sup>2-</sup> ) Strontium (Sr) Thallium (Tl) Total Sulfur Vanadium (V) Zinc (Zn)	mg/L
	Total dissolved solids	
	pH	pH units

### Groundwater monitoring during time limited operations

22. The works approval holder must monitor groundwater during time limited operations for concentrations of the identified parameters in accordance with Table 8.

**Table 8. Monitoring of ambient concentrations during time limited operations**

Monitoring location	Parameters	Triggers management action	Limit	Unit	Frequency	Sampling Method
At the groundwater monitoring wells as shown in Figure 6 & 8 of Schedule 1 MB-01 MB-02 MB-03 MB-05 MB-06 MB-07  AND A minimum of one southern boundary monitoring well (as indicated for construction in condition 5).	Standing water level	6	4	Metres below ground level (mbgl)	Monthly <sup>1</sup>	AS/NZS 5667.1
	pH <sup>2</sup>	-	-	pH units	A single sampling event undertaken between 30 and 60 calendar days following commencement of time limited operations (e.g. tailings being deposited into TSF).  AND  A single sampling event undertaken at the completion of time limited operations	
	Electrical conductivity (EC)	-	-	µS/cm		
	Total Dissolved Solids	-	-	mg/L		
	Weak acid dissociable cyanide (CNwad)	-	-	mg/L		
	Acrylamide	-	-	mg/L		
	Aluminium (Al)	-	-			
	Antimony (Sb)	-	-			
	Arsenic III (As III)	-	-			
	Arsenic V (As V)	-	-			
	Beryllium (Be)	-	-			
	Boron (B)	-	-			
	Cadmium (Cd)	-	-			
	Calcium (Ca)	-	-			
	Chromium III (Cr III)	-	-			
	Chromium VI (Cr VI)	-	-			
	Cobalt (Co)	-	-			
	Copper (Cu)	-	-			
	Iron (Fe)	-	-			
	Lead (Pb)	-	-			
	Magnesium (Mg)	-	-			
	Manganese (Mn)	-	-			
	Mercury (Hg)	-	-			
	Molybdenum (Mo)	-	-			
	Nickel (Ni)	-	-			
	Nitrate (NO <sub>3</sub> )	-	-			
	Nitrite (NO <sub>2</sub> )	-	-			
Potassium (K)	-	-				
Selenium (Se)	-	-				
Silver (Ag)	-	-				
Sodium (Na)	-	-				
Sulphate (SO <sub>4</sub> <sup>2-</sup> )	-	-				
Strontium (Sr)	-	-				
Total Sulfur	-	-				
Zinc (Zn)	-	-				

Monitoring location	Parameters	Triggers management action	Limit	Unit	Frequency	Sampling Method
Vibrating Wire Piezometers (VWP) as shown in Figures 6 & 8 of Schedule 1	Phreatic surface	-	-	mbgl	Monthly <sup>1</sup>	-

Note <sup>1</sup>: Monthly monitoring is undertaken at least 15 calendar days apart.

Note <sup>2</sup>: In-field non-NATA accredited analysis permitted.

### Groundwater monitoring limit exceedances

23. The works approval holder must record, investigate, take corrective action and report to the CEO within 14 calendar days, in the event of a parameter in Condition 22 exceeding the corresponding limit or management action trigger.
24. The works holder must include the following information in the report referred to in Condition 23 in relation to any exceedances of any limit identified in that condition:
  - (a) the nature, volume and characteristics of the emissions or 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(s) taken pursuant with Condition 23 in response to the exceedance
  - (e) the details and result of any investigation undertaken into the cause of the exceedance
  - (f) what action has 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.

### Groundwater monitoring reporting requirements

25. The works approval holder must submit to the CEO within 60 calendar days of each sampling event, a groundwater monitoring report demonstrating their compliance with conditions 22 for the preceding annual period, and must include:
  - (a) a clear statement of the scope of work carried out
  - (b) a description of the field methodologies employed
  - (c) a summary of the field and laboratory quality assurance / quality control (QA/QC) program
  - (d) copies of the field monitoring records and field QA/QC documentation
  - (e) an assessment of reliability of field procedures and laboratory results
  - (f) a tabulated summary of results, as well as all raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis

- (g) a diagram with aerial image overlay showing all monitoring locations and depicting groundwater level contours, flow direction and hydraulic gradient (relevant site features including discharge points and other potential sources of contamination must also be shown)
- (h) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the Guideline Assessment and management of contaminated sites
- (i) an interpretive summary and assessment of results against previous monitoring results
- (j) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the Guideline Assessment and management of contaminated sites
- (k) trend graphs to provide a graphical representation of historical results and to support the interpretive summary.

Note 1: General guidance on report presentation can be found in the Department's *Guideline: Assessment and management of contaminated sites*.

### Monitoring of decant pond

26. The works approval holder must monitor the tailings storage facility decant during time limited operations for concentrations of the identified parameters in accordance with Table 9.

**Table 9 Monitoring of Decant Pond during time limited operations**

Monitoring location	Parameters	Limit	Unit	Frequency	Sampling Method
Tailings storage facility decant	Total dissolved solids	-	mg/L	Monthly <sup>1</sup>	AS/NZS 5667.1
	Weak acid dissociable cyanide (CNwad)	100	mg/L		

Note<sup>1</sup>: Monthly monitoring is undertaken at least 15 calendar days apart.

### Monitoring of water balance

27. The works approval holder must undertake monitoring of the water balance for the TSF 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
  - (e) estimate of seepage losses.
28. The works approval holder must undertake monitoring of the water balance for the Imperial and Majestic pits each monthly period, and (as a minimum) record the following information:
- (a) site rainfall
  - (b) evaporation rate
  - (c) volume dewatered

- (d) estimate of seepage losses.

### Compliance reporting – Time limited operations

- 29.** 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.
- 30.** The works approval holder must ensure the report required by condition 29 includes the following:
  - (a) a summary of the time limited operations, including timeframes and amount of ore processed
  - (b) a summary of monitoring results obtained during time limited operations under conditions 22, 23, 24, 25, 26, 27 and 28
  - (c) a summary of the environmental performance of all infrastructure as constructed or installed
  - (d) a review of performance and compliance against the conditions of the works approval and the Environmental Commissioning Report
  - (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.

### Records and reporting (general)

- 31.** 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
  - (d) the complete details and dates of any action taken by the works approval holder to investigate or respond to any complaint.
- 32.** 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 3 and 4
  - (b) any maintenance of infrastructure that is performed in the course of complying with condition 4
  - (c) monitoring programmes undertaken in accordance with conditions 22, 23, 24, 25, 26, 27 and 28
  - (d) complaints received under condition 31.
- 33.** The books specified under condition 32 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
- (d) be available to be produced to an inspector or the CEO as required.

## Definitions

In this works approval, the terms in Table 10 have the meanings defined.

**Table 10: Definitions**

Term	Definition
annual period	a 12 month period commencing from 8 February until 8 February of the immediately following year.
ARI	average recurrence interval
AS1726	means the Australian Standard AS1726 <i>Geotechnical Site Investigations</i> .
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples</i> .
ASTM D5092/D5092M-16	means the ASTM international standard for <i>Standard practice for design and installation of groundwater monitoring wells</i> (Designation: ASTM D5092/D5092M-16).
ASTM D5299/D5299M-18	means the ASTM international standard for <i>Decommissioning of Groundwater Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities</i> (Designation: D5299/D5299M-18).
books	has the same meaning given to that term under the EP Act.
Category / categories	categories of prescribed premises as set out in Schedule 1 of the <i>Environmental Protection Regulations 1987</i> (WA) (EP Regulations).
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 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Condition	a condition to which this works approval is subject under section 62 of the EP Act.
critical containment infrastructure	means the items of infrastructure listed in condition 3.

Term	Definition
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 <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V Division 3 of the EP Act.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
environmental commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady state operation and confirm design specifications.
Environmental Commissioning Report	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other 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	<i>Environmental Protection Act 1986</i> (WA).
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA).
Guideline: Assessment and management of contaminated sites	means the document titled <i>Assessment and management of contaminated sites, Contaminated sites guidelines</i> (Department of Environment Regulation, December 2014), as amended from time to time.
m	metres
mbgl	metres below ground level
mg/L	milligrams per litre
m/s	metres per second
µS/cm	microsiemens per centimetre
mm	millimetres
monthly period	means a one-month period commencing from the first day of a month until the last day of the same month.
Mt	mega tonnes (1,000,000 tonnes)

Term	Definition
Mtpa	mega tonnes per annum
NATA	National Association of Testing Authorities
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis.
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
TDS	total dissolved solids
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.
VWP	Vibrating Wire Piezometers
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.

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**END OF CONDITIONS**

# Schedule 1: Maps

## Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).

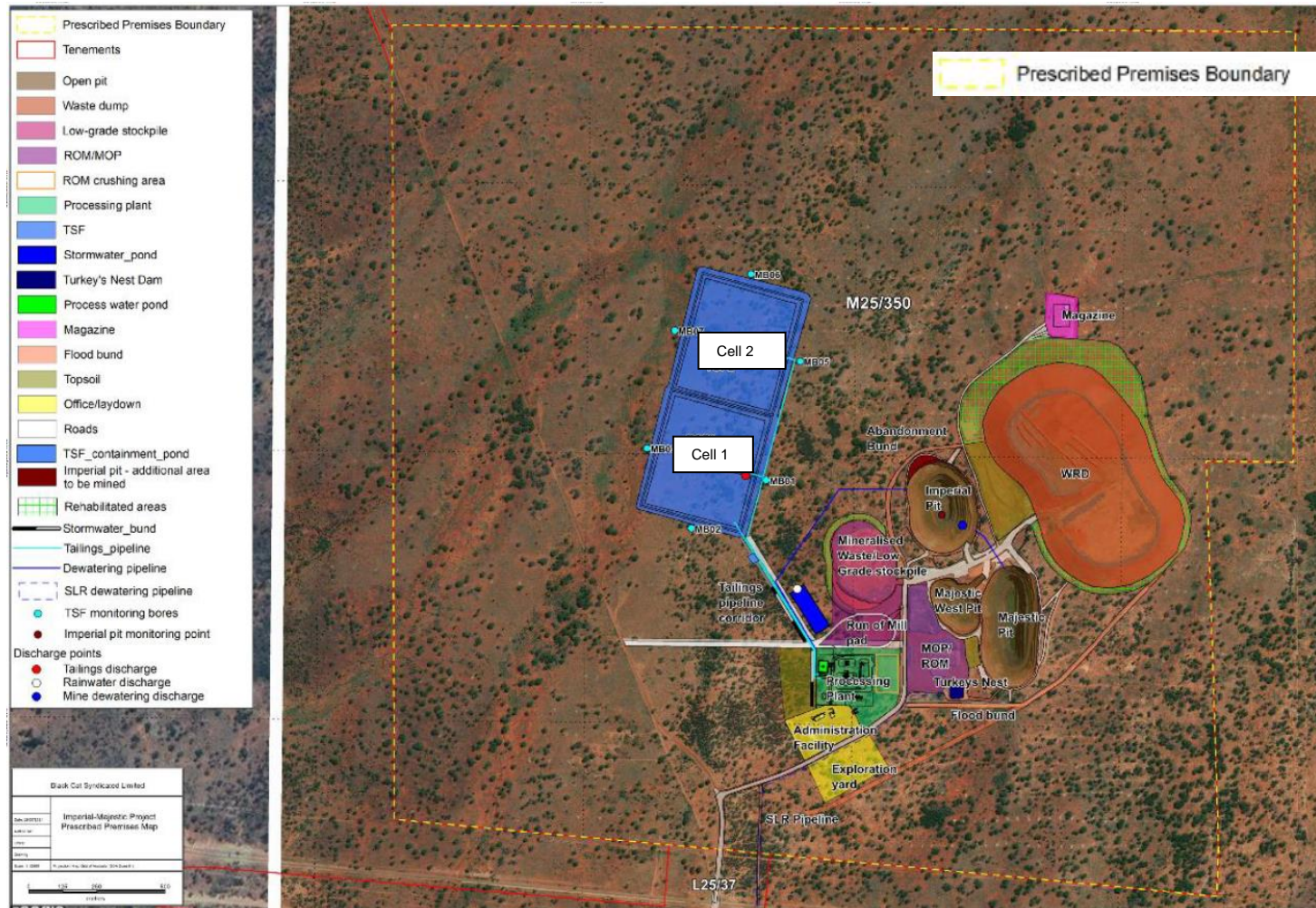


Figure 1: Map of the boundary of the prescribed premises

W6585/2021/1

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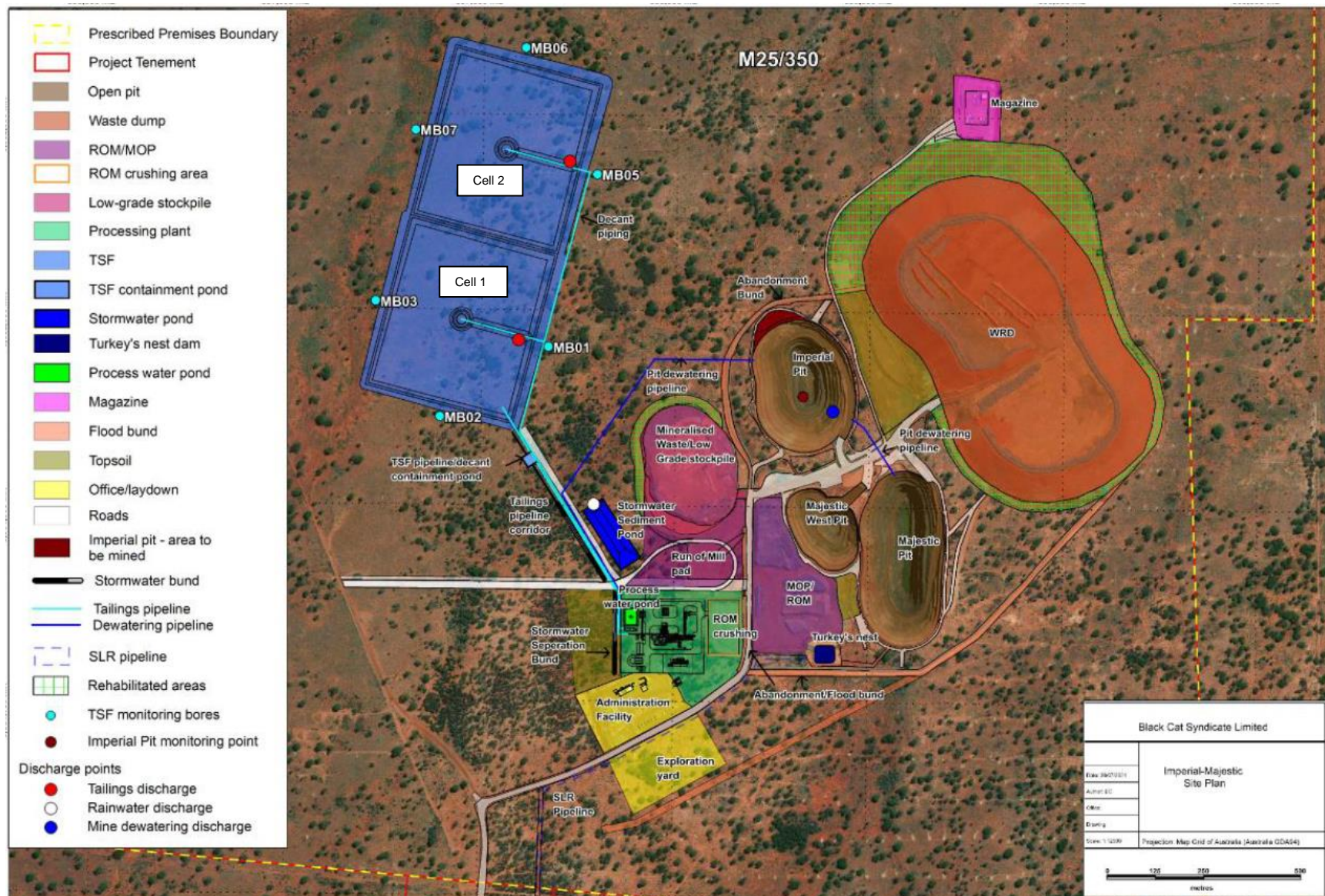


Figure 2: Site Layout and monitoring well location

W6585/2021/1

IR-T05 Works approval template (v5.0) (February 2020)



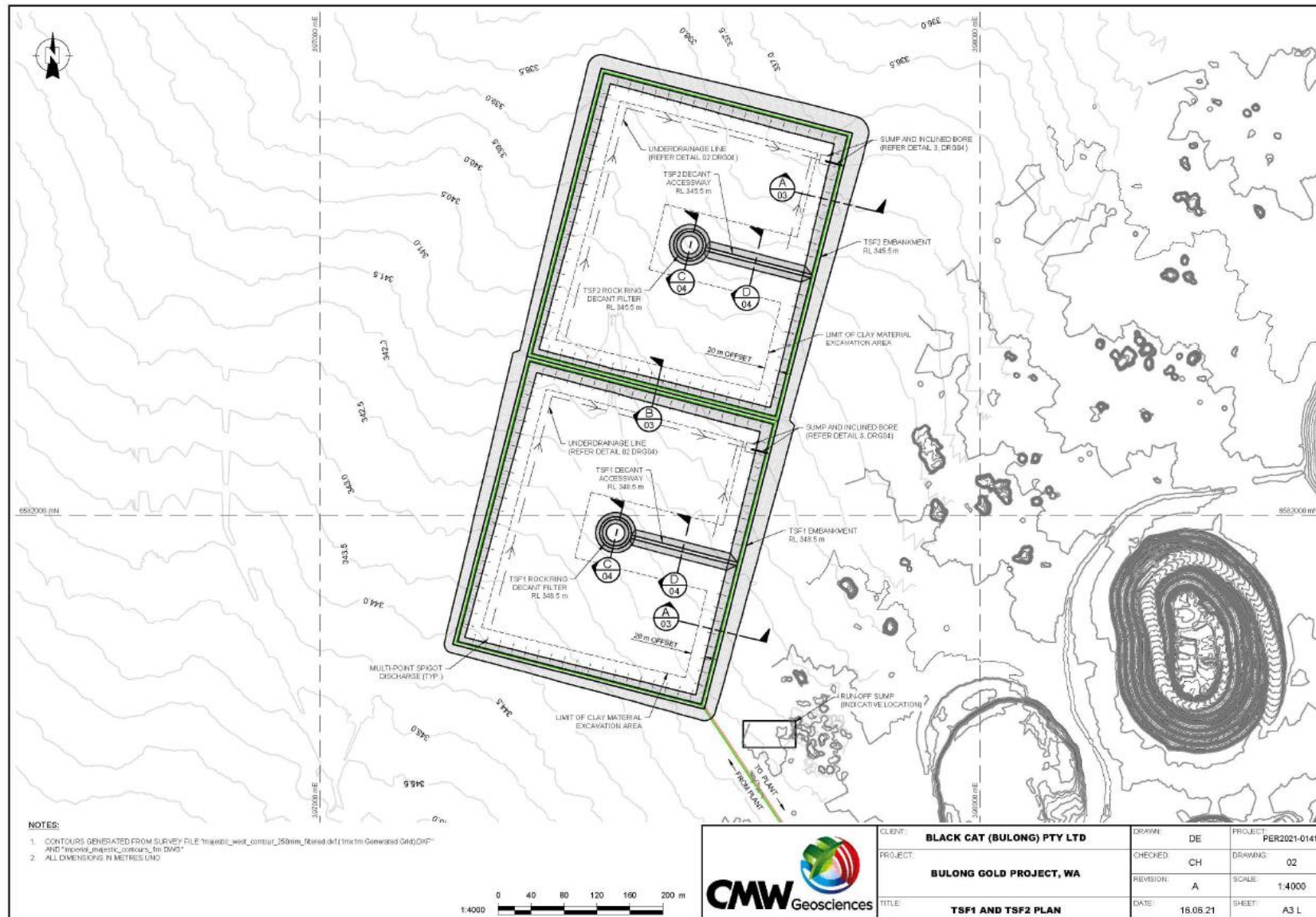


Figure 3: TSF plan cells 1 and 2 (PER2021-0141-02)

W6585/2021/1

IR-T05 Works approval template (v5.0) (February 2020)

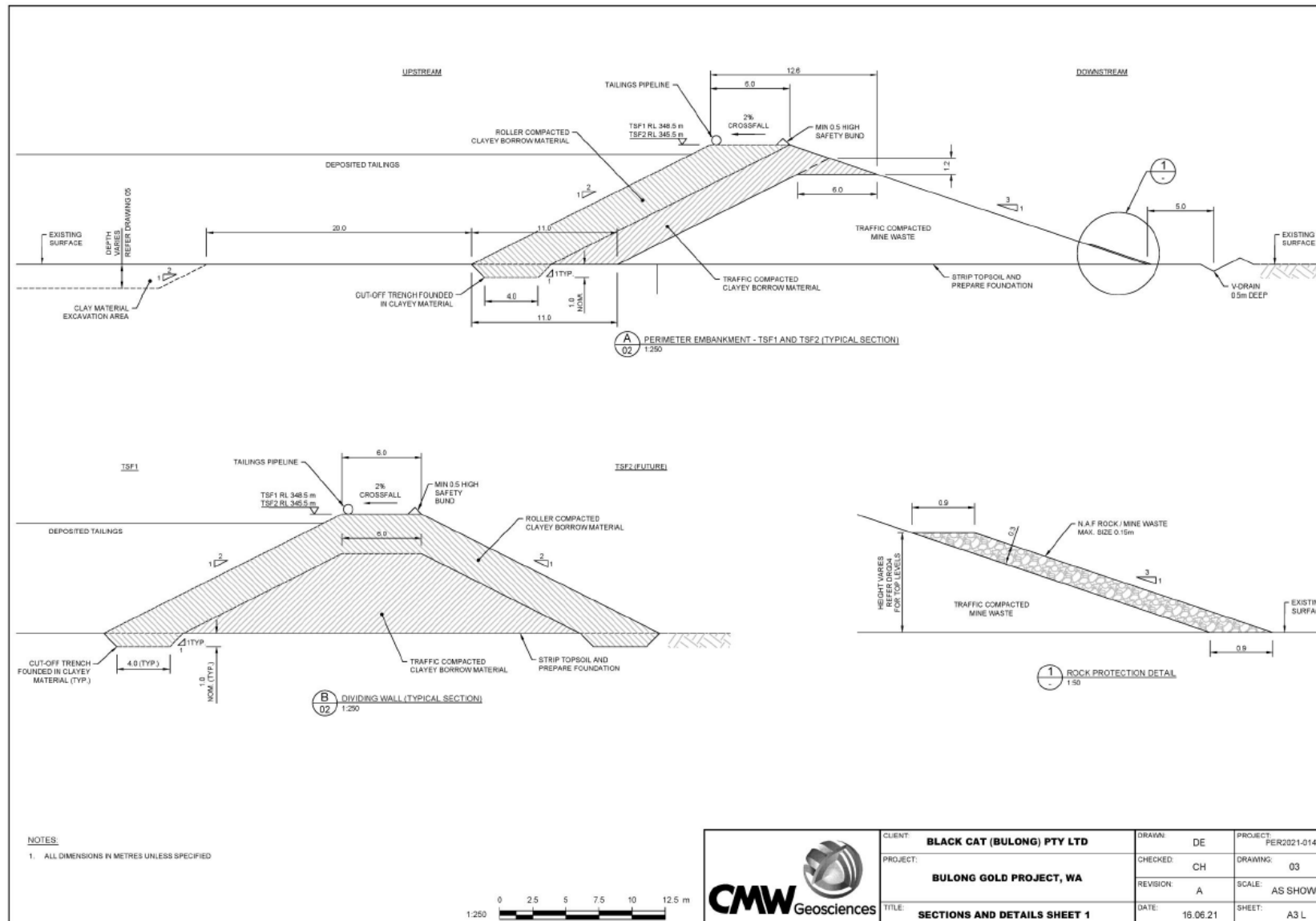


Figure 4: TSF (cells 1 and 2) - sections and details sheet - PER2021-0141-03)

W6585/2021/1

IR-T05 Works approval template (v5.0) (February 2020)



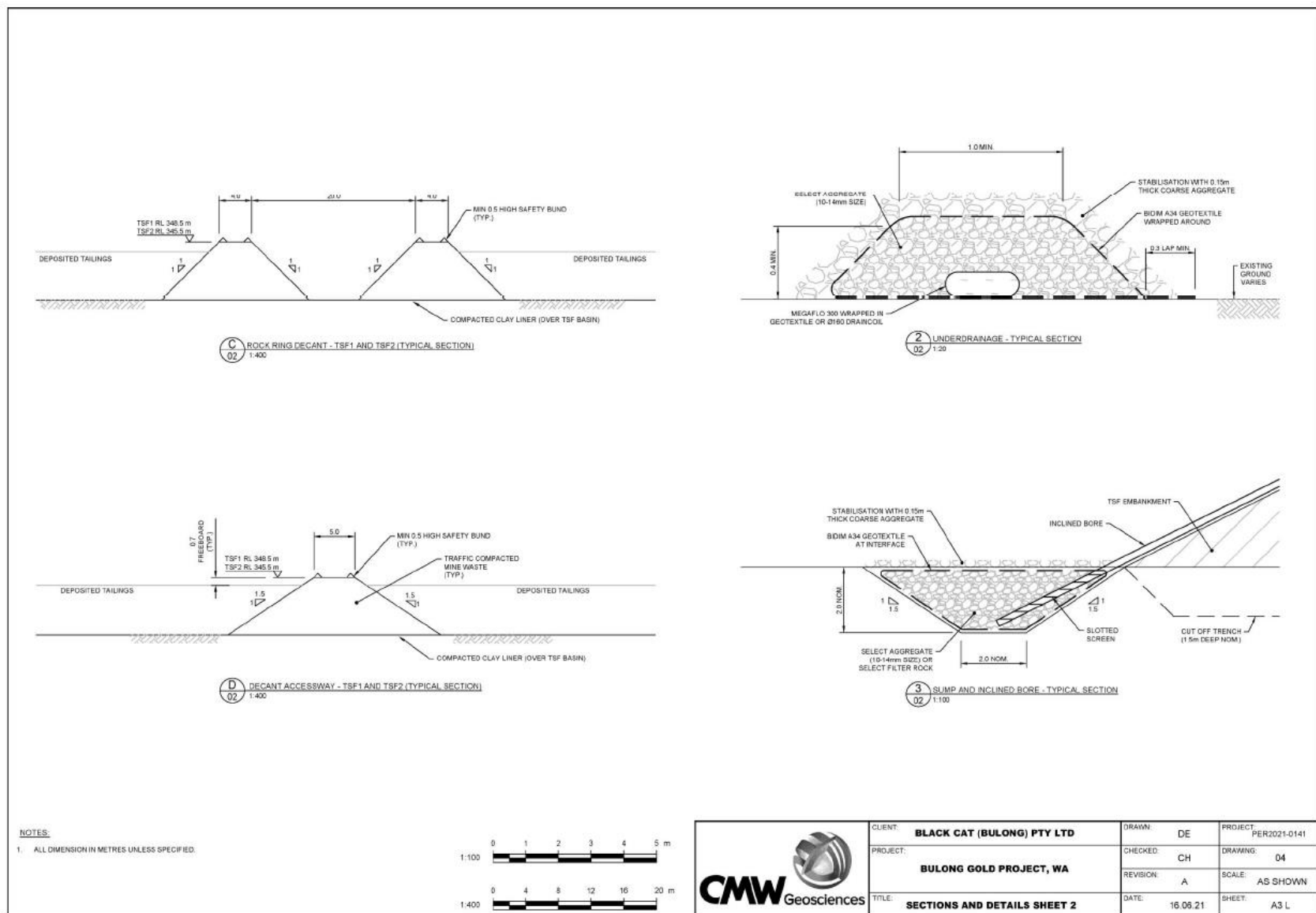


Figure 5: TSF (cells 1 and 2) - sections and details sheet - PER2021-0141-04)

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IR-T05 Works approval template (v5.0) (February 2020)

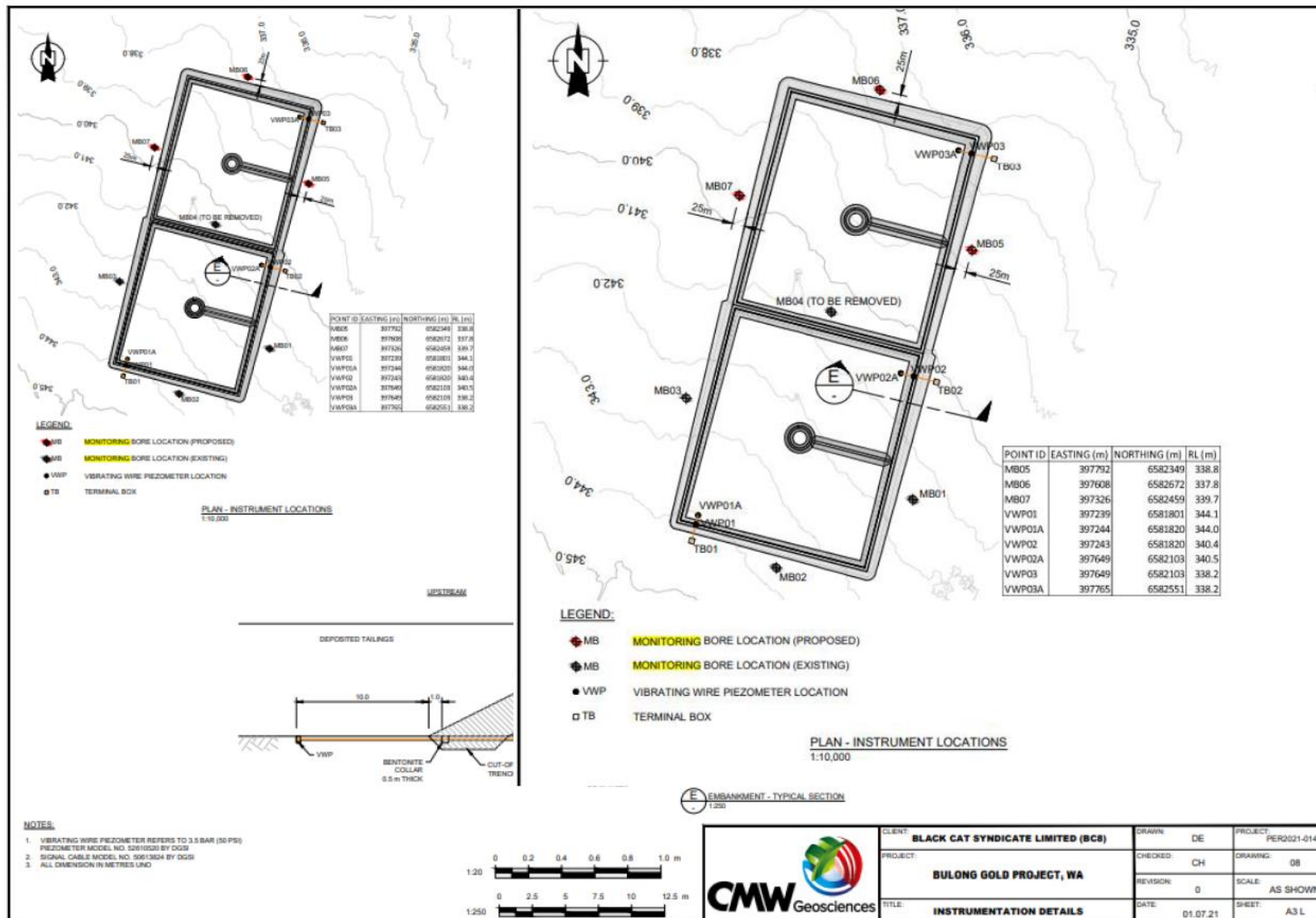


Figure 6: Monitoring bore and vibrating wire piezometer locations (PER2021-0141-08)

W6585/2021/1

IR-T05 Works approval template (v5.0) (February 2020)

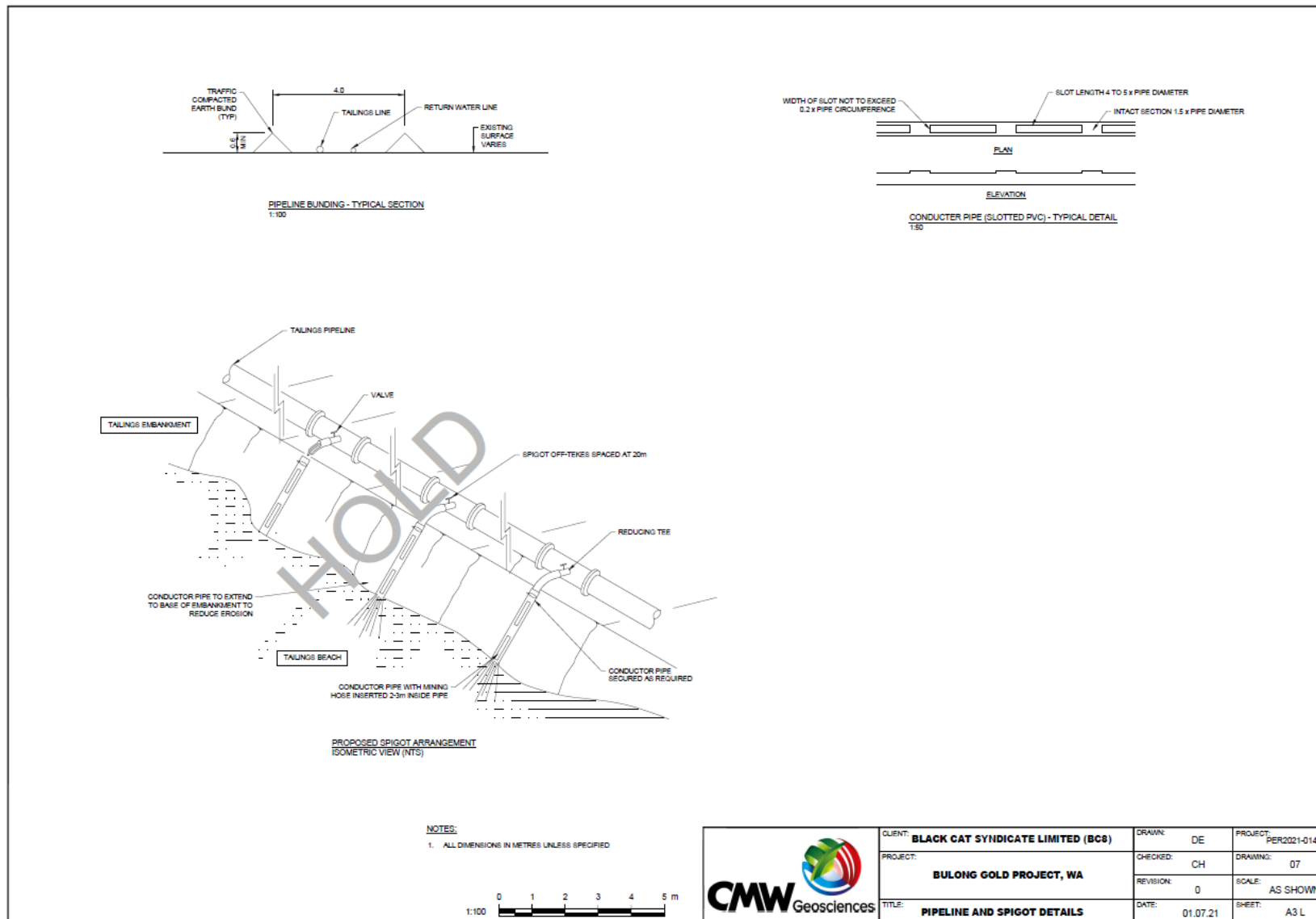


Figure 7: Pipeline and Spigot Details (PER2021-0141-07)

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IR-T05 Works approval template (v5.0) (February 2020)

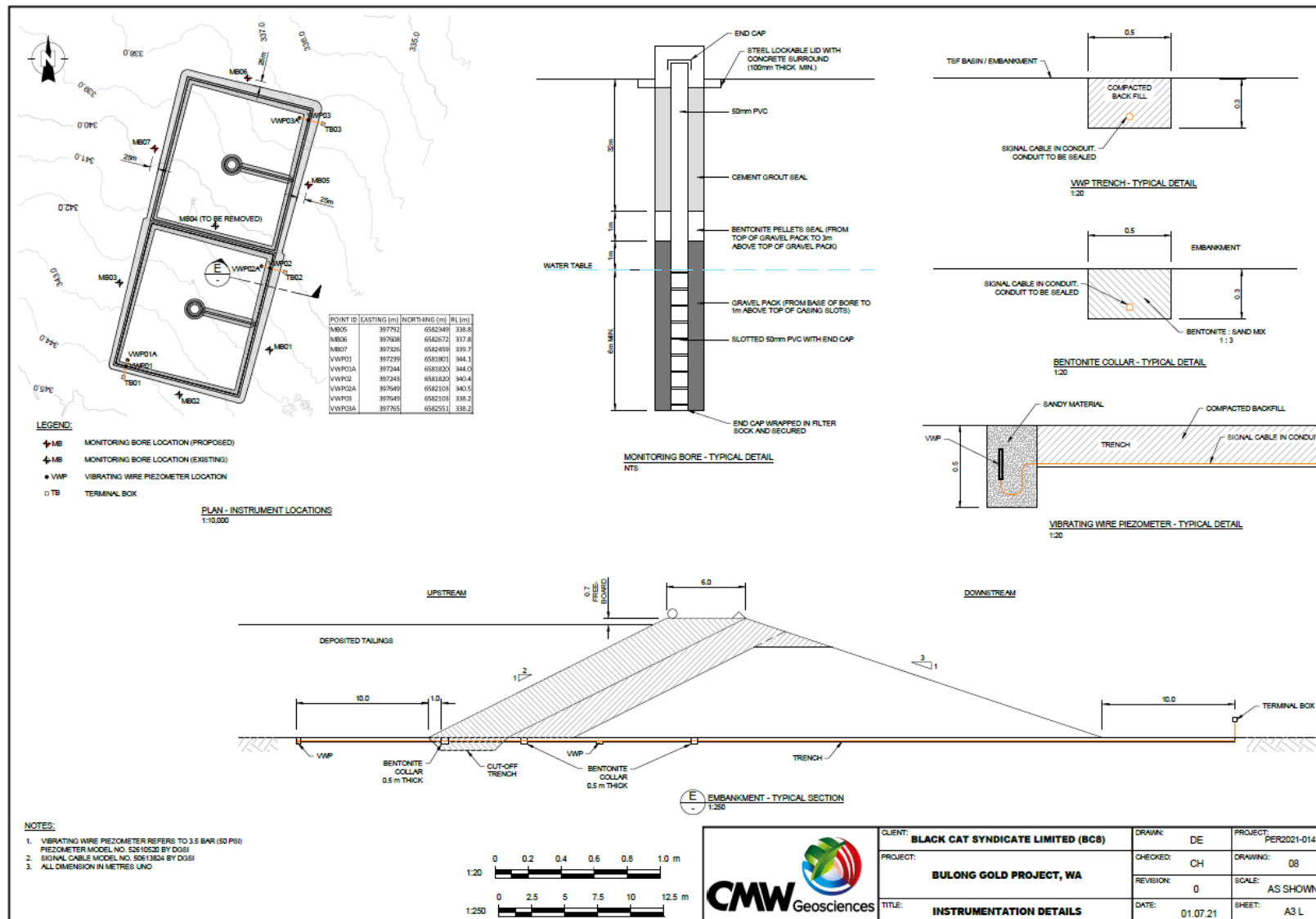
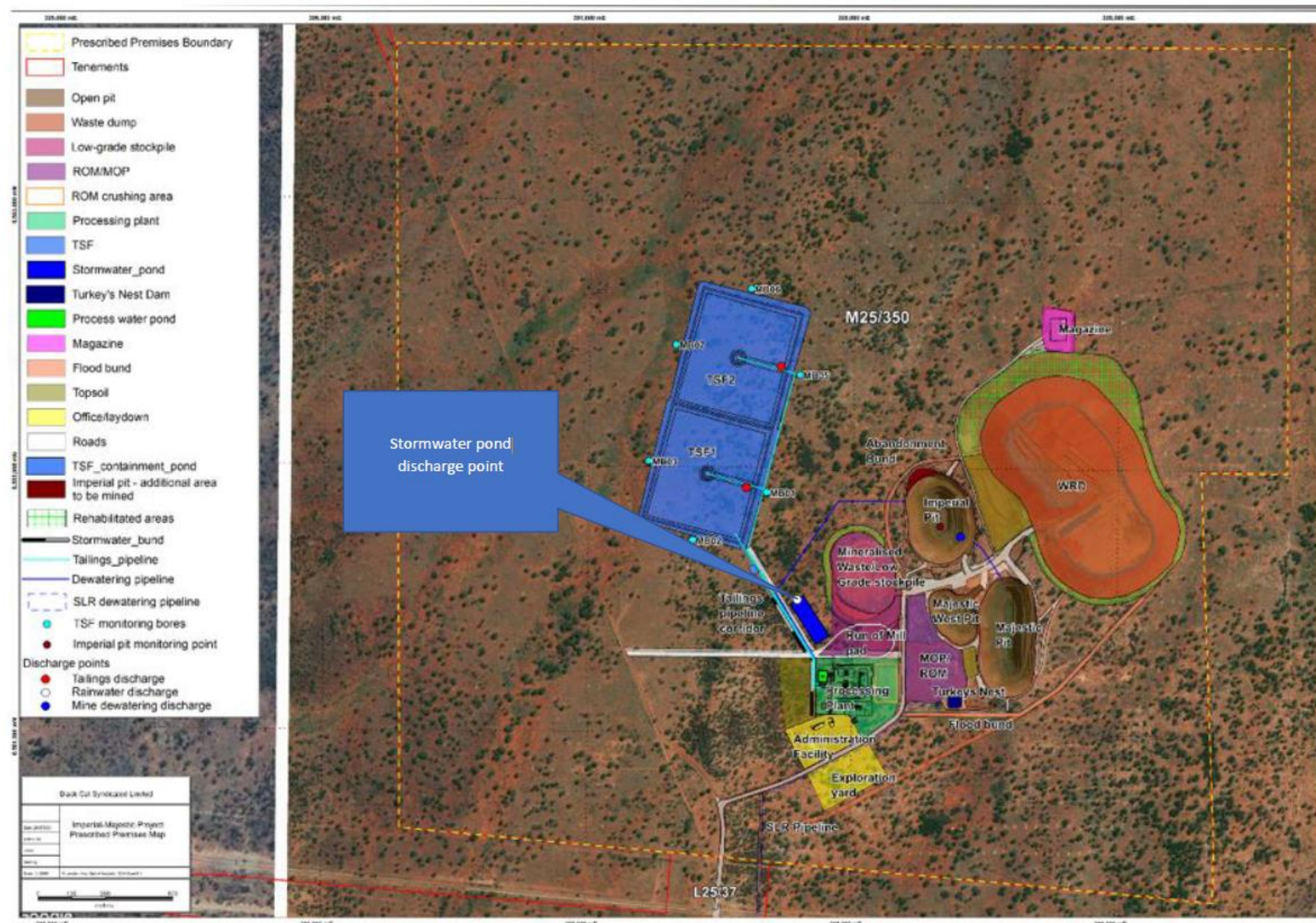


Figure 8: Instrumentation Details (PER2021-0141-08)

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**Figure 9: Stormwater Discharge Point**

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