



Works approval number	W6819/2023/1
Works approval holder	Coburn Resources Pty Ltd
ACN	165 036 537
Registered business address	Level 9, 216 St Georges Terrace PERTH WA 6000
DWER file number	DER2023/000322
Duration	16/11/2023 to 16/11/2028
Date of issue	16/11/2023
Premises details	Coburn Mineral Sands Project – Off Path Tailings Storage Facility Coburn Road, MEADOW Legal description: Mining tenements M09/102 and M09/103

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed design capacity
Category 8: Mineral sands mining or processing: premises on which mineral sands ore is mined, screened, separated or otherwise processed.	5.9 million tonnes.

This works approval is granted to the works approval holder, subject to the attached conditions, on 16 November 2023, by:

**A/Manager, Resource Industries
REGULATORY SERVICES**

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

Works approval history

Date	Reference number	Summary of changes
16/11/2023	W6819/2023/1	New 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 the tailings storage facility lifts (the infrastructure);
 - (b) in accordance with the corresponding design and construction requirements; and
 - (c) at the corresponding infrastructure location; as set out in Table 1.

Table 1: Infrastructure design and construction requirements

	Infrastructure	Design and construction requirements	Infrastructure location
1.	Off-path Tailings Storage Facility (TSF) Stage 4 embankment lift	<ol style="list-style-type: none"> a) Embankment height not to exceed RL99 b) Embankment to be constructed in accordance with Schedule 2, Figures 3, 5 and 6, with deposition causeways a minimum of 20m in length. c) Monitoring bores TMB01, TMB02, TMB03 and TMB04 to be relocated as indicated in Schedule 2, Figure 3. d) Minimum of 16 settlement pins installed in TSF embankments e) Minimum of 27 vibrating wire piezometers to be installed and/or maintained in and around the facility f) Minimum of 6 beach drains, dug 3m deep into the tailings beach approximately 15m from the embankment 	TSF Stage 4 embankment as set out in Schedule 2, Figure 3.
2.	Off-path Tailings Storage Facility (TSF) Stage 5 embankment lift	<ol style="list-style-type: none"> a) Embankment height not to exceed RL101 b) Embankment to be constructed in accordance with Schedule 2, Figures 4, 5 and 6 with deposition causeways a minimum of 20m in length. c) Minimum of 16 settlement pins installed in TSF embankments. d) Minimum of 27 vibrating wire piezometers to be installed and/or maintained in and around the facility. e) Minimum of 6 beach drains, dug 3m deep into the tailings beach approximately 15m from the embankment 	TSF Stage 5 embankment as set out in Schedule 2, Figure 4.

Compliance reporting

2. The works approval holder must within 30 calendar days of the infrastructure identified by condition 1 being constructed:
 - (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 geotechnical engineer that each item of infrastructure or component thereof, as specified in condition 1, has been built and installed in accordance with the design and construction requirements specified in condition 1;
 - (b) as constructed plans and a detailed site plan showing the location and dimensions for each item of infrastructure or component thereof, as specified in condition 1;
 - (c) photographic evidence of the installation of the infrastructure; and
 - (d) 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:
 - (a) where the item of infrastructure, as listed in condition 1, meets all of the design and construction requirements in columns 2 and 3 of condition 1; and
 - (b) 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 1:
 - (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.
 - (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
Off-path TSF Stage	a) Tailings deposition is not to exceed RL98.5	As set out in

Site infrastructure and equipment	Operational requirement	Infrastructure location
4 embankment lift	b) Beach freeboard is not to exceed 300mm c) Tailings deposition is not to exceed 3,000 tonnes per hour d) Decant pond to be maintained a minimum distance from the embankment of 8 times the embankment height (65 to 120m) e) Ensure monitoring bores TMB01 – TMB04 are maintained in a serviceable condition for monitoring purposes. f) Ensure decant return pumps with a minimum 2,160m ³ per hour pumping capacity are maintained in good working order	Schedule 2, Figure 3.
Off-path TSF Stage 5 embankment lift	a) Tailings deposition is not to exceed RL100.5 b) Beach freeboard is not to exceed 300mm c) Tailings deposition is not to exceed 3,000 tonnes per hour d) Decant pond to be maintained a minimum distance from the embankment of 8 times the embankment height (65 to 120m) e) Ensure monitoring bores TMB01 – TMB04 are maintained in a serviceable condition for monitoring purposes. f) Ensure decant return pumps with a minimum 2,160m ³ per hour pumping capacity are maintained in good working order	As set out in Schedule 2, Figure 4.
Pipelines for tailings and decant return water between the WCP and the off-path TSF	a) To be maintained with: <ul style="list-style-type: none"> • automatic cut-outs in the event of a pipeline failure; or • secondary containment sufficient to contain any spill for a period equal to the time between routine inspections; or • telemetry systems and flow meters to allow the detection of leaks and failures. 	Within the prescribed premises boundary, as set out in Schedule 1, Figure 1.

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

Emission	Discharge point	Discharge point location
Tailings	Off-path TSF	The TSF, as shown in Schedule 2, Figures 3 and 4.
Decant water	Returned to the HDPE-lined Wet Concentrator Plant settling and process water ponds	The Wet Concentrator Plant

8. The works approval holder shall:
- undertake inspections and monitoring as detailed in Table 4;
 - where any inspection or monitoring identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
 - maintain a record of all inspections and monitoring undertaken.

Table 4: Inspection of infrastructure

Scope of inspection	Inspection or monitoring requirements	Frequency of inspection
Tailings and return water pipelines	Visual integrity and leak assessment	Daily
Decant pond	Size, location and freeboard	Daily
Settlement pins	Monitoring movement	Weekly
Vibrating wire piezometers	Monitoring of porewater pressure	Twice weekly

Monitoring during time limited operations

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

Table 5: Emissions and discharge monitoring during time limited operations

Discharge point	Parameter	Unit	Frequency	Method
Tailings	pH		Twice during time limited operations	In accordance with AS/NZS 5667.1-1998 and AS/NZS 5667.10-1998.
	Total dissolved solids (TDS) Total Alkalinity, Total Hardness, Chloride, carbonate, bicarbonate, sulphate, nitrate, sodium, potassium, calcium, magnesium, iron, aluminium, manganese, arsenic, cadmium, copper, lead, selenium, zinc, copper, cobalt, nickel, uranium, thorium	mg/L		
	Radium-226 and radium-228	Bq/L	Once during time limited operations	
Decant water	pH			

	Total dissolved solids (TDS) Total Alkalinity, Total Hardness, Chloride, carbonate, bicarbonate, sulphate, nitrate, sodium, potassium, calcium, magnesium, iron, aluminium, manganese, arsenic, cadmium, copper, lead, selenium, zinc, copper, cobalt, nickel, uranium, thorium	mg/L	Twice during time limited operations	In accordance with AS/NZS 5667.1-1998 and AS/NZS 5667.10-1998.
	Radium-226 and radium-228	Bq/L	Once during time limited operations	

10. The works approval holder must record the results of all monitoring activity required by condition 9.
11. The works approval holder must monitor the groundwater during time limited operations in accordance with Table 6, and ensure that the parameters do not exceed the corresponding limits.

Table 6: Monitoring of groundwater mounding during time limited operations

Monitoring location	Parameter	Limit	Unit	Frequency
Monitoring bores: TMB01 TMB02 TMB03 TMB04	Standing water level	4	mbgl	Weekly

12. The works approval holder must record the results of all monitoring activity required by condition 11.

Compliance reporting

13. 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.
14. The works approval holder must ensure the report required by condition 13 includes the following:
- a summary of the time limited operations, including timeframes and amount of tailings deposited;
 - a summary of all monitoring results obtained during time limited operations under condition 9 and 11.
 - a summary of the environmental performance of all infrastructure as constructed or installed (as applicable), which includes records detailing:

- (i) Any action taken in accordance with condition 8(b).
- (d) a review of performance and compliance against the conditions of the works approval; and
- (e) where the 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)

- 15.** 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.
- 16.** 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) records of inspections and monitoring carried out in accordance with condition 8;
 - (d) monitoring programmes undertaken in accordance with conditions 9 and 11; and
 - (e) complaints received under condition 15.
- 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 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 1 have the meanings defined.

Table 1: Definitions

Term	Definition
beach freeboard	means the distance between the maximum water surface elevation plus allowance for a 1:100 year 72hr rainfall event and the point on the beach that meets the embankment wall
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
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.
EP Act	<i>Environmental Protection Act 1986</i> (WA).
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA).
operational freeboard	means the distance between the maximum tailings beach elevation and the top of retaining banks or structures at their lowest point
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.
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 and figures

Premises map

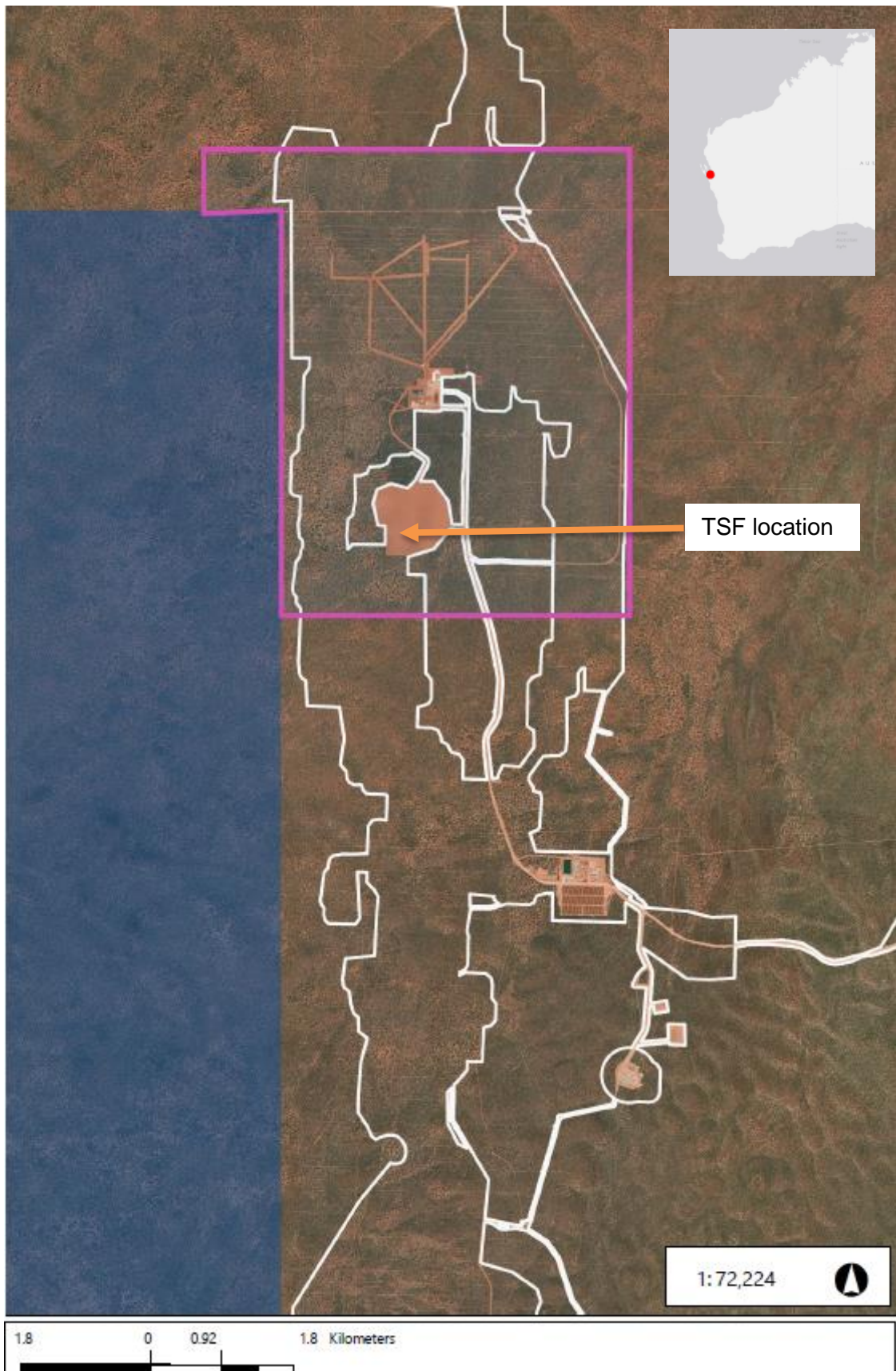


Figure 1: Map of the boundary of the prescribed premises

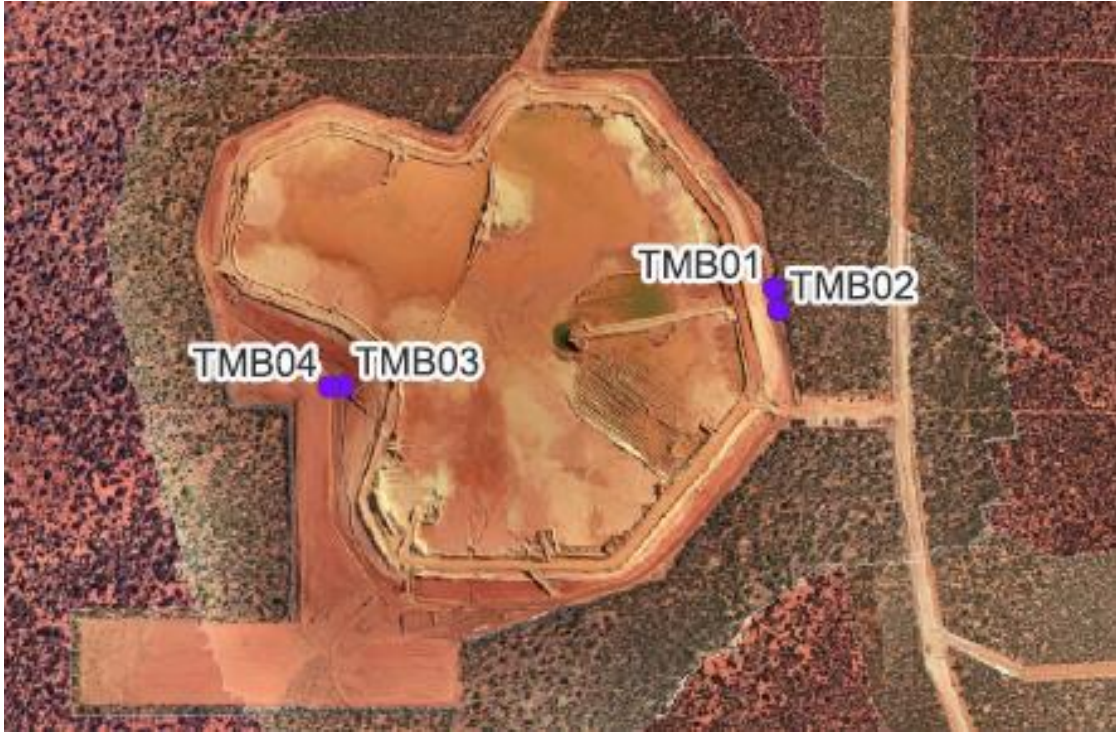


Figure 2: TSF monitoring bores

Schedule 2: TSF Lifts Construction Requirements

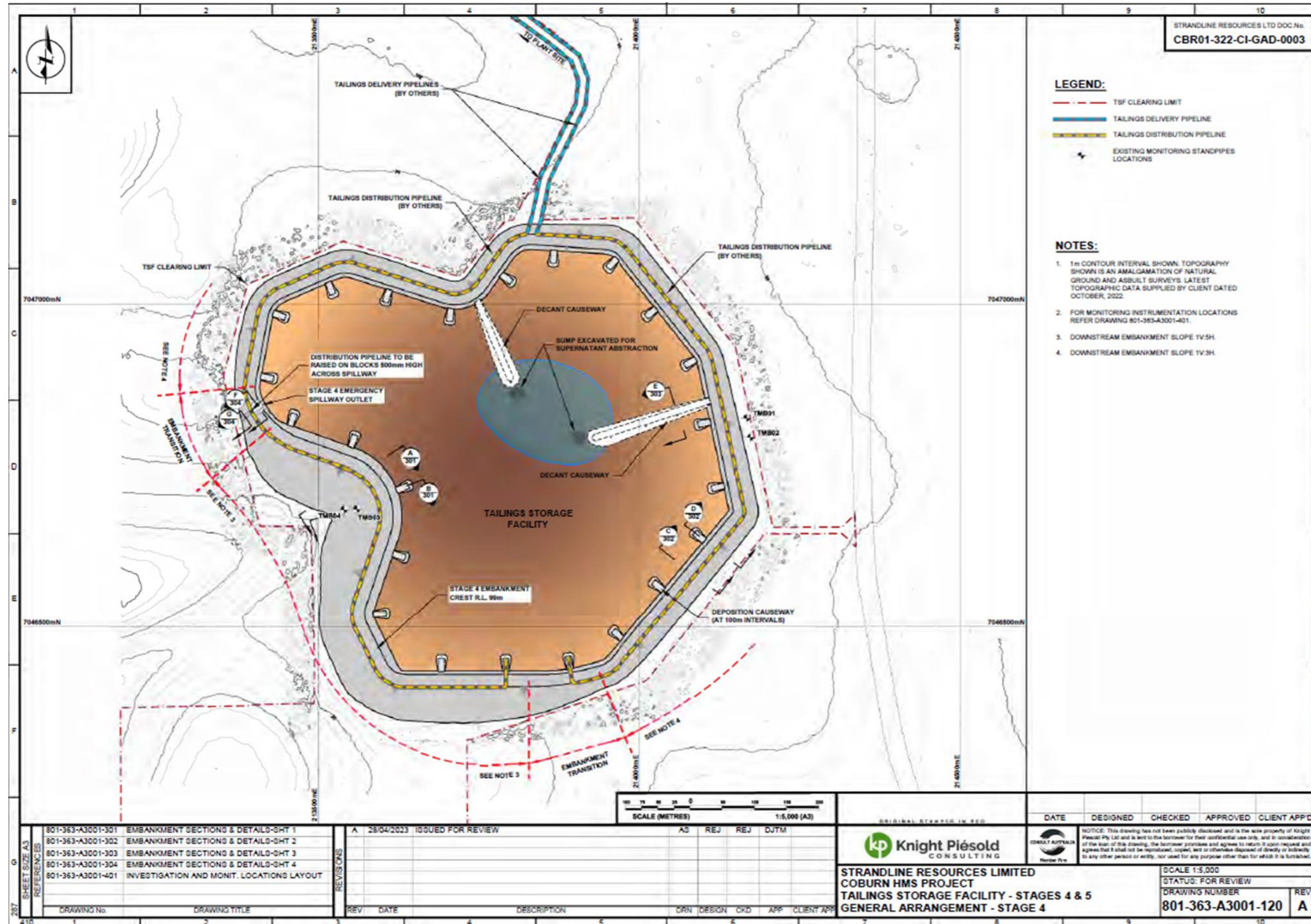


Figure 3: TSF Stage 4 construction requirements – aerial view

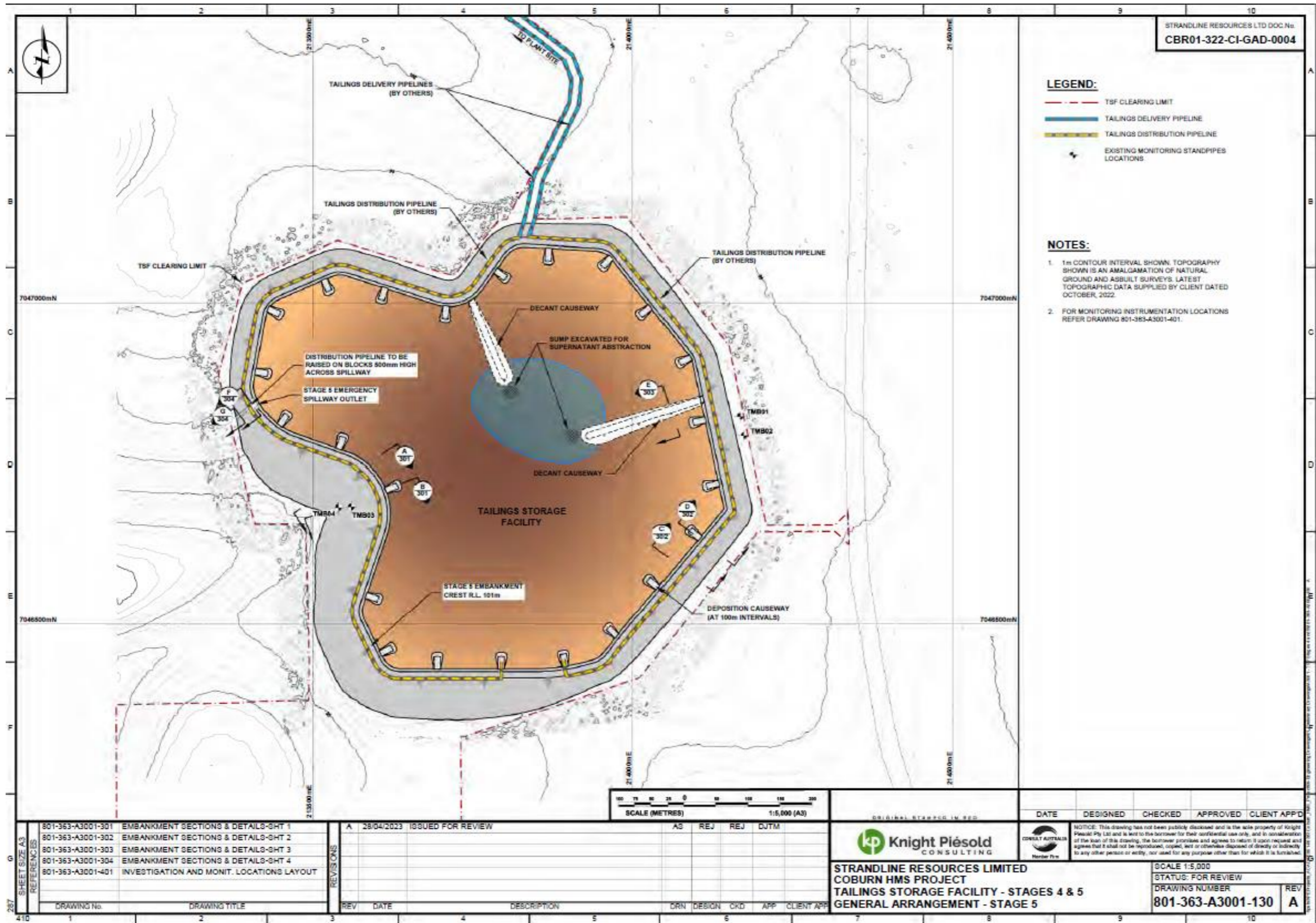
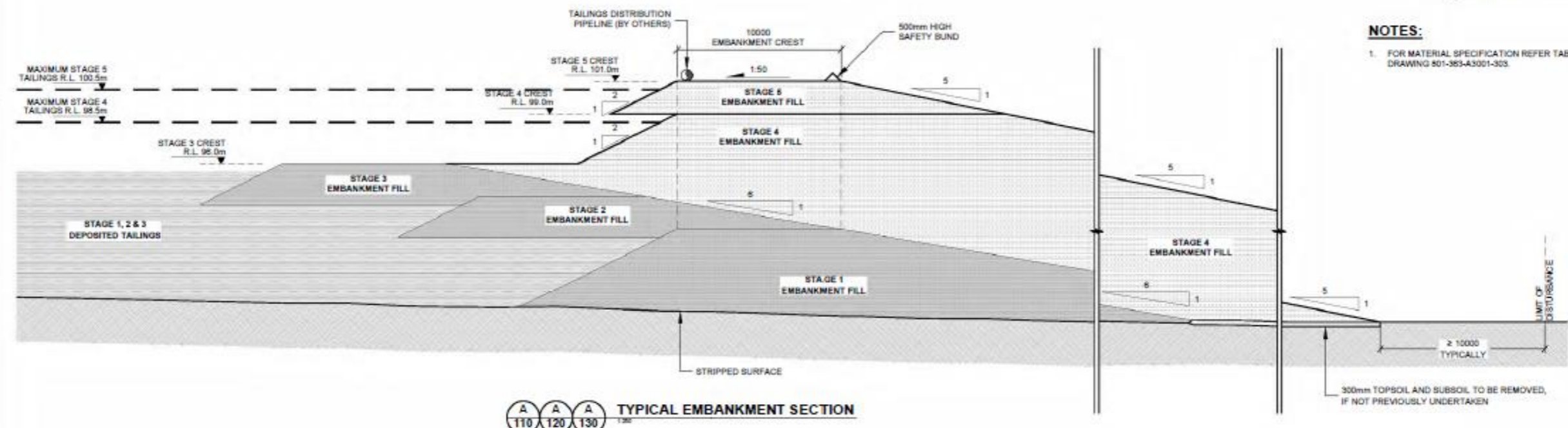
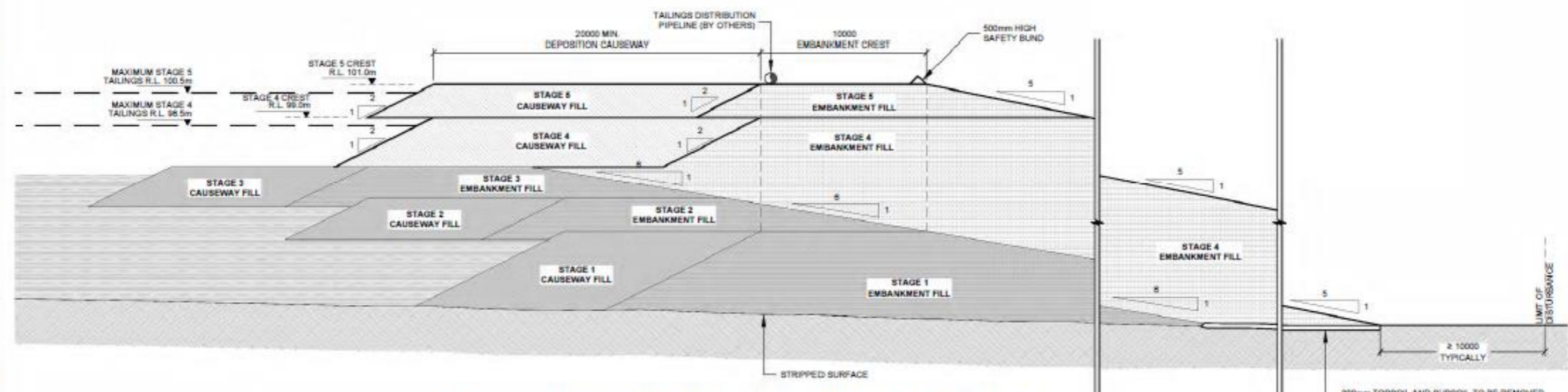


Figure 4: TSF Stage 5 construction requirements – aerial view

NOTES:
1. FOR MATERIAL SPECIFICATION REFER TABLE 1 ON DRAWING 801-363-A3001-303.



TYPICAL EMBANKMENT SECTION
110 120 130



TYPICAL EMBANKMENT SECTION THROUGH DEPOSITION CAUSEWAY
110 120 130

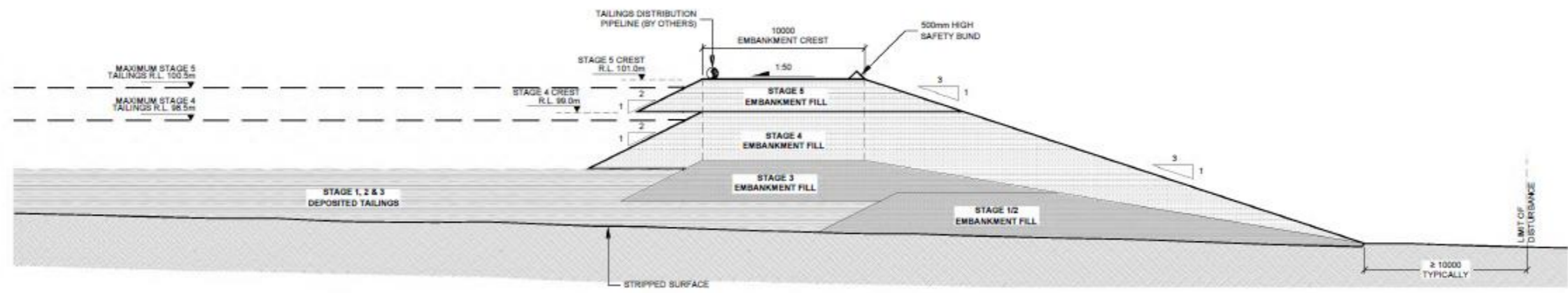
REV	DATE	DESCRIPTION	DRN	DESIGN	CKD	APP	CLIENT APP
A	28/04/2023	ISSUED FOR REVIEW	AS	REJ	REJ	DJTM	

<p>KNIGHT PIESOLD CONSULTING</p>	<p>DATE DESIGNED CHECKED APPROVED CLIENT APP'D</p>
<p>STRANDLINE RESOURCES LIMITED COBURN HMS PROJECT TAILINGS STORAGE FACILITY - STAGES 4 & 5 EMBANKMENT SECTIONS AND DETAILS - SHEET 1</p>	<p>SCALE 1:250 STATUS: FOR REVIEW DRAWING NUMBER 801-363-A3001-301 REV A</p>

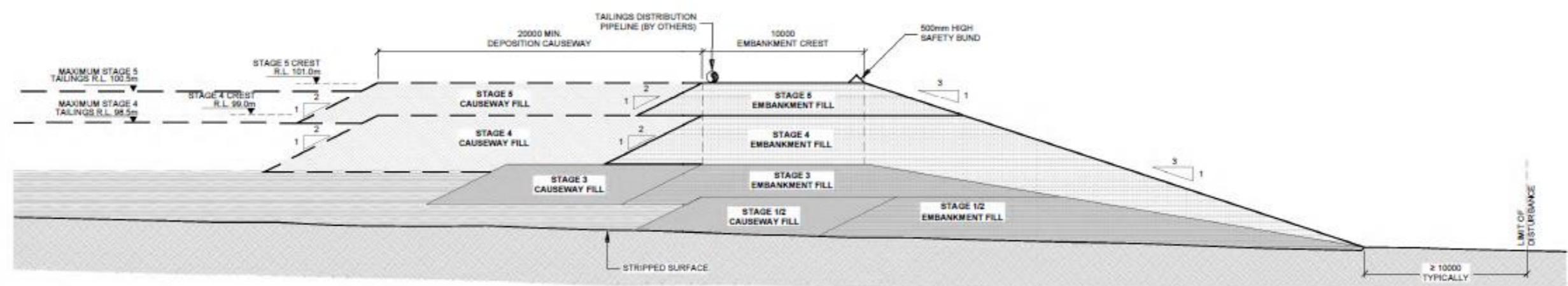
Figure 5: TSF Stage 4 and 5 construction requirements – embankment >10m height

NOTES:

- FOR MATERIAL SPECIFICATION REFER TABLE 1 ON DRAWING 801-363-A3001-303.



TYPICAL EMBANKMENT SECTION
C 110 120 130



TYPICAL EMBANKMENT SECTION THROUGH DEPOSITION CAUSEWAY
D 110 120 130

REFERENCES		REVISIONS		DATE		DESIGNED		CHECKED		APPROVED		CLIENT APP'D	
801-363-A3001-110	GENERAL ARRANGEMENT - STAGE 3 (CURRENT)	A	28/04/2023	ISSUED FOR REVIEW	AS	REJ	REJ	DJTM					
801-363-A3001-120	GENERAL ARRANGEMENT - STAGE 4												
801-363-A3001-130	GENERAL ARRANGEMENT - STAGE 5												
801-363-A3001-303	EMBANKMENT SECTIONS & DETAILS-SHT 3												
DRAWING No.	DRAWING TITLE	REV	DATE	DESCRIPTION	DRN	DESIGN	CKD	APP	CLIENT APP	SCALE 1:250		STATUS: FOR REVIEW	
										DRAWING NUMBER		REV	
										801-363-A3001-302		A	

ORIGINAL STAMPED IN RED

kp Knight Piésold CONSULTING

STRANDLINE RESOURCES LIMITED
COBURN HMS PROJECT
TAILINGS STORAGE FACILITY - STAGES 4 & 5
EMBANKMENT SECTIONS AND DETAILS - SHEET 2

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Figure 6: TSF Stage 4 and 5 construction requirements – embankment <10m height