Greenbushes Lithium Operation

Part V Works Approval Amendment Application

8 May 2026, Revision 0

TSF4 Cell 1 1277.5mRL Raise

Supporting Document

Issue No	Issue Date	Document Author	Issue Amendments
A	03/26	Preston Consulting	Initial Issue
B	03/26	Preston Consulting	Update of Scope to Cell 1 only
C	04/26	Preston Consulting	Update with revised design
0	5/26	Preston Consulting	Final for submission

Reviewed By [redacted] Date 11/03/2026

Director, Preston Consulting

Authorised By [redacted] Date 07/05/2026

Manager Approvals and Compliance

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PROJECT BACKGROUND

The Greenbushes Lithium Operation (**Premises**) comprises an existing open pit mine and several processing facilities operated by Talison Lithium Australia Pty Ltd (**Talison**). The Premises is located in the Shire of Bridgetown-Greenbushes, immediately south of the Greenbushes townsite and approximately 250km south of Perth, Western Australia (**WA**) (Figure 1).

Talison received approval in 2019 to expand the existing operations under the *Environmental Protection Act 1986* (**EP Act**; WA) and *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**; Cth). The expansion (**Project**) involved the merging and expansion of existing mine pits, extension of the waste rock landform (**WRL**), establishment of a new tailings storage facility (**TSF**) and the construction and operation of new infrastructure, including a new Mine Services Area (**MSA**), a crushing circuit, two new spodumene processing plants and a tailings retreatment plant (**TRP**).

Ministerial Statement (**MS**) 1111 authorises an increase in processing capacity (throughput) from 5 million tonnes per annum (**Mtpa**) to approximately 11.6Mtpa of spodumene ore, and an additional 2.1Mtpa of recovered tailings from Tailings Storage Facility #1 (**TSF1**) will also be reprocessed. The increased processing rate will result in an increase of tailings deposition to approximately 9Mtpa when full production is reached.

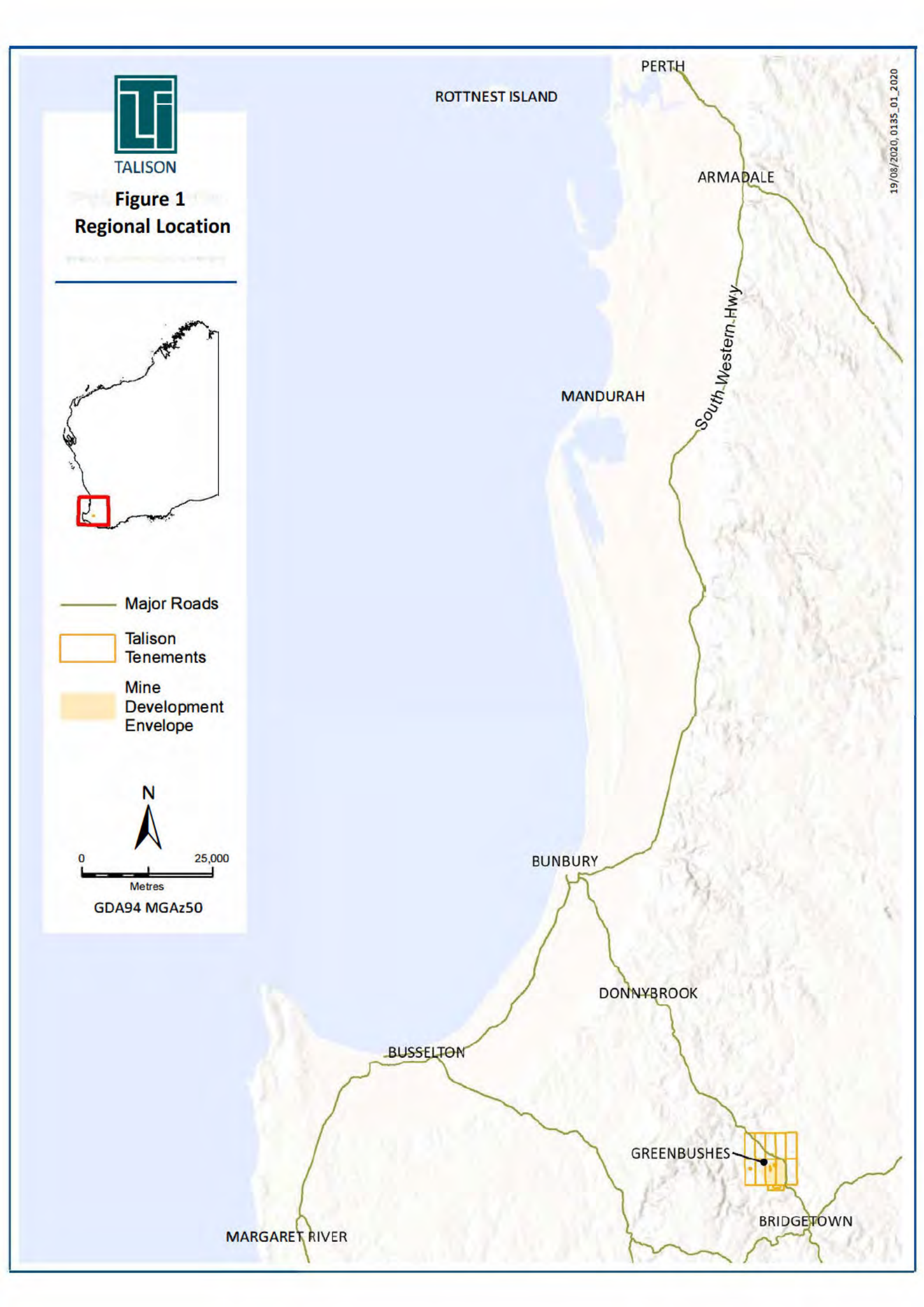
Works Approval 6618/2021/1

Works Approval 6618/2021/1 (**W6618/2021/1**) was granted by DWER on 8 March 2022 for construction of the starter embankment of Tailings Storage Facility #4 (**TSF4**). TSF4 is a two-cell, centreline TSF, designed to accommodate approximately 68.2 million tonnes (**Mt**) of tailings at an average density of 1.4 tonnes per cubic metre (**t/m^3**). TSF4 was designed with a starter embankment height of 1,265m Reduced Level (**mRL**), and 5m raises, resulting in a final crest height of 1,295mRL.

An amendment of W6618/2021/1 was approved on 4 July 2023 to allow for staged construction of the TSF4 Cell 1 starter embankment (Cell 1 – stage 1a (**Cell 1a**) to 1261mRL and Cell 1 – stage 1b (**Cell 1b**) to 1265mRL), and subsequent staged submission of two Critical Containment Infrastructure Reports (**CCIR**). An amendment requesting the liner for the final section of the TSF4 Cell 1 to be constructed from bituminous geomembrane material (**BGM**) (rather than a clay liner) was approved on 1 September 2023. A final amendment of W6618/2021/1 permitting the TSF4 Cell 2 liner to be constructed from BGM (rather than a clay liner) was approved on 27 March 2024.

Works Approval 6901/2024/1

Works Approval 6901/2024/1 (**W6901/2024/1**) was approved on 22 July 2024 for the construction of the first raise of TSF4 Cell 1 and Cell 2 to 1,270mRL and increasing beneficiation to 7.1Mtpa (as per L4247/1991/13). An amendment to W6901/2024/1 on 11 April 2025 approved a change to the specifications of the construction method and material for the 1,270mRL embankment raise. An embankment raise to 1,275mRL was approved under a further amendment to W6901/2024/1 on 31 October 2025.


TALISON
Figure 1
Regional Location
Major Roads
Talison Tenements
Mine Development Envelope
N
0
25,000
Metres
GDA94 MGAz50
PERTH
ROTTNEST ISLAND
ARMADALE
MANDURAH
South Western Hwy
BUNBURY
DONNYBROOK
BUSSELTON
GREENBUSHES
BRIDGETOWN
MARGARET RIVER
19/08/2020, 0135_01_2020

Licence L4247/1991/13

Talison currently holds Part V EP Act Licence L4247/1991/13 (**Licence**) for the Premises. The prescribed premise categories authorised by the Licence, as defined under Schedule 1 of the Environmental Protection Regulations, is presented in Table 1.

Table 1: Prescribe Premises Categories authorised under L4247/1991/13

Category	Current approved premises production or design capacity
5: Processing or beneficiation of metallic or non-metallic ore: premises on which – (a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed; or (b) tailings from metallic or non-metallic ore are reprocessed; or (c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	7,100,000 tonnes beneficiated per annual period. 5,200,000 tonnes of tailings deposited per annual period.
54: Sewage facility: premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters.	187.5 m^3 per day.
61: Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	15,000 tonnes per year.

The Licence regulates key beneficiation and tailings deposition infrastructure, as well as support infrastructure. An amendment to the Licence on 1 August 2024 approved the operation of Cell 1 of TSF4 to an embankment height of 1261mRL. On the 1 July 2025 a further amendment to the Licence included the operation of the TSF4 Cell 1 and Cell 2 to the starter embankment height of 1,265mRL. A Licence amendment is currently under assessment to include the operation of TSF4 to 1,270mRL.

This Works Approval Amendment Application

This document provides the supporting information for a Works Approval Amendment Application (**Application**) to W6901/2024/1 for an amendment to the approved embankment raise for Cell 1 of TSF4 from 5m to 7.5m (i.e., embankment crest height of 1,277.5mRL rather than 1,275mRL).

The following attachments required by Department of Water and Environmental Regulation (**DWER**) as specified in *Application form: Works Approval/ Licence/ Renewal/ Amendment/ Registration v16, August 2022* (DWER, 2022) are provided in this document:

- Attachment 2 (Premises map);
- Attachment 3B (Proposed activities);

- Attachment 5 (Other approvals);
- Attachment 6A (Emissions and discharges);
- Attachment 7 (Siting and location);
- Attachment 8 (Additional Information);
- Attachment 9 (Category-specific checklist(s)); and
- Attachment 10 (Proposed fee calculation).

Talison determined that the remainder of potential Application Form attachments are not required as they are not relevant to this Application.

ATTACHMENT 2: PREMISES MAPS

The proposed Premises boundary will not change from what is approved for W6901/2024/1 as part of this Application. The Premises boundary and the location of TSF4 Cell 1 is shown in Figure 2.

411000
414000
6255000
6252000
6249000

GREENBUSHES
Stanifer St
Spring Gully Rd
Maranup Ford Rd
Cell 2
Cell 1
South Western Hwy

Internal Ref: i:\Projects\2026\0032_00_2026 TSF4 Embankment Raise Works Approval\Premises Boundary

GREENBUSHES OPERATIONS

PREMISES BOUNDARY

- Talison Tenements
- Talison Premises Boundary
- Greenbushes Townsite
- TSF4 footprint
- Roads

Datum: GDA2020
Projection: MGA Zone 50

LOCALITY MAP

0 0.35 0.7 1.4 Kilometers

SCALE: 1:25,000 @ A3

FIGURE 2

TALISON LITHIUM

ATTACHMENT 3B: PROPOSED ACTIVITIES

TSF4 has been designed in accordance with the *Code of Practice for Tailings Storage Facilities in Western Australia* (Department of Mines and Petroleum, 2013) and the *Australian National Committee on Large Dams* (**ANCOLD**) guidelines (2019) and relevant regulatory requirements. The embankment design will be constructed with the specifications outlined in the following documents:

- TSF4 detailed design report (GHD, 2021; Attachment 8A);
- Addendum to the 2021 TSF4 detailed design report (GHD, 2024a; Attachment 8B);
- TSF4 RL 1275m Raise Detailed Engineering Design Report (GHD, 2025; Attachment 8C); and
- TSF4 Cell 1 Design to RL 1277.5m – Addendum to RL 1275m Raise Detailed Design Report (GHD, 2026; Attachment 8D).

The TSF4 detailed design report (Attachment 8A) presented the design of the external walls using the centreline construction method with a vertical clay core and waste rockfill for downstream zones. A starter embankment up to 20m high provided capacity for the first 11 to 15 months of operation, followed by 5m raises at approximately yearly intervals. The final crest level was designed to be 1,295mRL, resulting in a maximum embankment height of approximately 45m. Attachment 8A included detail relevant to TSF4 at its maximum height of 1,295mRL. Attachment 8A was submitted as a supporting document for the TSF4 Works Approval (W6618/2021/1; approved 8 March 2022).

The Addendum to the 2021 TSF4 design report (Attachment 8B) outlines details of the revised liner design, embankment geometry and the updated Seismic Hazard Assessment for TSF4. Attachment 8B was submitted as a supporting document for a recent TSF4 Licence Amendment Application for L4247/1991/13 (submitted November 2024). The addendum to the detailed design report was informed by the BGM Cell 1 design report (GHD, 2023a), an environmental review of using BGM in Cell 1 (GHD, 2023b), and the BGM Cell 2 design report (GHD, 2023c), which have all previously been provided to DWER as attachments to Part V applications.

There are no changes to the design, location or operation of TSF4 approved under W6618/2021/1 and L4247/1991/13 as part of this Application.

W6901/2024/1 approved the construction of embankment raises at TSF4, including the first raise to 1,270mRL (22 July 2024) and the second embankment raise to 1,275mRL (31 October 2025). This Application is to amend W6901/2024/1 to increase the height of the approved TSF4 Cell 1 1275mRL embankment raise from 5m to 7.5m (i.e. to an embankment height of 1277.5mRL rather than 1275mRL).

3B.1 TSF4 Cell 1 Detailed Design (raise to 1277.5mRL)

Construction of the second embankment raise of TSF4 Cell 1 and Cell 2 to 1,275mRL was approved under W6901/2024/1 on 31 October 2025. Construction of the Cell 2 1,275mRL embankment raise is currently underway; however, Cell 1 remains at 1270mRL.

Talison is proposing to revise the design of the Cell 1 embankment raise to achieve a crest elevation of 1277.5mRL. The increased crest height of Cell 1 to 1277.5mRL will:

- increase storage capacity resulting from the embankment raise of TSF4 Cell 1 to at least 12 months; and
- allow construction of future embankment raises to be scheduled during the dry season.

GHD (2026) completed a redesign of the 1,277.5mRL raise based on the existing TSF4 Cell 1 1,275mRL embankment raise. No changes from the original 1,275mRL design (GHD, 2025a) as approved under W6901/2024/1 were made to the following aspects:

- Design principles, intent and philosophy;
- Design standards and criteria;
- Site background conditions (site location, climate, topography, surface water, geology, hydrogeology, previous land use, existing TSF landforms, powerlines arrangement, tailings retreatment plant positioning, site access);
- Tailings properties (no inconsistencies with previous assumptions were observed or reported to GHD);
- Underdrainage performance;
- Seismic assessment;
- Settlement and deformation assessment (was carried out for the ultimate TSF4 height);
- Water balance;
- Tailings deposition strategy and tailings management principles;
- Dam break modelling (was carried out for the ultimate TSF4 height);
- Population at risk and ANCOLD consequence category (High B);
- Background geotechnical data, geotechnical parameters and liquefaction assessment;
- Surface water management; and
- Closure design.

Detail on the above aspects, as relevant to this Application under EP Act Part V, are provided in the *TSF4 275mAHD Raise Works Approval Supporting Document* (6 June 2025, Revision 1) included as Attachment 8E of this Application.

GHD (2025; Attachment 8C) provides the original detailed design for the 1,275mRL embankment raise, including the unchanged aspects noted above. The changes related to the proposed increase to the Cell 1 crest elevation of 7.5m are summarised in Attachment 8D, which should be read concurrently with Attachment 8C. The details below have been sourced from the *TSF4 Cell 1 Design to RL 1277.5m – Addendum to RL 1275m Raised Detailed Design Report* (GHD, 2026; Attachment 8D) unless otherwise specified.

The Basis of Design (**BoD**) for the redesign addressed the following aspects:

- Update to the geometry of the BGM liner design;
- Update to the geometry of the perimeter and divider embankments;
- Update of slope stability and seepage analysis;

- Update of elevated drainage system; and
- Review of Cell 1 capacity.

Attachment 8D addresses key assumptions (Section 2.2) and key basis of design elements (Section 2.3) relevant to the 1,277.5mRL raise. Design details for the raise of TSF4 Cell 1 to 1277.5mRL are outlined below and shown in the following figures:

- Figure 4 – Cell 1 General Arrangement;
- Figure 5 – TSF4 Cell 1 raise perimeter embankment geometry (South and East);
- Figure 6 – Northern Embankment at TSF1 Interface and Divider Embankment (Section C, D and E);
- Figure 7: Decant Causeway – TSF4 Cell 1 raise to 1277.5mRL;
- Figure 8: BGM Liner General Arrangement;
- Figure 9: Elevated Drains;
- Figure 10: Elevated drains detail;
- Figure 11: Monitoring instrumentation (Piezometers);
- Figure 12: Monitoring instrumentation (survey markers and inclinometers);
- Figure 13: Inclinometer staging plan; and
- Figure 14: Raise foundation preparation.

3B.1.1. Seepage Assessment

Seepage modelling was undertaken for a 1,277.5mRL embankment raise to estimate the phreatic surface through the embankment for used in the stability assessment (GHD, 2026).

Changes were made to the geometry of TSF4 Cell 1 and the maximum tailings pond / water level assumptions for the raise. No changes from the original 1,275mRL design (GHD, 2025a) were made to the following:

- Underdrainage – it is existing and sized for the 1,295mRL raise. No changes to the previously reported flow are expected due to the interim raise height change (1,277.5mRL instead of 1,275mRL);
- Elevated underdrain objectives, elevation and details – as starting tailings elevation for this raise remains unchanged (1,270mRL). Only the positioning of the drains has been shifted adjacent the northern wall, to accommodate northern embankment geometry changes; and
- Material parameters (e.g. construction materials, tailings, bedrock) and BGM permeability.

The results of the seepage assessment were incorporated into the stability analysis, as detailed in the following section.

3B.1.2. Stability Analysis

The new crest height will affect the geometry of the cross sections and consequently the stability assessment was updated. No required changes were identified to the following aspects of the 1,275mRL design due to the increased crest height:

- Seismic assessment and loading:
  - The Operational Basis Earthquake (**OBE**) is a 1 in 475 years' event with 0.07g expected loading; and
  - The Safety Evaluation Earthquake (**SEE**) is a 1 in 5,000 years' (50th percentile) event with 0.406g expected loading.
- Liquefaction assessment:
  - Tailings are liquefiable under SEE loading;
  - The compacted embankment is not considered liquefiable; and
  - Foundation materials are not susceptible to liquefaction.

Slope stability analyses were conducted using GeoStudio Slope/W (Version 2024.2.1) software in conjunction with Seep/W. Limit equilibrium computer models were developed by adopting the Morgenstern-Price method of slices for all analyses. The figures showing the stability analysis results are included in Appendix B of the Attachment 8D (GHD,2026).

The proposed geometry for the 1,277.5mRL embankment raise resulted in satisfactory factors of safety within the specified assumptions and criteria. However, TSF1 is currently being excavated (re-mining of tailings), with excavation expected to reach about 1264mRL at the time of construction of the TSF4 Cell 1 raise to 1277.5mRL.

To support the stability of TSF1 embankment, infilling of the downstream side of the TSF4 Cell 1 northern embankment (upstream side of the TSF1 southern embankment) with waste rock will be undertaken for the construction of the Cell 1 embankment raise to 1277.5mRL. Slope stability analyses were undertaken for five critical sections of the embankment to determine required infilling (see Attachment 8D). Talison will infill the void adjacent to the TSF4 Cell 1 northern embankment with mine waste rock to 1269.5mRL. The TSF4 Cell 1 northern embankment will not be raised until the infilling has been completed.

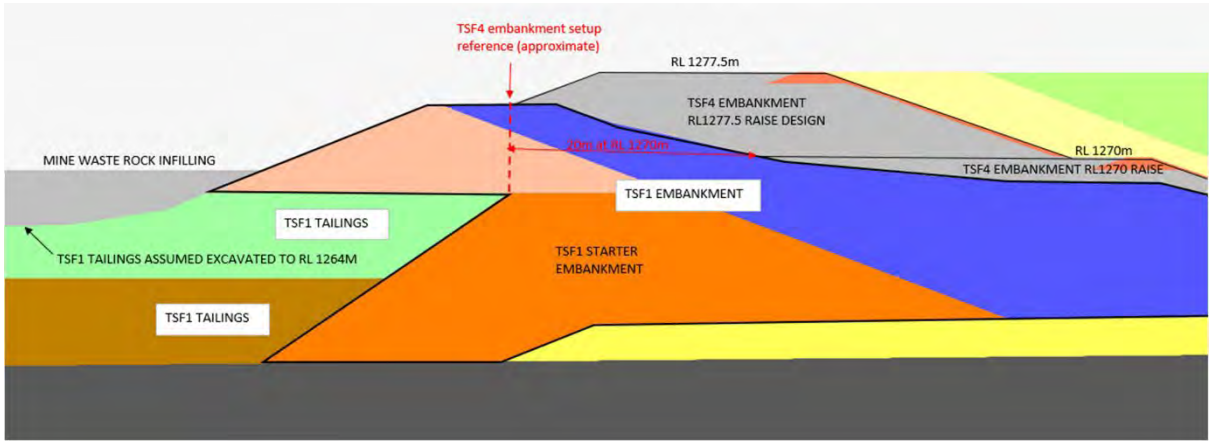


Figure 3: TSF4 Cell 1 Northern Embankment Arrangement

A preliminary assessment of the infilling placement rate concluded that the placement of the mine waste rock in no greater than 0.5m thick lifts is required to prevent unacceptable pore water pressures developing. In addition, to allow for the dissipation of excess pore water pressure the subsequent lift can only be placed 14 days after the preceding lift had been placed. A supplementary geotechnical investigation is scheduled for Q2 2026 and will inform revision and potential optimisation of the infilling placement rate. Additional monitoring instrumentation to monitor pore pressure in the underlying tailings is further detailed in section 3B.1.8.

A full summary of the stability analyses for the 1,277.5mRL can be found in Section 5.5 of Attachment 8D (GHD,2026).

3B.1.3. Safety in Design

A review of the Safety in Design prepared for the original embankment raise height of 1,275mRL determined that safety measures were considered valid for the updated crest elevation of 1,277.5mRL. Additional safety measures were incorporated in the 1,277.5mRL embankment raise design, including:

- Field trials and assessment of the loading to TSF1 tailings and associated pore pressure dissipation rate are recommended to reduce the risk of TSF1/TSF4 slope failure and further cascade failure;
- The raise of the northern wall has been designed to prevent encroachment on the TSF1 tailings;
- If the excavations within TSF1 extend beyond the design assumptions it is recommended that additional stability assessments are carried out to confirm stability of the interface wall; and
- Additional requirement has been added to the maximum operating level to consider the pond distance from the embankments.

GHD (2026) has updated the Safety in Design Register for Cell 1, as detailed in Appendix E of Attachment 8D.

3B.1.4. Embankments

The TSF4 Cell 1 perimeter embankments will be raised via a centreline construction methodology from a crest level of 1,270mRL to 1,277.5mRL. Future centreline raises are planned to be undertaken in 7.5m increments up to a final crest of 1,295mRL; these raises will be subject to future detailed design not included in the 1,277.5mRL design. There is no change to the construction materials selection or placement methodology specified in the original 1,275mRL raise design (GHD, 2026). The 1,277.5mRL layout is shown in Figure 4.

Perimeter Embankment – South and East

The 1,277.5mRL perimeter embankment raise design uses a centreline construction methodology and crest width of 31.5m matching previous raises. The embankment raise is primarily constructed from mine waste rock, and BGM is installed along the upstream face as a liner to provide containment of supernatant liquor.

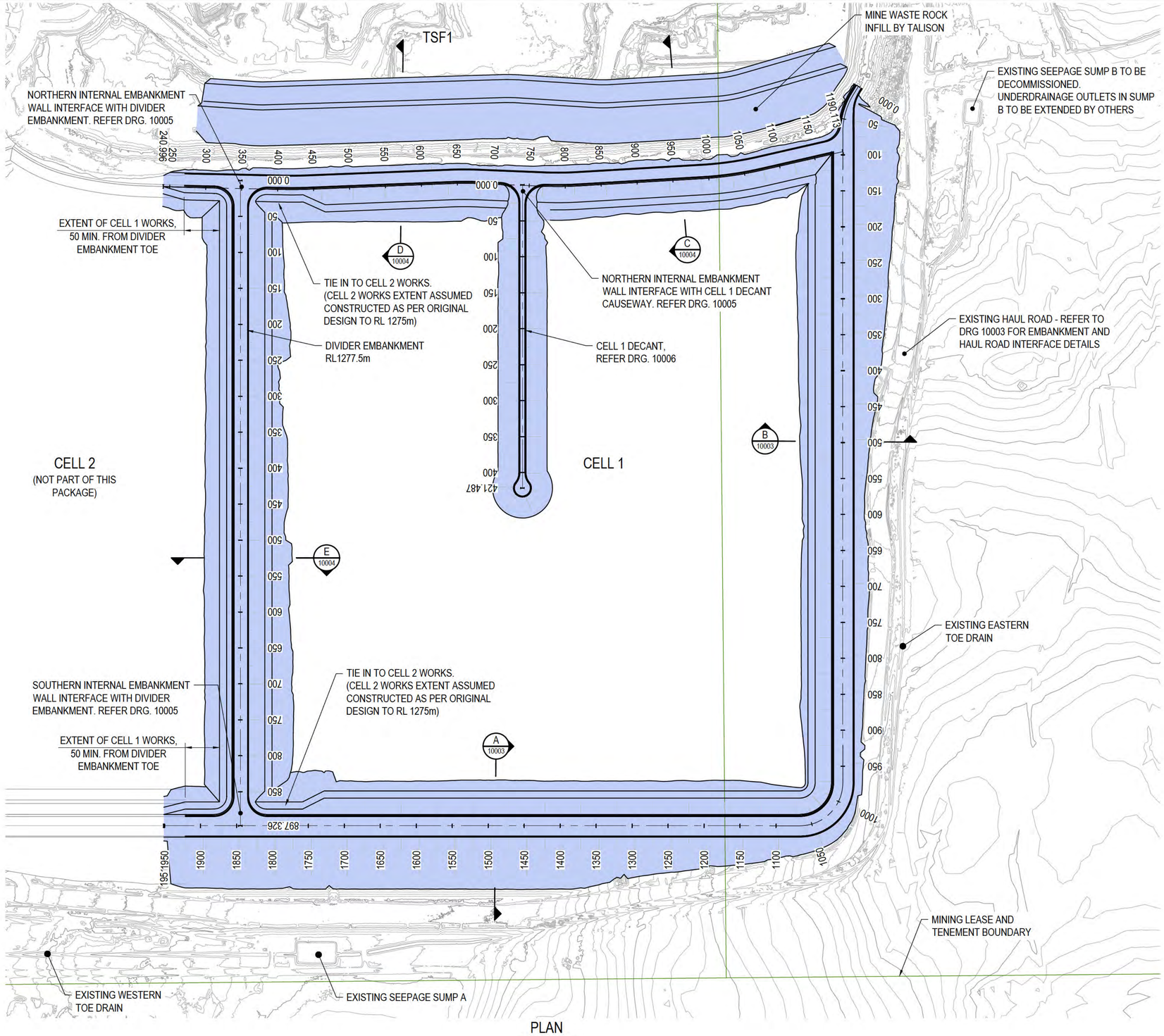
The perimeter embankments' downstream slope will be constructed from mine waste rock at a slope of 3(H):1(V).

A clean tailings sand platform will be mechanically placed to 1,270mRL to provide a foundation to construct the 1,277.5mRL raise and allow for a working space to tie in the BGM liner.

The upstream slope will comprise a BGM liner placed over a nominal 5m thick layer of suitable subgrade material at a slope of 3(H):1(V). The BGM will be installed on top of the subgrade material from the top of the embankments (highest elevation) to the 1,270mRL embankment elevation. The BGM liner will be secured in an anchor trench at the crest of the 1,277.5mRL raise and welded to the BGM installed on the tailings sand platform. The BGM will be welded to the BGM installed as part of the 1,270mRL raise to provide containment.

A cushion geotextile and a protective clean tailings sand layer will be installed to protect this BGM liner from damage during the construction of the mine waste rock portion of the 1,277.5mRL raise. Tailings required for constructing the compacted tailings sand platform will be harvested from deposited tailings material within TSF4.

A typical cross section is shown in Figure 5.



PLAN
SCALE 1:3000

NOTES:

1. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
2. ALL RL's ARE IN METRES TO LOCAL MINE DATUM (m).
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-01-77-DRG-CI-".
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5. WINDROWS TO INCLUDE BREAKS EVERY 40m FOR DRAINAGE.
6. FOR SETOUT OF CELL 1 EARTHWORKS MODEL REFER TO 12685165-GHD-01-77-MDL-CI-00001.
7. REFER TO TECHNICAL SPECIFICATIONS FOR MATERIAL AND COMPACTION REQUIREMENTS.

LEGEND:

TENEMENT BOUNDARY

CELL 1 EMBANKMENT EXTENT

BASE SURVEY SUPPLIED BY:
TALISON LITHIUM PTY LTD
RECEIVED ON: TSF4, 21 DECEMBER 2025
TSF1, 5 JANUARY 2026
EXTERNAL AREA, 4 OCT 2024
CO-ORDINATE GRID: GDA2020 MGA50
LEVEL DATUM: MINE DATUM

THIS DRAWING INCLUDES COLOURED INFORMATION
COPIES OF THIS DRAWING MUST BE PRODUCED IN COLOUR

C01	ISSUED FOR CONSTRUCTION	SW	DC	23/04/26

0 30 60 90 120 150m
SCALE 1:3000 AT ORIGINAL SIZE

N

TALISON LITHIUM

GHD
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PO Box 3106 Perth WA 6832 Australia
T 61 8 6222 8222 F 61 8 6222 8555
E permail@ghd.com W www.ghd.com
www.ghd.com

Project No. 12685165

Client: TALISON LITHIUM PTY LTD

Project: TSF4 CELL 1 REDESIGN TO RL1277.5m

Status: FOR CONSTRUCTION

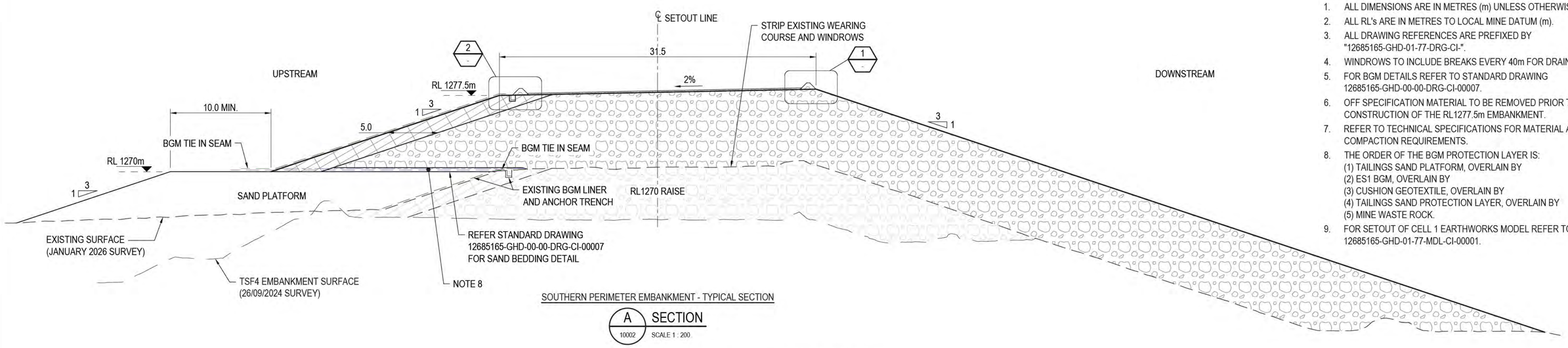
Drawing Title: FIGURE 4: TSF4 CELL 1 RAISE TO RL1277.5m GENERAL ARRANGEMENT

Size: A1

Drawing No.: 12685165-GHD-01-77-DRG-CI-10002

Rev: C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-01-77-DRG-CI-10002.dwg



SOUTHERN PERIMETER EMBANKMENT - TYPICAL SECTION

A / 10002 SECTION
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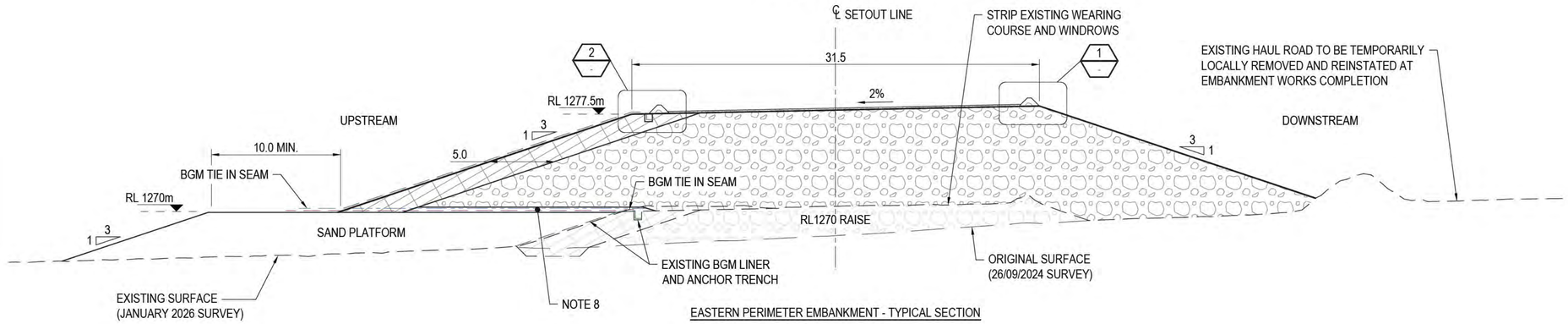


EASTERN PERIMETER EMBANKMENT - TYPICAL SECTION

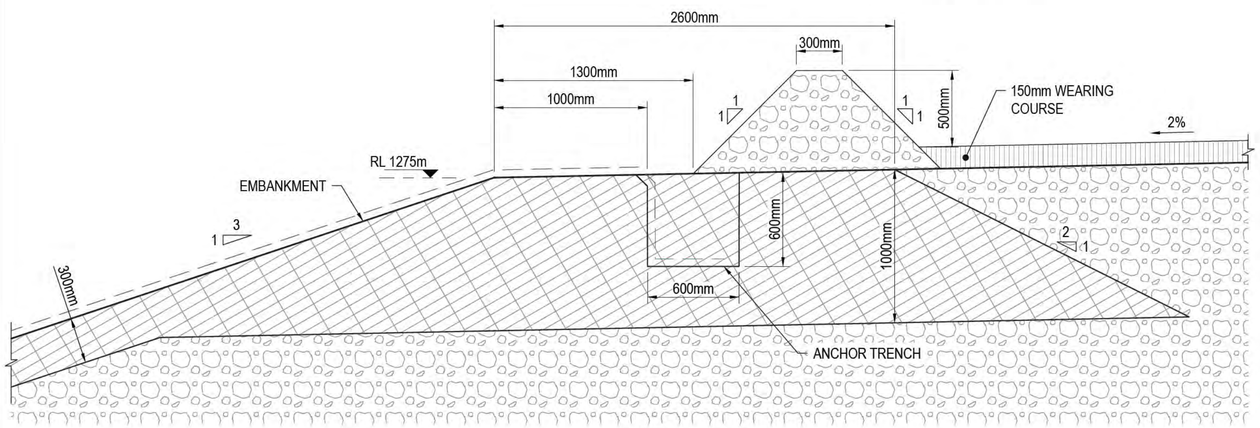
B / 10002 SECTION
SCALE 1 : 200

NOTES:

1. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
2. ALL RL's ARE IN METRES TO LOCAL MINE DATUM (m).
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-01-77-DRG-CI-".
4. WINDROWS TO INCLUDE BREAKS EVERY 40m FOR DRAINAGE
5. FOR BGM DETAILS REFER TO STANDARD DRAWING 12685165-GHD-00-00-DRG-CI-00007.
6. OFF SPECIFICATION MATERIAL TO BE REMOVED PRIOR TO THE CONSTRUCTION OF THE RL1277.5m EMBANKMENT.
7. REFER TO TECHNICAL SPECIFICATIONS FOR MATERIAL AND COMPACTION REQUIREMENTS.
8. THE ORDER OF THE BGM PROTECTION LAYER IS:
   (1) TAILINGS SAND PLATFORM, OVERLAIN BY
   (2) ES1 BGM, OVERLAIN BY
   (3) CUSHION GEOTEXTILE, OVERLAIN BY
   (4) TAILINGS SAND PROTECTION LAYER, OVERLAIN BY
   (5) MINE WASTE ROCK.
9. FOR SETOUT OF CELL 1 EARTHWORKS MODEL REFER TO 12685165-GHD-01-77-MDL-CI-00001.

LEGEND:

- BGM LINER (ES3)
- BGM LINER (ES1)
- CUSHION GEOTEXTILE
- EXISTING GEOTEXTILE
- MINE WASTE ROCK
- BGM LINER SUBGRADE
- WEARING COURSE
- CLEAN TAILINGS SAND



3 / 10004 DETAIL
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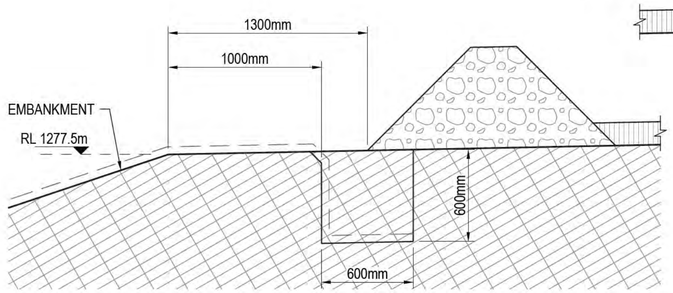

TYPICAL ANCHOR TRENCH

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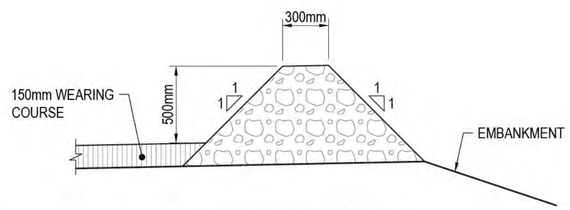


TYPICAL WINDROW

1 / - DETAIL
SCALE 1 : 20

THIS DRAWING INCLUDES COLOURED INFORMATION
COPIES OF THIS DRAWING MUST BE PRODUCED IN COLOUR

BASE SURVEY SUPPLIED BY: TALISON LITHIUM PTY LTD
RECEIVED ON: TSF4, 21 DECEMBER 2025
TSF1, 5 JANUARY 2026
EXTERNAL AREA, 4 OCT 2024
CO-ORDINATE GRID: GDA2020 MGA50
LEVEL DATUM: MINE DATUM

Rev	Description	Originator	Checked	Approved	Date
C01	ISSUED FOR CONSTRUCTION	SW	DC		23/04/26

SCALE 1:20 AT ORIGINAL SIZE (0 0.2 0.4 0.6 0.8 1.0m)

SCALE 1:200 AT ORIGINAL SIZE (0 2 4 6 8 10m)

TALISON LITHIUM

GHD
Level 10, 999 Hay Street Perth WA 6000
PO Box 3106 Perth WA 6832 Australia
T 61 8 6222 8222 F 61 8 6222 8555
E permail@ghd.com W www.ghd.com
www.ghd.com

Project No. 12685165

Client: TALISON LITHIUM PTY LTD

Project: TSF4 CELL 1 REDESIGN TO RL1277.5m

Status: FOR CONSTRUCTION

Drawing Title: FIGURE 5: TSF4 CELL 1 RAISE PERIMETER EMBANKMENT GEOMETRY (SOUTH AND EAST)

Size: A1

Drawing No.: 12685165-GHD-01-77-DRG-CI-10003

Rev: C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-01-77-DRG-CI-10003.dwg

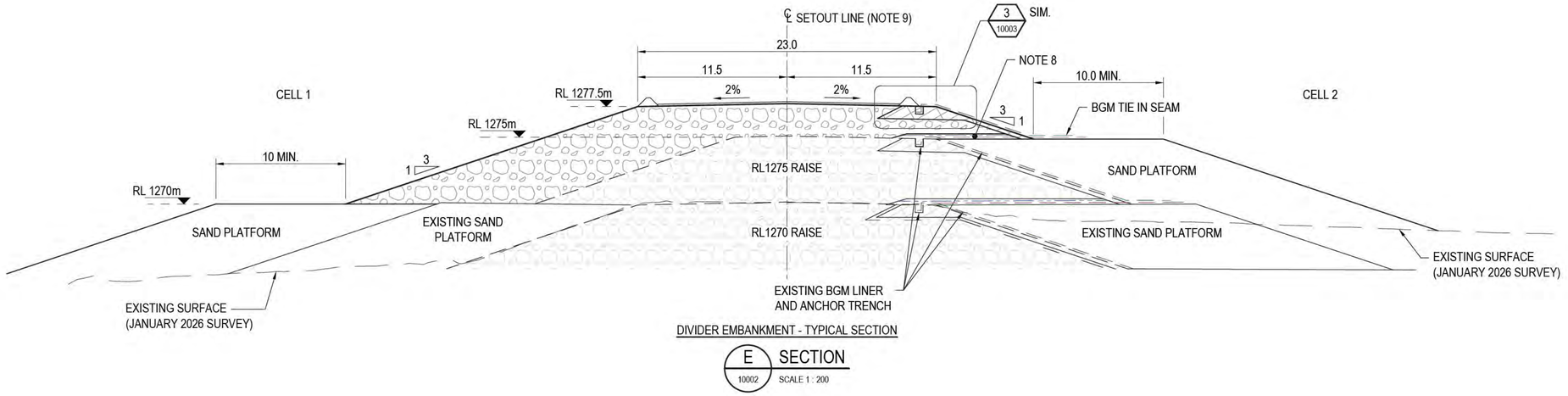
Northern Embankment at TSF1 Interface

The 1277.5mRL northern embankment raise is designed to minimise encroaching of the TSF4 northern embankment on the upstream side of the TSF1 starter embankment. The TSF1 starter embankment positioning is based on the interpretation of the internal geometry undertaken in the *Recommissioning post remining proof of concept report* (GHD, 2020a).

The TSF4 1277.5mRL embankment is 20m wide, with 3(H):1(V) slopes, with BGM liner tied into existing and extended to the face of the new raise. There are two different typical sections (Figure 6) identified along the TSF1 interface:

- Section C, typical for the eastern side of cell 1. Existing 1270mRL bench can accommodate the 1277.5mRL raise of TSF4. Sand platform is added for constructability to provide enough construction room; and
- Section D, typical for the western side of cell 1, where sand platform partially supports the raise.

TSF1 is currently being excavated (re-mining of tailings), with excavation expected to reach approximately 1,264mRL at the time of construction of the TSF4 Cell 1 raise to 1277.5mRL. To support the stability of TSF1 upstream embankment, infilling of the downstream side of the TSF4 Cell 1 northern embankment (upstream side of the TSF1 southern embankment) is required. Talison will infill the void adjacent to the TSF4 Cell 1 northern embankment with mine waste rock to 1269.5mRL. The TSF4 Cell 1 northern embankment will not be raised until the infilling has been completed (see section 3B.1.2 and Figure 3).



DIVIDER EMBANKMENT - TYPICAL SECTION

E 10002 SECTION

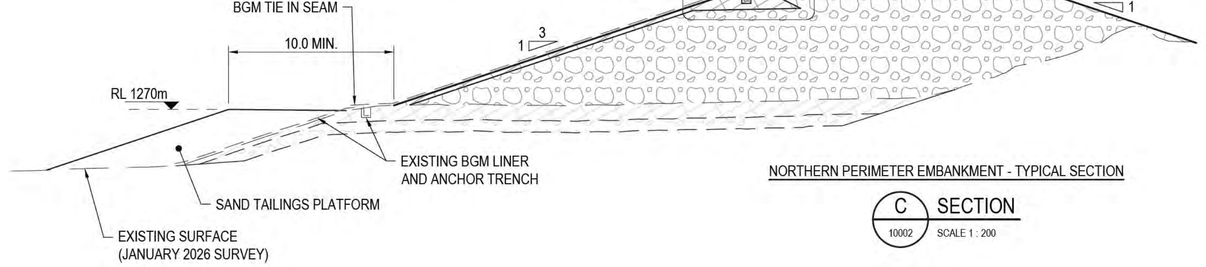
SCALE 1 : 200

NOTES:

1. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
2. ALL RL's ARE IN METRES TO LOCAL MINE DATUM (m).
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-01-77-DRG-CI-".
4. WINDROWS TO INCLUDE BREAKS EVERY 40m FOR DRAINAGE.
5. FOR BGM DETAILS REFER TO STANDARD DRAWING 12685165-GHD-00-00-DRG-CI-00007.
6. OFF SPECIFICATION MATERIAL TO BE REMOVED PRIOR TO THE CONSTRUCTION OF THE RL 1277.5m EMBANKMENT.
7. REFER TO TECHNICAL SPECIFICATIONS FOR MATERIAL AND COMPACTION REQUIREMENTS.
8. THE ORDER OF THE BGM PROTECTION LAYER IS:
   (1) TAILINGS SAND PLATFORM, OVERLAIN BY
   (2) ES1 BGM, OVERLAIN BY
   (3) CUSHION GEOTEXTILE, OVERLAIN BY
   (4) TAILINGS SAND PROTECTION LAYER, OVERLAIN BY
   (5) MINE WASTE ROCK.
9. FOR SETOUT OF CELL 1 EARTHWORKS MODEL REFER TO 12685165-GHD-01-77-MDL-CI-00001.

LEGEND:

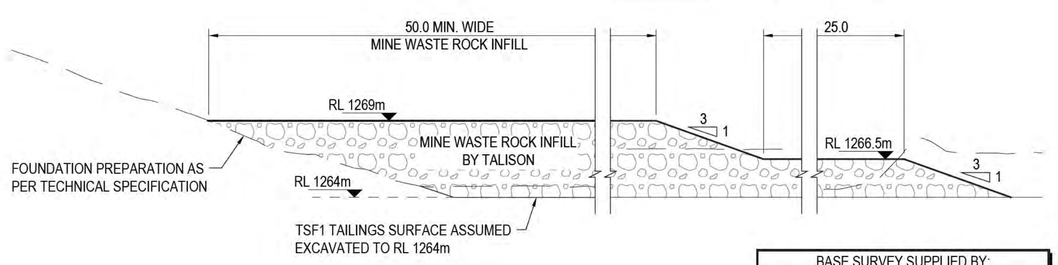
- BGM LINER (ES3)
- BGM LINER (ES1)
- CUSHION GEOTEXTILE
- EXISTING GEOTEXTILE
- MINE WASTE ROCK
- BGM LINER SUBGRADE
- WEARING COURSE
- CLEAN TAILINGS SAND

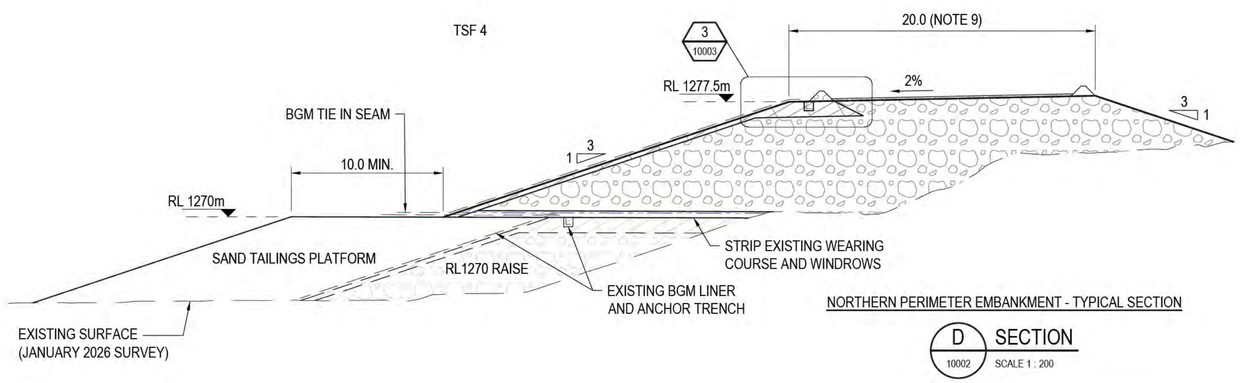


NORTHERN PERIMETER EMBANKMENT - TYPICAL SECTION

C 10002 SECTION

SCALE 1 : 200

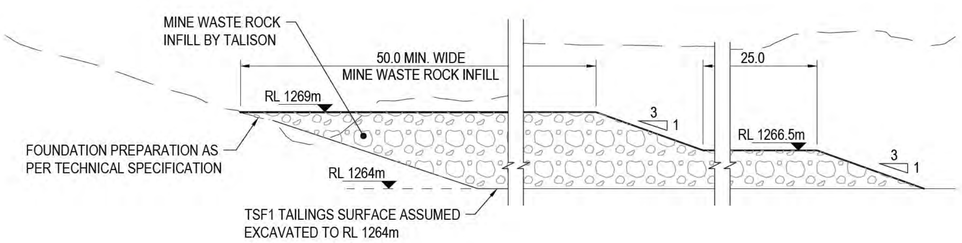




NORTHERN PERIMETER EMBANKMENT - TYPICAL SECTION

D 10002 SECTION

SCALE 1 : 200



BASE SURVEY SUPPLIED BY:
TALISON LITHIUM PTY LTD
RECEIVED ON: TSF4, 21 DECEMBER 2025
TSF1, 5 JANUARY 2026
EXTERNAL AREA, 4 OCT 2024
CO-ORDINATE GRID: GDA2020 MGA50
LEVEL DATUM: MINE DATUM

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Rev	Description	Checked	Approved	Date
C01	ISSUED FOR CONSTRUCTION	SW	DC	23/04/26

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

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www.ghd.com

Project No. 12685165

Client TALISON LITHIUM PTY LTD

Project TSF4 CELL 1 REDESIGN TO RL1277.5m

Status FOR CONSTRUCTION

Drawing Title FIGURE 6: TSF4 CELL 1 RAISE, SECTION C, D AND E

Size A1

Drawing No 12685165-GHD-01-77-DRG-CI-10004

Rev C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-01-77-DRG-CI-10004.dwg

Divider Embankment

The divider embankment is currently being raised to 1,275mRl in accordance with the 1,275mRL design (GHD, 2025). The raise of the divider embankment from 1,275mRl to 1,277.5mRL will comprise mine waste rock with a BGM liner on the Cell 2 face. A sand platform will be conducted on both sides of the divider to provide foundation for the raise. A typical cross-section is shown as Section E in Figure 6.

3B.1.5. Decant Causeway

The decant causeway is designed with a 10m wide crest and 1(V):2(H) embankment slopes. The causeway shall be extended to reach middle of the pond and support decant recovery.

Tailings which are in, and adjacent to, the current decant pond are likely to be soft. The design has provided allowance for mine waste rock to be placed down to the original floor level of the TSF4 Cell 1. The construction methodology will be nominated by the contractor and approved by Talison and will consider safe construction methods (i.e., end-tipping and placing mine waste rock over soft tailings areas). The decant causeway is shown in Figure 7.

3B.1.6. BGM Liner

A BGM liner will be installed on the upstream perimeter embankment of the 1277.5mRL raise and the Cell 2 side of the divider embankment (Figure 8). The details of the BGM liner to be installed for different sections and the divider embankment are discussed under each embankment section above.

3B.1.7. Elevated Drainage

Seepage modelling was undertaken to estimate the phreatic surface through the embankment for use in the stability assessment (GHD, 2026). Results are incorporated and shown in the stability assessment Figures (Appendix B).

There are no changes from the original approved 1,275mRL design (GHD, 2025a) to the following features:

- Underdrainage – it is existing and sized for the 1,295mRL raise. No changes to the previously reported flow are expected due to the interim raise height change (1,277.5mRL instead of 1,275mRL); and
- Elevated underdrain objectives, elevation and details – as starting tailings elevation for this raise remains unchanged (1,270mRL). Only the positioning of the drains has been shifted adjacent the northern wall, to accommodate northern embankment geometry changes (Figure 9).

The Detailed Engineering Design Report for TSF4 1,275m Raise (GHD, 2025) states that elevated drains were included as part of the 1,275mRL embankment raise to provide additional contingency to the existing underdrainage system. The elevated drains will be located 60m from the embankment at 1,270mRL and will comprise two DN 160 slotted DrainCoil pipes with geotextile socks. The DrainCoil

pipes are encased in Zone 2B material and mine waste rock to provide structural protection to the pipes from future tailings loads (20m) that will be deposited over these pipes.

A fall of 0.3% was incorporated into the elevated drain design to provide sufficient gradient to convey seepage out of the TSF while considering the geometry of the existing embankments. The elevated drain system will not impact the existing BGM liner on the embankments and will not be higher than the 1,275mRL crest level. Elevated sand platforms will be required to provide the foundation for the elevated drains. Talison will construct the foundation for the elevated drains from reclaimed clean tailings sand material prior to the construction of the elevated drains. The detailed drawing of elevated drains shown in Figure 10.

Two outlets for the elevated drains are included in each cell. Outlets were minimised in order to reduce the risks related to penetrations through the embankment. Outlet pipes penetrating the BGM will be sealed using onsite manufactured pipe boots (Appendix A; GHD, 2025). The outlet pipes will discharge into the existing underdrainage collection sumps. Details of the tie-ins to the existing sumps are dependent on the design of the manifolds and have not been included in the design.

The elevated drains have been positioned to coincide with the design phreatic surface. If the existing underdrainage system continues to function as designed, the phreatic surface will remain below the elevated drains.

3B.1.8. Monitoring Infrastructure

Vibrating wire piezometers (**VWP**), survey monitoring points, inclinometers and monitoring bores were installed as part of the previous raises. A single VWP is left to be installed as shown in Appendix A of Attachment 8D.

The 1,277.5mRL design includes provision for the following modifications to the existing monitoring infrastructure:

- Protection of the existing infrastructure;
- Raising the settlement survey markers; and
- Raising the inclinometers.

Data logger relocation was specified in the 1,275mRL design and has already been completed with no changes required due to the increase in embankment raise height.

The settlement survey markers are designed to be raised by adding threaded rods to extend the survey rod above the embankment raise. The survey rod is housed within a PVC pipe and the PVC pipe will also be extended as part of subsequent embankment lifts. Each marker is protected by a compacted earthen bund. The extended rod will be supported by the placement of cracker dust around the rod within the PVC pipe sleeve.

Due to the disturbance of the survey marker at each raise, there will be a period of re-calibration after each raise. The survey marker will be resurveyed after it has been raised to provide a new baseline for the ongoing dam safety monitoring.

The design includes raising the inclinometer by extending the casing to 1.5m above crest level and constructing a protective windrow around the casing. To stabilise the inclinometer casing the area within the window was designed to be backfilled with compacted crusher dust.

The monitoring instrumentation details for TSF4 Cell 1 1,277.5mRL raise has been presented in Figure 11 and Figure 12.

TSF1 southern embankment infill zone instrumentation

Up to six additional VWPs will be installed in the footprint of TSF1 southern embankment within the infilling zone, in addition to two existing and four new VWPs installed in the TSF1 embankment, to monitor pore pressure in the underlying tailings. Continuous pore pressure measurements will be reviewed at the end of each shift and prior to the commencement of the next shift during infilling, to ensure that increased pore water pressure due to loading is within acceptable limits. Before the placement of the subsequent lift, pore water pressure measurements will be reviewed to ensure that sufficient dissipation of the excess pore water pressures have occurred.

TSF4
CELL 1

TSF1

A

1

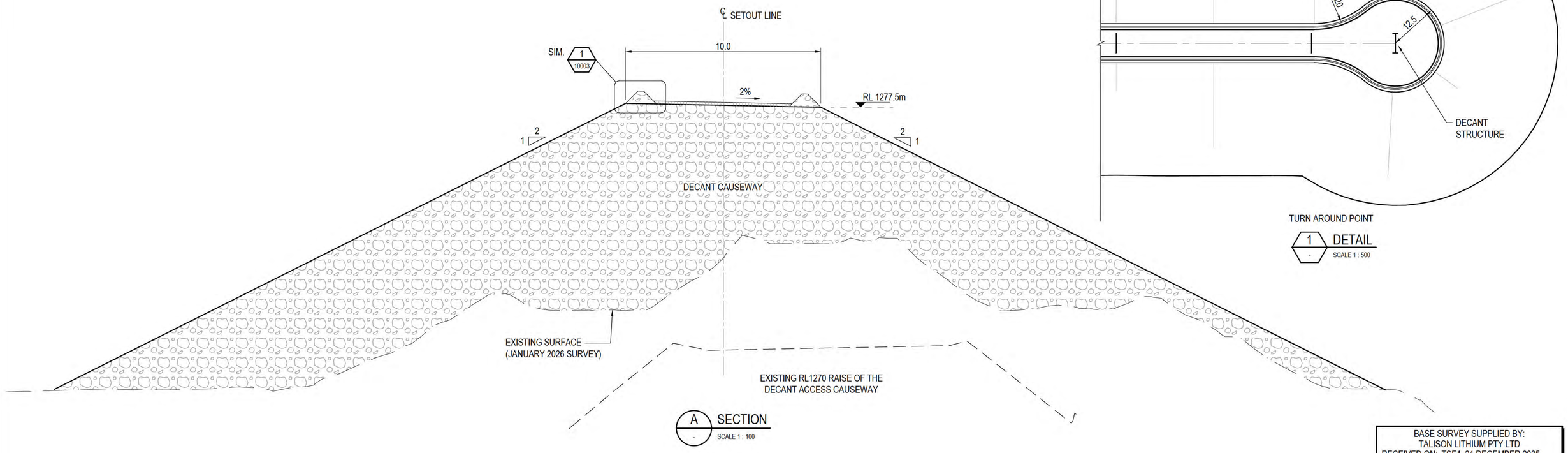
NOTES:

1. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
2. ALL RL's ARE IN METRES TO LOCAL MINE DATUM (m).
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-01-77-DRG-CI-".
4. WINDROWS TO INCLUDE BREAKS EVERY 40m FOR DRAINAGE.
6. REFER TO TECHNICAL SPECIFICATIONS FOR MATERIAL AND COMPACTION REQUIREMENTS.

LEGEND:

- MINE WASTE ROCK
- WEARING COURSE
- TAILINGS

PLAN
SCALE 1:1000



A SECTION
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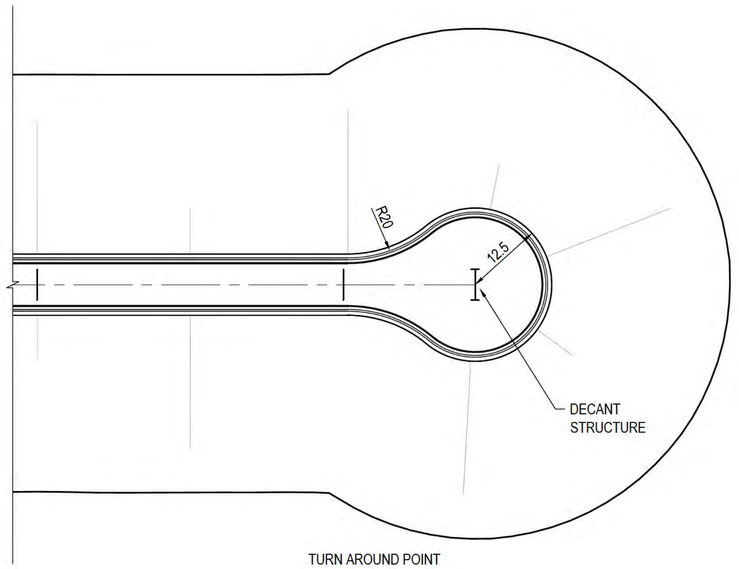

1 DETAIL
SCALE 1 : 500

BASE SURVEY SUPPLIED BY:
TALISON LITHIUM PTY LTD
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TSF1, 5 JANUARY 2026
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C01	ISSUED FOR CONSTRUCTION	SW	DC 23/04/26

0 1 2 3 4 5m
SCALE 1:100 AT ORIGINAL SIZE

0 10 20 30 40 50m
SCALE 1:1000 AT ORIGINAL SIZE

0 5 10 15 20 25m
SCALE 1:500 AT ORIGINAL SIZE

N

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www.ghd.com

Project No. 12685165

Client: TALISON LITHIUM PTY LTD

Project: TSF4 CELL 1 REDESIGN TO RL1277.5m

Status: FOR CONSTRUCTION

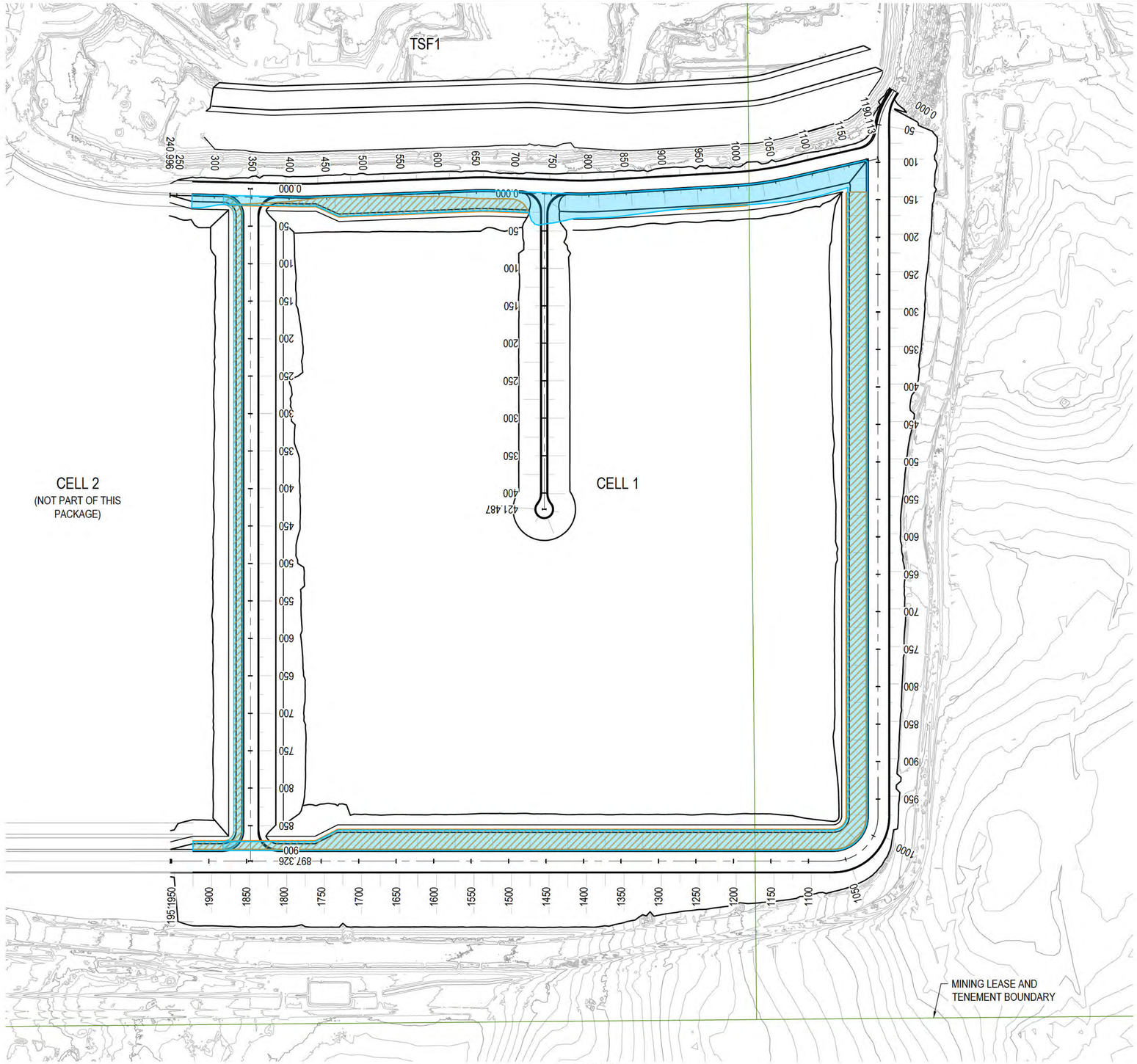
Drawing Title: FIGURE 7: DECANT CAUSEWAY - TSF4 CELL 1 RAISE TO 1277.5mRL

Size: A1

Drawing No.: 12685165-GHD-01-77-DRG-CI-10006

Rev: C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-01-77-DRG-CI-10006.dwg



PLAN
SCALE 1:3000

NOTES:

1. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
2. ALL RL's ARE IN METRES TO LOCAL MINE DATUM (m).
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-01-77-DRG-CI-".
4. CELL 2 WORKS BY OTHERS.
5. REFER TO TECHNICAL SPECIFICATIONS FOR BGM MATERIAL REQUIREMENTS
   ES3 TO BE INSTALLED ON EMBANKMENT SLOPES, AND
   ES1 TO BE INSTALLED ON THE TAILINGS PLATFORM FLOOR.
6. REFER TO TECHNICAL SPECIFICATIONS FOR MATERIAL AND COMPACTION REQUIREMENTS.

LEGEND:

- TENEMENT BOUNDARY
- BGM LINER ES3
- BGM LINER ES1

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BASE SURVEY SUPPLIED BY:
TALISON LITHIUM PTY LTD
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EXTERNAL AREA, 4 OCT 2024
CO-ORDINATE GRID: GDA2020 MGA50
LEVEL DATUM: MINE DATUM

C01	ISSUED FOR CONSTRUCTION	SW	DC 23/04/26

0 30 60 90 120 150m
SCALE 1:3000 AT ORIGINAL SIZE

N

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GHD
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www.ghd.com

Project No. 12685165

Client: TALISON LITHIUM PTY LTD

Project: TSF4 CELL 1 REDESIGN TO RL1277.5m

Status: FOR CONSTRUCTION

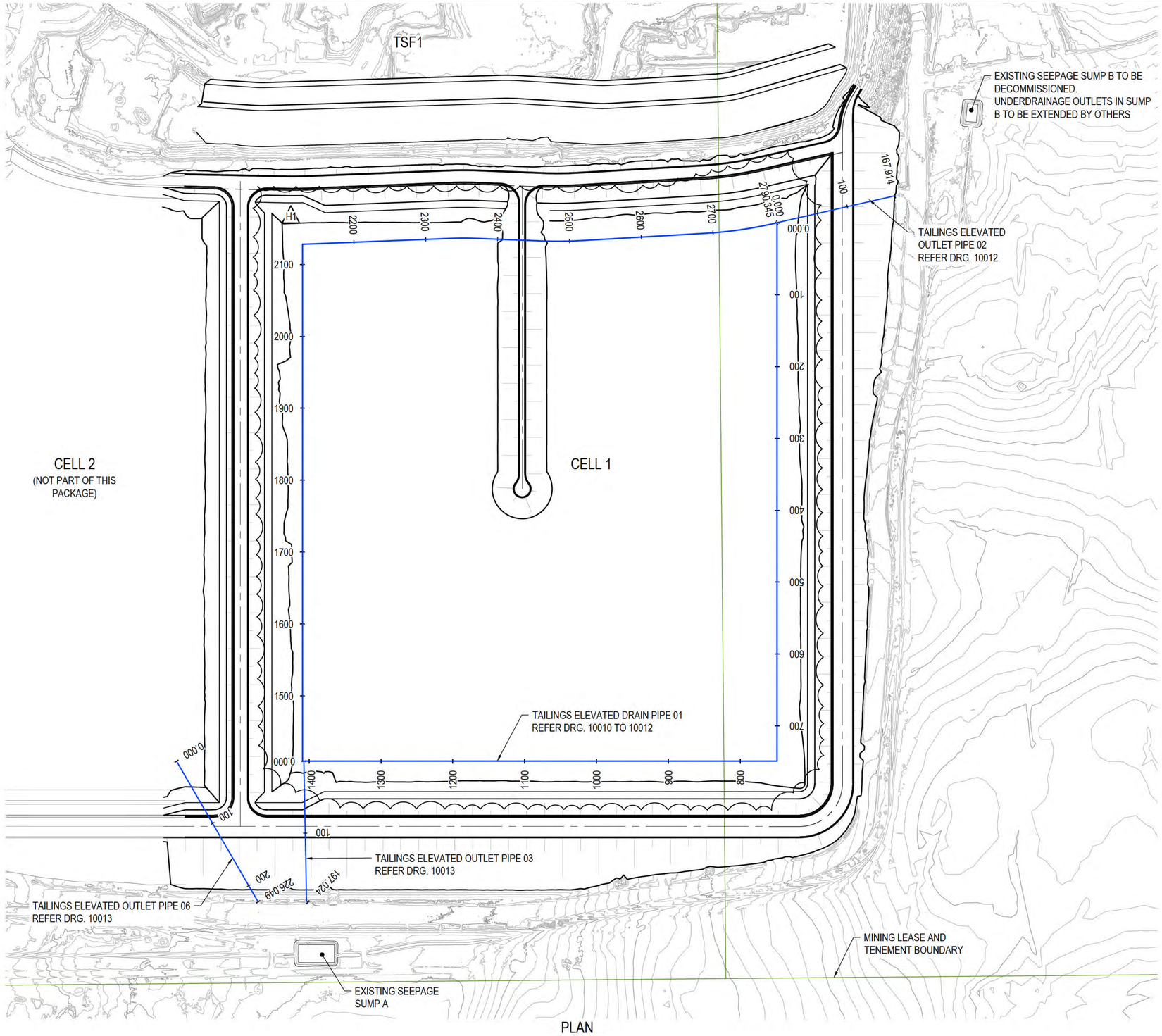
Drawing Title: FIGURE 8: BGM LINER GENERAL ARRANGEMENT

Size: A1

Drawing No.: 12685165-GHD-01-77-DRG-CI-10007

Rev: C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-01-77-DRG-CI-10007.dwg



PLAN
SCALE 1:3000

NOTES:

1. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
2. ALL RL's ARE IN METRES TO LOCAL MINE DATUM (m).
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-01-77-DRG-CI-".
4. CELL 2 WORKS BY OTHERS.
5. FOR SETOUT OF CELL 1 TAILINGS ELEVATED DRAINS MODEL REFER TO 12685165-GHD-01-77-MDL-CI-00002.

LEGEND:

TENEMENT BOUNDARY

TAILINGS ELEVATED DRAINS

ITEMS ON HOLD:

H1 - CONSTRUCTION OF ELEVATED DRAIN BY PRINCIPAL.

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EXTERNAL AREA, 4 OCT 2024
CO-ORDINATE GRID: GDA2020 MGA50
LEVEL DATUM: MINE DATUM

C01	ISSUED FOR CONSTRUCTION	SW	DC	23/04/26

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N

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Project No. 12685165

Client TALISON LITHIUM PTY LTD

Project TSF4 CELL 1 REDESIGN TO RL1277.5m

Status FOR CONSTRUCTION

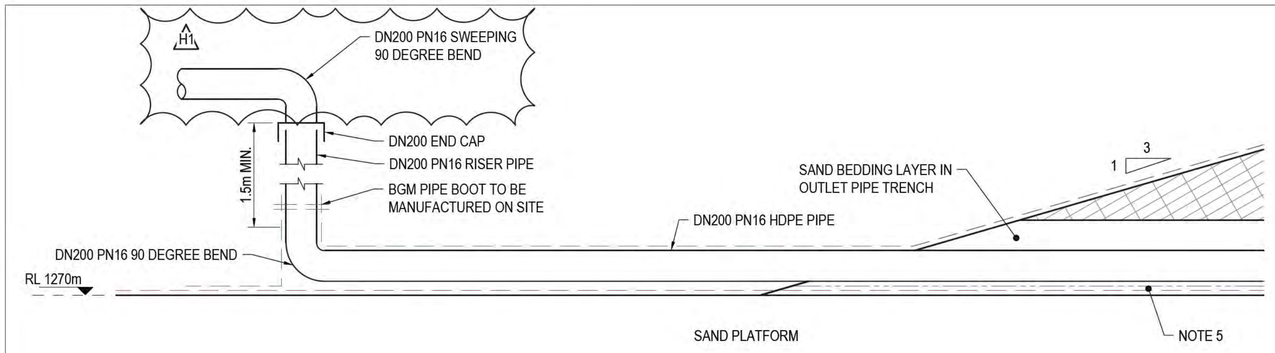
Drawing Title FIGURE 9: ELEVATED DRAINS

Size A1

Drawing No. 12685165-GHD-01-77-DRG-CI-10008

Rev C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-01-77-DRG-CI-10008.dwg



1 DETAIL
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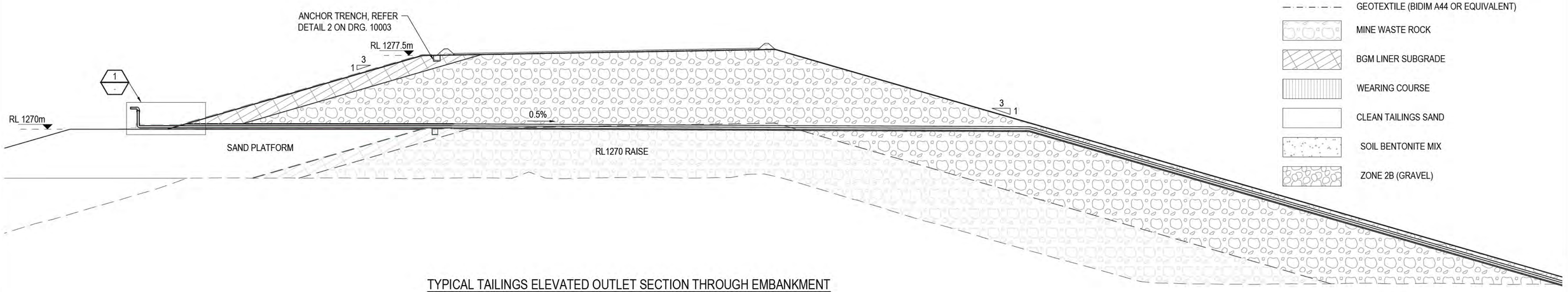


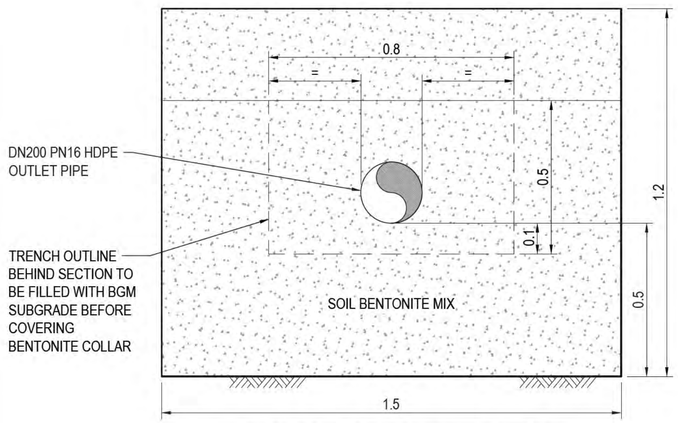
TYPICAL TAILINGS ELEVATED OUTLET SECTION THROUGH EMBANKMENT
SCALE 1:200

NOTES:

1. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
2. ALL RL's ARE IN METRES TO LOCAL MINE DATUM (m).
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-01-77-DRG-CI-".
4. REFER TO TECHNICAL SPECIFICATIONS FOR MATERIAL AND COMPACTION REQUIREMENTS.
5. THE ORDER OF THE BGM PROTECTION LAYER IS:
   (1) TAILINGS SAND PLATFORM, OVERLAIN BY
   (2) ES1 BGM, OVERLAIN BY
   (3) CUSHION GEOTEXTILE, OVERLAIN BY
   (4) SAND BEDDING LAYER, OVERLAIN BY
   (5) DN200 PN16 HDPE PIPE, OVERLAIN BY
   (6) SAND BEDDING LAYER, OVERLAIN BY
   (7) BGM SUBGRADE.

LEGEND:

- BGM LINER (ES3)
- BGM LINER (ES1)
- CUSHION GEOTEXTILE
- GEOTEXTILE (BIDIM A44 OR EQUIVALENT)
- MINE WASTE ROCK
- BGM LINER SUBGRADE
- WEARING COURSE
- CLEAN TAILINGS SAND
- SOIL BENTONITE MIX
- ZONE 2B (GRAVEL)



TYPICAL SOIL BENTONITE MIX CUTOFF
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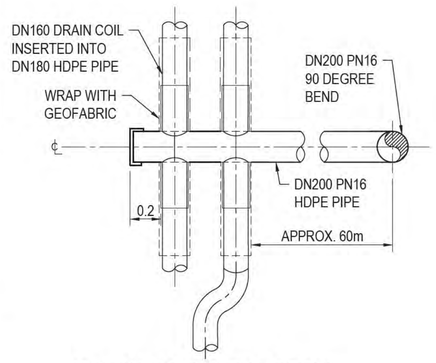
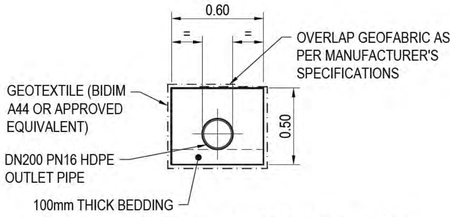
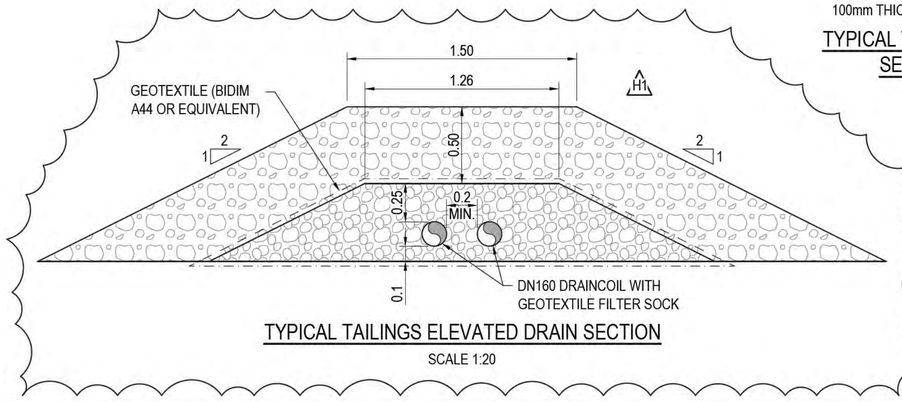


TYPICAL CONNECTION DETAIL DRAINCOIL TO OUTLET PIPE
SCALE 1:20



TYPICAL TAILINGS ELEVATED OUTLET DRAIN SECTION WITHIN EMBANKMENT
SCALE 1:20



TYPICAL TAILINGS ELEVATED DRAIN SECTION
SCALE 1:20

ITEMS ON HOLD:

H1 - CONSTRUCTION OF ELEVATED DRAIN BY PRINCIPAL.

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TSF1, 5 JANUARY 2026
EXTERNAL AREA, 4 OCT 2024
CO-ORDINATE GRID: GDA2020 MGA50
LEVEL DATUM: MINE DATUM

C01	ISSUED FOR CONSTRUCTION	SW	DC	23/04/26

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SCALE 1:200 AT ORIGINAL SIZE

0 0.2 0.4 0.6 0.8 1.0m
SCALE 1:20 AT ORIGINAL SIZE

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Project No. 12685165

Client: TALISON LITHIUM PTY LTD

Project: TSF4 CELL 1 REDESIGN TO RL1277.5m

Status: FOR CONSTRUCTION

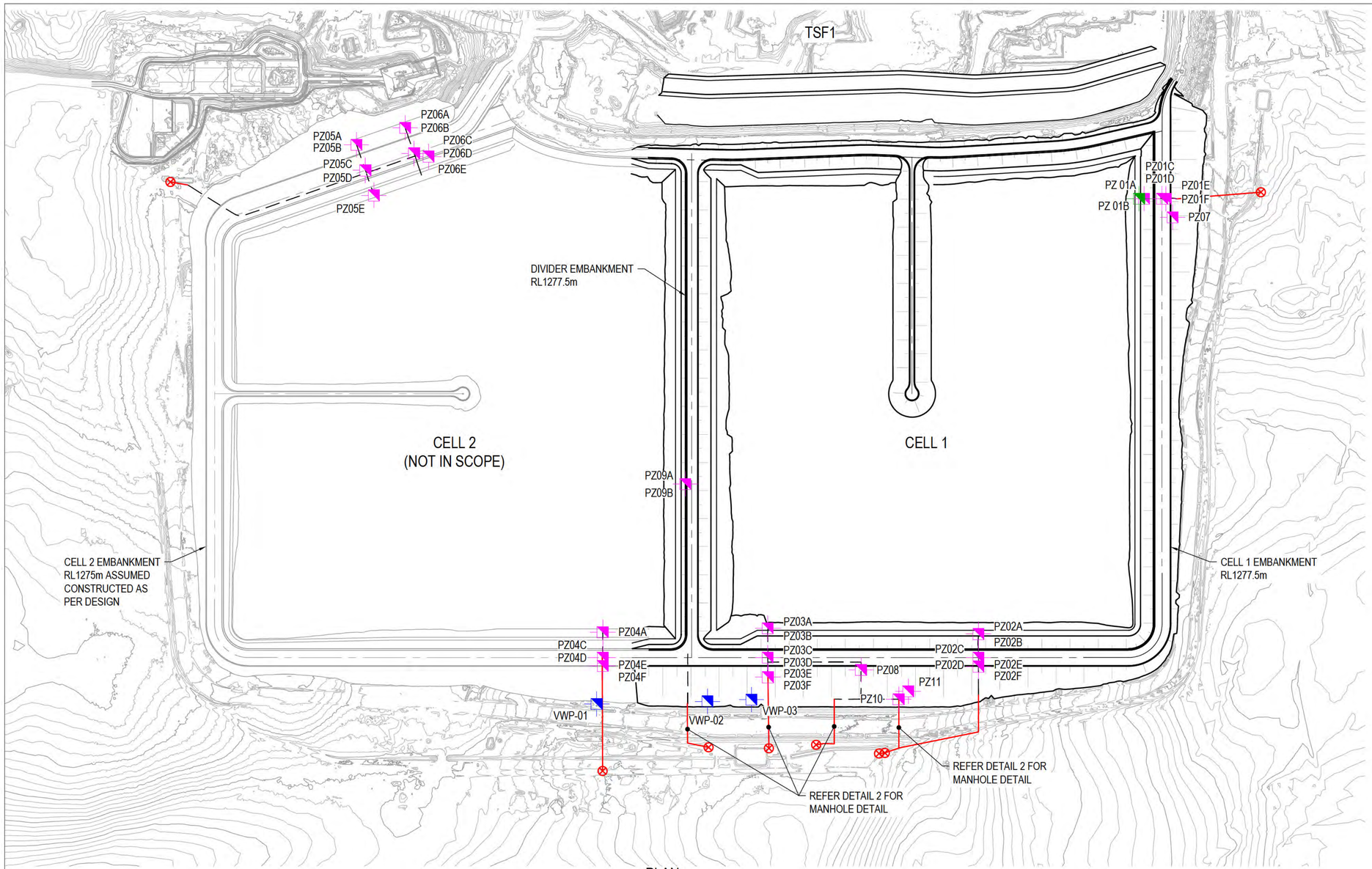
Drawing Title: FIGURE 10: ELEVATED DRAIN DETAILS

Size: A1

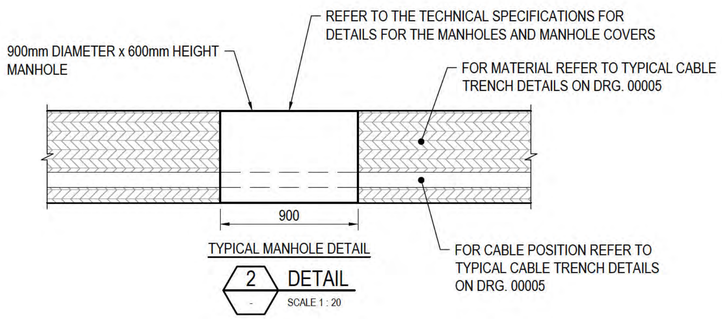
Drawing No.: 12685165-GHD-01-77-DRG-CI-10009

Rev: C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-01-77-DRG-CI-10009.dwg



PLAN
SCALE 1:4000



TYPICAL MANHOLE DETAIL
2 DETAIL
SCALE 1 : 20

NOTES:

1. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
2. ALL RL's ARE IN METRES TO LOCAL MINE DATUM (m).
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-00-00-DRG-CI-".
4. EXISTING PIEZOMETERS TO BE PROTECTED.
5. FOR INSTRUMENTATION DETAILS REFER TO DRAWING 00005.

LEGEND:

- EXISTING VWP LOCATIONS
- EXISTING VWP LOCATIONS TO MEASURE PORE PRESSURES DURING CONSTRUCTION
- PROPOSED VWP LOCATION
- EXISTING DATA LOGGER LOCATION
- EXISTING PIEZOMETER CONDUITS
- ROCK LINING
- NATURAL GROUND

PROPOSED PIEZOMETER SETOUT TABLE

POINT ID	EASTING	NORTHING	TIP RL (m)
PZ 01B	413823.2	6250519.5	1260.3

EXISTING PIEZOMETER SETOUT TABLE

POINT ID	EASTING	NORTHING	TIP RL (m)
PZ 01A	413832	6250519.5	1258.8
PZ 01C	413864	6250519.5	1263.2
PZ 01D			1254.6
PZ 01E	413871	6250519.5	1263.4
PZ 01F			1257.7
PZ 02A	413537	6249744.5	1253.9
PZ 02B			1255.9
PZ 02C	413537	6249702.5	1260.3
PZ 02D			1250.3
PZ 02E	413537.1	6249686.5	1260.8
PZ 02F			1253.8
PZ 03A	413162	6249754.5	1249.4
PZ 03B			1251.4
PZ 03C	413161.9	6249702.5	1251.0
PZ 03D			1241.0
PZ 03E	413162.2	6249667.5	1250.7
PZ 03F			1243.7
PZ 04A	412868	6249747.8	1255.5
PZ 04C	412868	6249702.5	1261.2
PZ 04D			1251.2
PZ 04E	412868	6249687.5	1261.1
PZ 04F			1254.1
PZ 05A	412429.4	6250615.5	1256.7
PZ 05B			1246.7
PZ 05C	412445.2	6250570	1257.6
PZ 05D			1247.6
PZ 05E	412460.6	6250525.4	1257.1
PZ 06A	412516.2	6250645.6	1255.7
PZ 06B			1245.7
PZ 06C	412532	6250600.1	1258.5
PZ 06D			1248.5
PZ 06E	412558	6250594.5	1254.1
PZ 07	413883	6250486.5	1250.0
PZ 08	413328.1	6249680.5	1234.0
PZ 09A	413015	6250011.5	1249.5
PZ 09B			1259.5
PZ 10	413395	6249628.5	1248.4
PZ 11	413412	6249642.5	1248.4

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BASE SURVEY SUPPLIED BY:
TALISON LITHIUM PTY LTD
RECEIVED ON: TSF4, 21 DECEMBER 2025
TSF1, 5 JANUARY 2026
EXTERNAL AREA, 4 OCT 2024
CO-ORDINATE GRID: GDA2020 MGA50
LEVEL DATUM: MINE DATUM

Rev	Description	Checked	Approved	Date
C01	ISSUED FOR CONSTRUCTION	SW	DC	23/04/26

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SCALE 1:20 AT ORIGINAL SIZE
0 0.5 1.0 1.5 2.0 2.5m
SCALE 1:50 AT ORIGINAL SIZE
0 40 80 120 160 200m
SCALE 1:4000 AT ORIGINAL SIZE

N

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Project No. 12685165

Client: TALISON LITHIUM PTY LTD

Project: TSF4 CELL 1 REDESIGN TO RL1277.5m

Status: FOR CONSTRUCTION

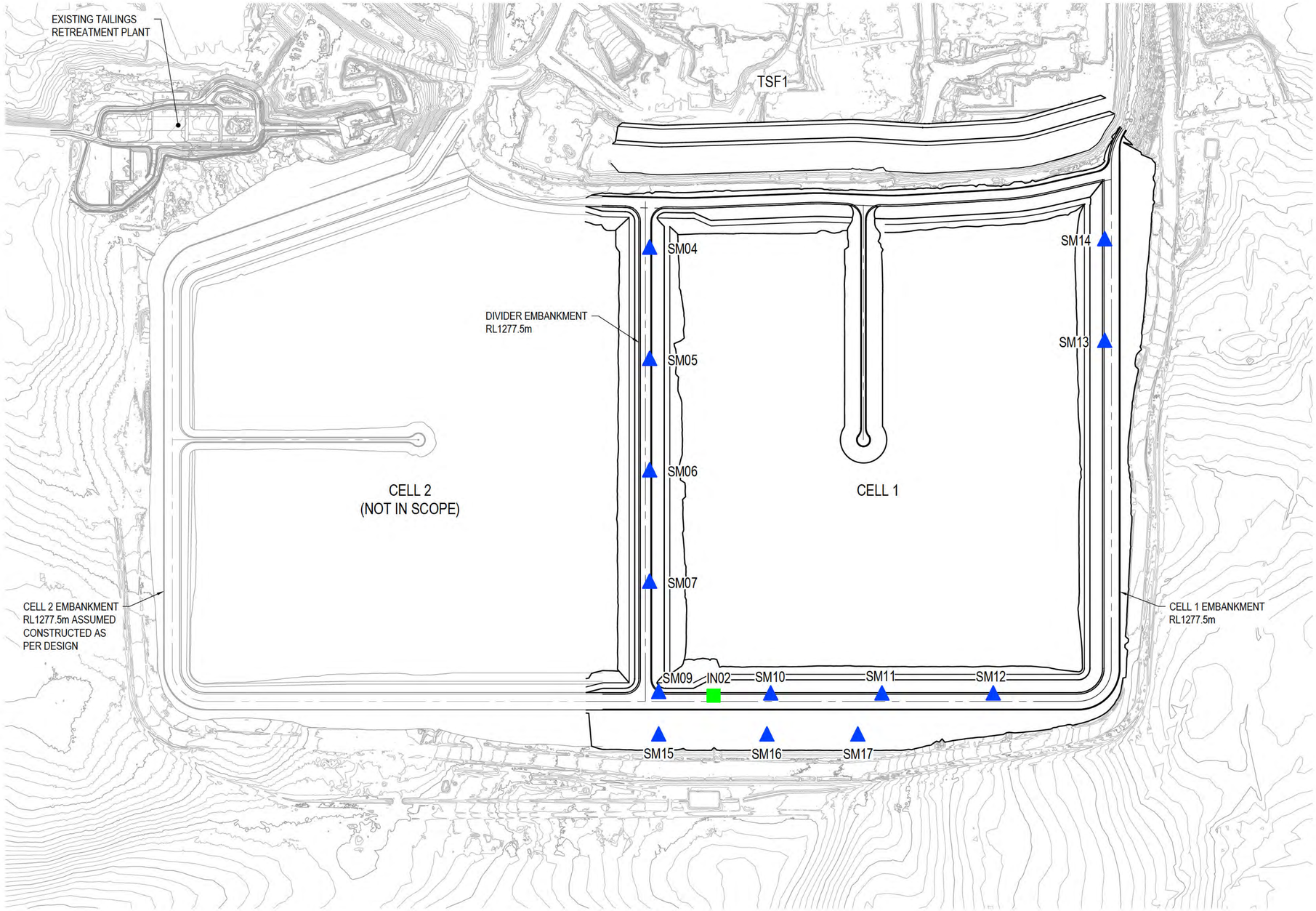
Drawing Title: FIGURE 11: MONITORING INSTRUMENTATION (PIEZOMETERS)

Size: A1

Drawing No.: 12685165-GHD-00-00-DRG-CI-00003

Rev: C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-00-00-DRG-CI-00003.dwg



PLAN
SCALE 1:4000

NOTES:

1. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
2. ALL RL's ARE IN METRES TO LOCAL MINE DATUM (m).
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-00-00-DRG-CI-".
4. FOR INSTRUMENTATION DETAILS REFER TO STANDARD DRAWING 00005.
5. FOR INCLINOMETER STAGING PLAN REFER TO DRAWING 00006.
6. THE CASING EXTENSION IS TO BE INSTALLED IN ACCORDANCE WITH THE PREVIOUS INSTALLED SET OF ALIGNMENT GROOVES AND SUPERVISED BY AN EXPERIENCED PERSON. FOR MORE DETAILS REFER TO TECHNICAL SPECIFICATION.
7. CELL 2 INSTRUMENTS ARE NOT SHOWN - NOT IN SCOPE.

LEGEND:

EXISTING SURVEY MARKERS TO BE RAISED

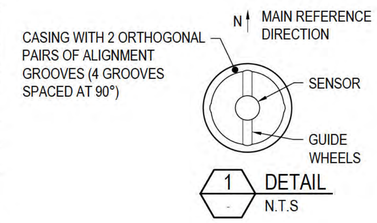
EXISTING INCLINOMETER / SETTLEMENT GAUGE TO BE RAISED

EXISTING CELL 1 INCLINOMETER SETOUT TABLE (NOTE 7)

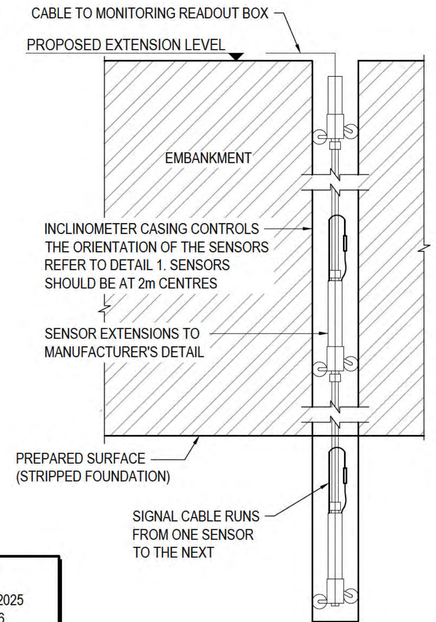
POINT ID	EASTING	NORTHING
IN02	413149.3	6249712.9

EXISTING CELL 1 SURVEY MARKER SETOUT TABLE (NOTE 7)

POINT ID	EASTING	NORTHING
SM04	413034.4	6250515.2
SM05	413034.4	6250315.2
SM06	413034.4	6250115.2
SM07	413034.4	6249915.2
SM09	413050.7	6249717.4
SM10	413251.9	6249714.5
SM11	413451.9	6249714.5
SM12	413651.9	6249714.5
SM13	413852.2	6250347.7
SM14	413852.2	6250530.2
SM15	413050.7	6249640.8
SM16	413245.2	6249640.8
SM17	413408.6	6249640.8



1 DETAIL
N.T.S



INCLINOMETER DETAIL
N.T.S

BASE SURVEY SUPPLIED BY:
TALISON LITHIUM PTY LTD
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Rev	Description	Checked	Approved	Date
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0 40 80 120 160 200m
SCALE 1:4000 AT ORIGINAL SIZE

N

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Project No. 12685165

Client TALISON LITHIUM PTY LTD

Project TSF4 CELL 1 REDESIGN TO RL1277.5m

Status FOR CONSTRUCTION

Drawing Title FIGURE 12: MONITORING INSTRUMENTATION (SURVEY MARKERS AND INCLINOMETERS)

Size A1

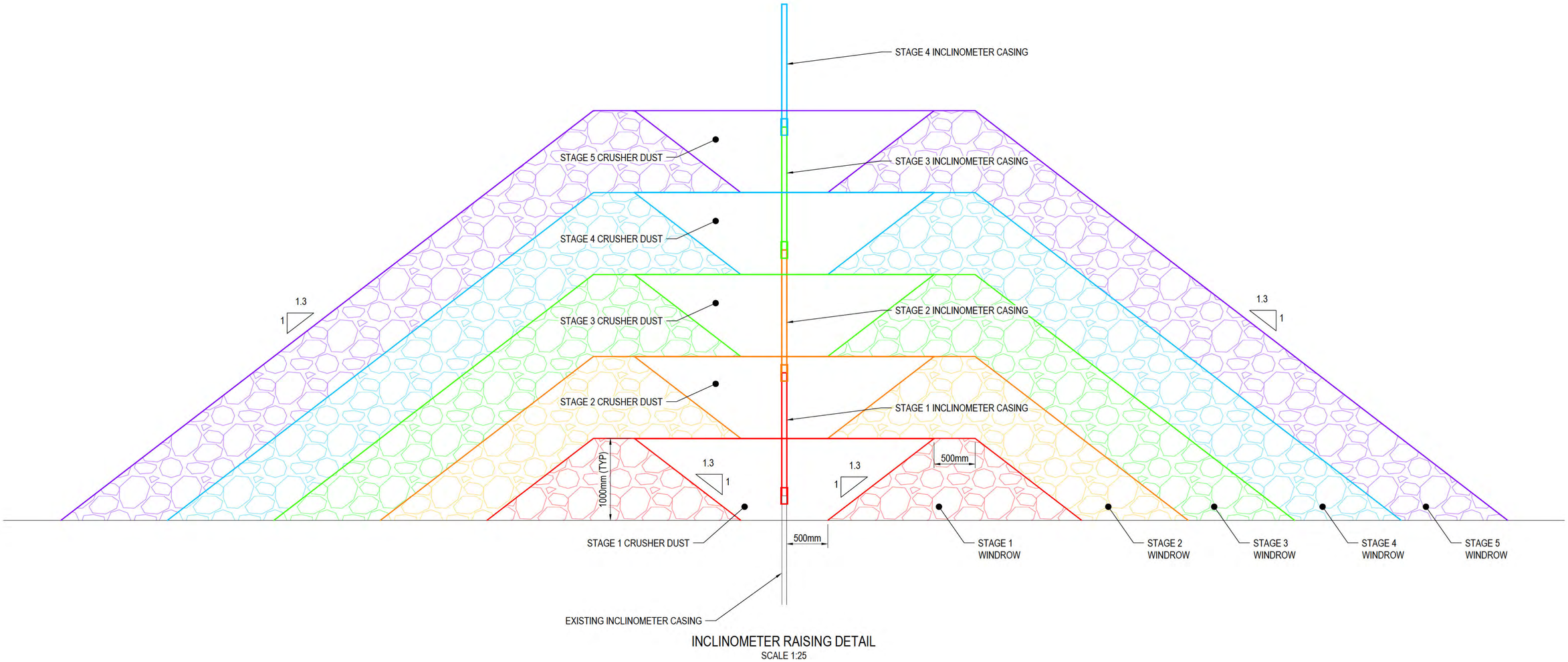
Drawing No. 12685165-GHD-00-00-DRG-CI-00004

Rev C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-00-00-DRG-CI-00004.dwg

NOTES:

1. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
2. ALL RL's ARE IN METRES TO LOCAL MINE DATUM (m).
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-00-00-DRG-CI-".
4. REFER DRAWING 00004 FOR INCLINOMETER LOCATIONS.



INCLINOMETER RAISING DETAIL
SCALE 1:25

STAGING

- STAGE 1: CONSTRUCT 1M HIGH WINDROW; INSTALL 1.5M LONG INCLINOMETER CASING; GLUE, POP RIVET AND TAPE INCLINOMETER CASING JOINT; MANUAL BACKFILL ANNULUS BETWEEN CASING AND WINDROW WITH CRUSHER DUST; COMPACT CRUSHER DUST WITH HAND COMPACTOR
- STAGE 2: RAISE WINDROW BY 1M; INSTALL 1.5M LONG INCLINOMETER CASING; GLUE, POP RIVET AND TAPE INCLINOMETER CASING JOINT; MANUAL BACKFILL ANNULUS BETWEEN CASING AND WINDROW WITH CRUSHER DUST; COMPACT CRUSHER DUST WITH HAND COMPACTOR
- STAGE 3: RAISE WINDROW BY 1M; INSTALL 1.5M LONG INCLINOMETER CASING; GLUE, POP RIVET AND TAPE INCLINOMETER CASING JOINT; MANUAL BACKFILL ANNULUS BETWEEN CASING AND WINDROW WITH CRUSHER DUST; COMPACT CRUSHER DUST WITH HAND COMPACTOR
- STAGE 4: RAISE WINDROW BY 1M; INSTALL 1.5M LONG INCLINOMETER CASING; GLUE, POP RIVET AND TAPE INCLINOMETER CASING JOINT; MANUAL BACKFILL ANNULUS BETWEEN CASING AND WINDROW WITH CRUSHER DUST; COMPACT CRUSHER DUST WITH HAND COMPACTOR
- STAGE 5: RAISE WINDROW BY 1M; MANUAL BACKFILL ANNULUS BETWEEN CASING AND WINDROW WITH CRUSHER DUST; COMPACT CRUSHER DUST WITH HAND COMPACTOR

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EXTERNAL AREA, 4 OCT 2024
CO-ORDINATE GRID: GDA2020 MGA50
LEVEL DATUM: MINE DATUM

C01	ISSUED FOR CONSTRUCTION	SW	DC	23/04/26

[redacted]

0 0.25 0.5 0.75 1.0 1.25m
SCALE 1:25 AT ORIGINAL SIZE

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Project No. 12685165

Client: TALISON LITHIUM PTY LTD

Project: TSF4 CELL 1 REDESIGN TO RL1277.5m

Status: FOR CONSTRUCTION

Drawing Title: FIGURE 13: INCLINOMETER STAGING PLAN

Size: A1

Drawing No.: 12685165-GHD-00-00-DRG-CI-00006

Rev: C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-00-00-DRG-CI-00006.dwg

3B.2 Construction

3B.2.1 Scope of All Construction Works

The 2021 GHD detailed design report was submitted as a supporting document for the TSF4 Works Approval (W6618/2021/1; approved 8 March 2022) and describes the general construction process at each staged raise until the maximum embankment height (295mAHD) is reached. Construction of embankment raises will be continuous until completion of TSF4 and no modifications to foundation preparation, access roads, materials, construction methodology or technical specifications are required to the original design (GHD, 2025; Attachment 8C). Changes are generally related to the crest elevation and zone geometry (Figure 14).

3B.2.2 High-level methodology

TSF4 comprises two (2) cells that are raised alternately. The Cell 1 and Cell 2 raises to 1,270mRL were completed in Quarter 1 and Quarter 2 of 2025 respectively. GHD issued their design for the 1,275mRL raise in May 2025 (GHD, 2025a). Cell 2 and the divider embankment between the two cells are currently being raised to 1,275mRL in accordance with this design. Cell 1 has been redesigned to have an embankment crest height of 1,277.5mRL (subject of this Application).

No modifications to the original design construction process are required (GHD, 2025) and works will follow the same design philosophy and construction methodology. A combined centreline–downstream approach has been adopted, ensuring that the embankment footprint remains within the Mine Development Envelope and that no nearby structures are adversely affected, particularly in the vicinity of the north-western embankment (GHD, 2026).

The works covered include site preparation, foundation treatment, earthworks, tailings sand platform placement, BGM liner installation, and ancillary structures such as the decant causeway and access ramp. The earthworks construction process comprises clearing and grubbing, stripping, foundation preparation, and staged placement of embankment materials.

It should be noted for Cell 1:

- The divider embankment starting elevation will be 1,275mRL (as it will be constructed to this elevation as part of the Cell 2 works);
- TSF1 interface will require supporting TSF1 stability and infilling (construction methodology to be determined to support the pore pressure dissipation in TSF1 tailings, as noted in section 3B.1.2); and
- The Cell 2 1,275mRL and Cell 1 1,277.5mRL embankments need to be constructed and BGM-lined in a sequence that provides a continuous impermeable boundary.

Detailed key construction materials and methodology are described in Attachments 8A-8D.

The works are proposed to be staged. The following high level construction methodology outlines the key steps required to construct the Cell 1 1277.5mRL:

1. Construction to start in Cell 1 while depositing in Cell 2 to 1,275mRL;

2. Place sand platform. The sand platform shall be constructed in accordance with the Drawings using tailings sand material sourced from within the cell;
3. Install BGM liner on the flat surface;
4. Place the cushion geotextile;
5. Place protective sand layer;
6. Place mine waste rock;
7. Place subgrade;
8. Excavate the anchor trench for BGM;
9. Place BGM on the embankment face. The BGM liner will be installed from the upstream crest of the embankments (highest elevation) to the floor (lowest elevation) to minimise the potential for water to seep underneath the BGM during the installation; and
10. Anchor BGM / fill and compact anchor trench. Once the BGM has been installed in the anchor trench the anchor trench will be backfilled with the excavated soil and compacted using a handheld compactor.

Following completion of the embankment raise activities the ring mains and spigots will be replaced to facilitate discharge into the raised facility.

3B.2.3 Sequencing

Construction of the Cell 1 and Cell 2 embankments will be sequenced such that one cell is always able to be operated whilst works are completed on the other. They will be constructed and BGM-lined in a sequence that ensures that the BGM liner of the Cell 1 and Cell 2 perimeter embankments creates an impermeable boundary. The general sequencing of construction events is as outlined above.

NOTES:

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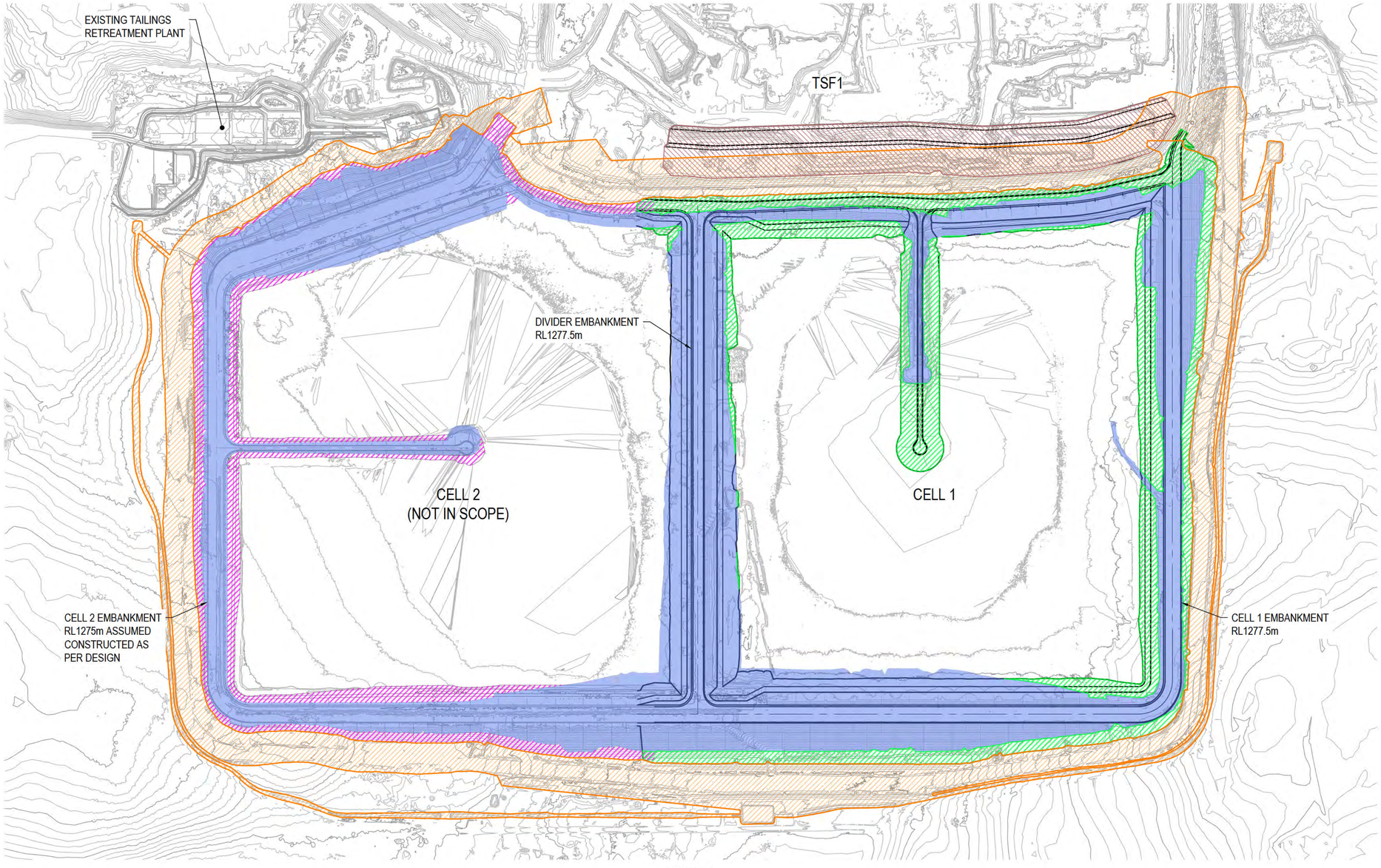
3. ALL DRAWING REFERENCES ARE PREFIXED BY "12685165-GHD-00-00-DRG-CI-".
4. OFF SPECIFICATION MATERIAL TO BE REMOVED PRIOR TO THE CONSTRUCTION OF THE RL1277.5m EMBANKMENT.

LEGEND:

- RL1270m EMBANKMENT EXTENT (EXISTING)
- RL1277.5m CELL 1 EMBANKMENT EXTENT
- MINE WASTE ROCK INFILL
- RL1275m CELL 2 EMBANKMENT EXTENT (NOT IN SCOPE, FOR INFORMATION ONLY)
- RL1295m CLEARING EXTENT (NOT IN SCOPE, FOR INFORMATION ONLY)



PLAN
SCALE 1:4000

BASE SURVEY SUPPLIED BY:
TALISON LITHIUM PTY LTD
RECEIVED ON: TSF4, 21 DECEMBER 2025
TSF1, 5 JANUARY 2026
EXTERNAL AREA, 4 OCT 2024
CO-ORDINATE GRID: GDA2020 MGA50
LEVEL DATUM: MINE DATUM

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C01	ISSUED FOR CONSTRUCTION	SW	DC 23/04/26

0 40 80 120 160 200m
SCALE 1:4000 AT ORIGINAL SIZE

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Project No. 12685165

Client: TALISON LITHIUM PTY LTD
Project: TSF4 CELL 1 REDESIGN TO RL1277.5m
Status: FOR CONSTRUCTION

Drawing Title: FIGURE 14: RAISE FOUNDATION PREPARATION
Size: A1
Drawing No.: 12685165-GHD-00-00-DRG-CI-00002
Rev: C01

File Name: C:\12d\SW\data\P-00-12D-001\61-12685165 - Talison TSF4 raise to RL1277.5_4111\CADD\Drawings\12685165-GHD-00-00-DRG-CI-00002.dwg

3B.3 Operation

The operation of TSF4 has been assessed and approved under W6618/2021/1 and there will be no change to the general operation of TSF4 due to the works proposed in this Application. The following section provides a summary of relevant operational information to satisfy the requirements of the TSF Category-Specific Check List.

3B.3.1 Water Balance

The existing water balance model for the TSF4 (as detailed in Attachment 8A) was reviewed and updated as part of the embankment raise design for 1,275mRL. No remodelling was identified to be required or has been conducted as a part of Cell 1 1,277.5mRL embankment raise. The revised 1,275mRL water balance model is described in Attachment 8C (GHD, 2025) and is summarised below.

The water balance model was used to calculate the volume of water within TSF4 over time and under a range of climatic conditions. The decant pond volume was converted to a pond area and the decant pond level was inferred from the stage storage curves. Decanted water is pumped to the Clear Water Dam.

The monthly average inputs and outputs were plotted for average rainfall and typical wet and dry year conditions. Decant return rates required to maintain an adequate normal operating pond level were then calculated accordingly. The catchment area used for the revised water balance model is shown in Figure 15.

Figure 15: Water balance model catchment area

The revised water balance model considered the following inflow and outflow streams, which are visually represented in Figure 16.

Inflows:

- Water in the tailings slurry;
- Rainfall; and
- Return water to the decant pond from the collection sumps (Sump A, Sump B and Sump C).

Outflows:

- Evaporation loss;
- Seepage loss based on estimated seepage rates;
- Water retained in the tailings; and
- Decant water.

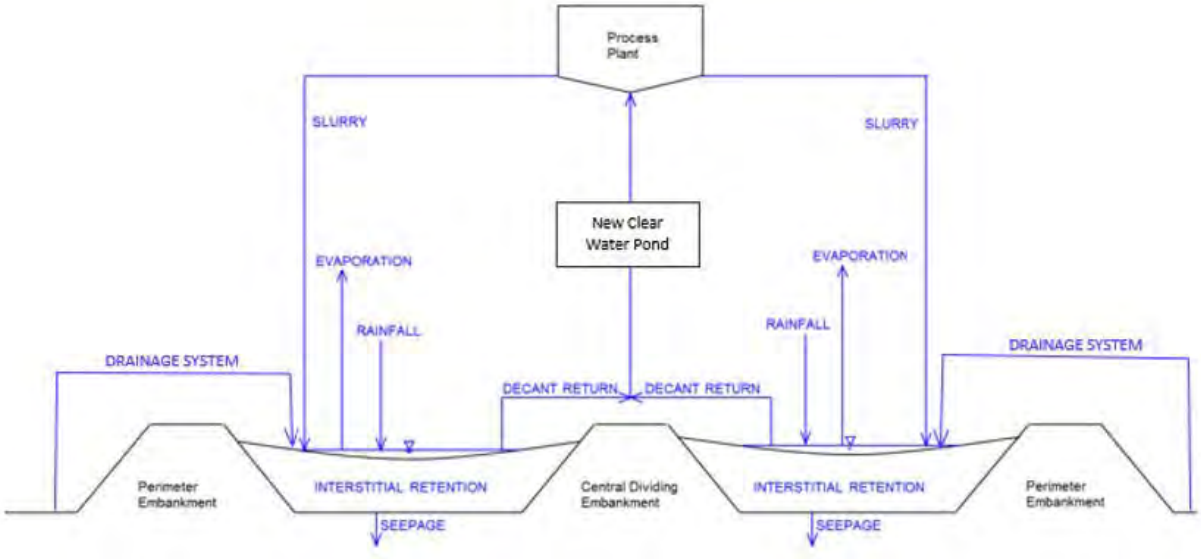


Figure 16: Schematic representation of revised water balance model

Decant return

To maintain the pond area for each stage a decant return rate of 2,700m^3/h is required for average rainfall conditions.

The "wet" and "dry" conditions were also assessed to determine the potential variation in the required decant capacity:

- For "wet" conditions a decant return rate of up to 2,850m^3/h is required to maintain the pond area; and
- For "dry" conditions the maximum required decant rate was calculated to be 1,650m^3/h.

If wet conditions result in the level of the decant pond increasing above the minimum operating level, then an additional temporary pump may be required for short durations.

3B.3.2 Tailings Deposition

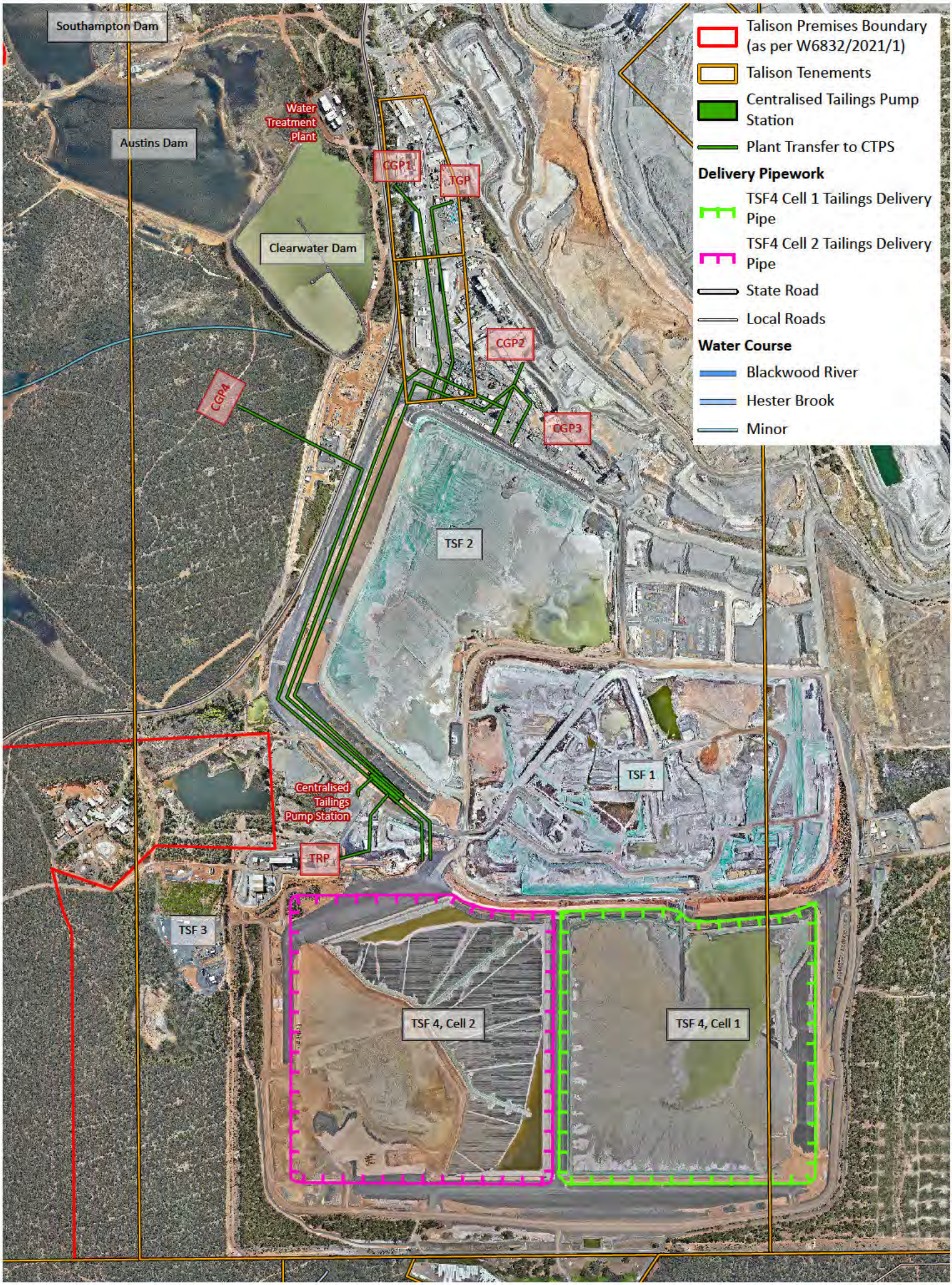
The tailings deposition strategy at TSF4 aims to store tailings safely and efficiently, minimising the risk of failure modes, maximising storage capacity and providing continuous storage for the ongoing operation of the Talison processing plants. These characteristics underscore the importance of tailings management in the operation of TSF4. Tailings management at TSF4 involves the following key aspects:

- Perimeter discharge: Tailings discharge occurs from multi-spigot lines running along the upstream edge of the embankment crests of both perimeter and the dividing embankments;
- Pond location: Tailings are discharged into TSF4 using sub-aerial deposition, which generates tailings beaches around the embankments and a centralised decant pond away from the embankments;
- Facilitate future raises: facility operation promotes solar drying, desiccation, and tailings strength gain, by maintaining a dry beach adjacent to embankments to facilitate future centreline raises; and
- Cycled deposition: Tailings will be evenly deposited, generally for a period of no more than 24 hours in any location, thus maximising tailings consolidation, density and overall storage capacity.

The tailings management and deposition strategy drives the water balance (Section 3B.3.1) by defining the tailings throughput deposited in the cells and slurry water, which is a key inflow of the water balance model. Additionally, part of the tailings management scope is managing the decant pond size and volume. The delivery/recovery pipelines sizing and embankment raises staging are also strongly influenced by the tailing's deposition strategy.

Pipelines

Approval for the construction of the pipelines has been provided under Works Approval W6618/2021/1, and no changes are proposed.



Ref:I:\Projects\2023\0146_00_2023_TSF4 Cell 1 Licence Amendment\Pipeline Layout

GREENBUSHES OPERATIONS
Figure 17: Pipeline Layout

0 250 500 Meters
SCALE: 1:15,000

Datum: GDA 94
Projection: MGA Zone 50

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Tailings production

Table 2 shows the anticipated production schedule with real deposition data from the beginning of TSF4 operation in January 2024 until October 2024 and forecast tailings production for the remaining periods until 2034 (GHD, 2025; Attachment 8C).

Table 2: Anticipated tailings production schedule

Year	Planned production (t)
2026	6,633,000
2027	5,419,000
2028	5,936,000
2029	6,840,000
2030	6,840,000
2031	6,840,000
2032	6,840,000
2033	6,840,000
2034	6,840,000

Tailings Deposition Modelling

Considerations

No change to tailings deposition is proposed for the Cell 1 1,277.5mRL embankment raise (GHD, 2026). Tailings deposition modelling was conducted to support Works Approval application for TSF4 1,275mRL raise (GHD, 2025; Attachment 8C) and is summarised below.

Modelling was carried out using the Muk3D software, developed by MineBridge® for simulating deposition in each cell. The tailings deposition modelling is based on the following assumptions:

- Tailings beach profile: The tailings beach profile adopted for the deposition modelling was 2.5% for the first 80m, 1.5 % for the next 150m, and 0.5% onwards. This tailings beach profile is based on TSF2 observations and has been used in previous deposition modelling for TSF4. It was compared with available 2024 surveys resulting in a reasonable fit with the actual tailings beach developing on site;
- Tailings density: The tailings density used for the deposition modelling is 1.4t/m^3 (as discussed in Section 5.4 of Attachment 8C). This corresponds to the settled dry density of the tailings;
- Base surface: The base surface for the deposition modelling was created from the as-constructed site topographic survey undertaken after the construction of the 265mAHD starter embankment and before the commencement of 270mAHD raise construction;
- Tailings throughput: The tailings throughput, or deposition rate, corresponds to the actual tonnes of tailings deposited in TSF4 until October 2024 and the forecasted production afterwards (Table 2); and

- Tailings freeboard: The tailings maximum level has been defined to maintain a minimum freeboard of 0.3m at all times.

Results

The tailings deposition model was run from the initial operation of the facility until its ultimate capacity, thus replicating the already deposited tailings as well as estimating future conditions. The results, presented in Figure 18, show the relationship between stored tailings and elevation for each cell and combined (with a focus on crest elevation of 1275mRL for both the Cell 1 & Cell 2).

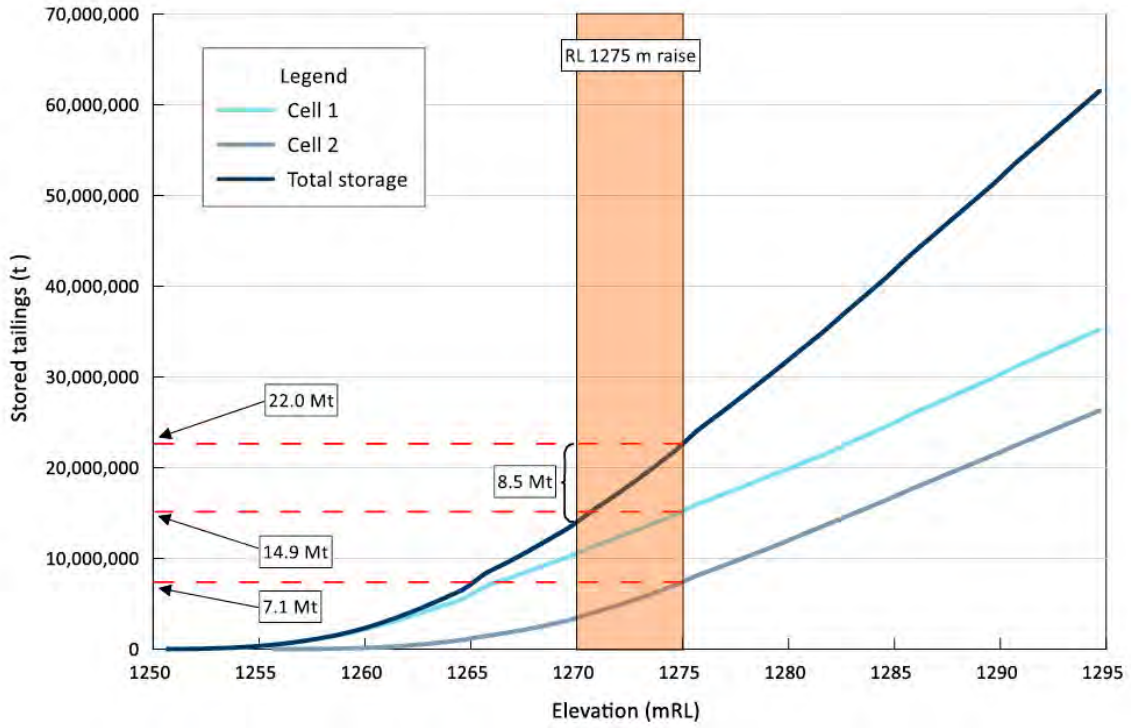

Figure 18: Tailings deposition storage results

3B.3.3 Underdrainage system

The underdrainage comprises a foundation underdrainage under the clay/BGM liner and tailings underdrainage on top of the clay/BGM liner (original underdrainage). The foundation underdrainage consists of MegaFlo drains below the liner and the tailings underdrainage consists of DN160 DrainCoil pipes above the liner. Each drain has duplicate pipes and gravel surrounding it to give alternate flow paths, and each section has two spaced outlets to reduce the impact of any blockages. Both the foundation and tailings underdrainage systems operate as designed, discharging seepage into four sumps, from where it is pumped back to the TSF4 decant area.

The total seepage captured by the foundation underdrainage for the final height of 295mAHD is summarised in Table 3 . The total seepage captured by the tailings underdrainage for the final height of 295mAHD is summarised in Table 4.

Table 3: Foundation underdrainage summary (295mAHD height)

Item	Unit	Cell 1 Representative Section			Cell 2 Representative Section		
		North	Northeast	South	South	West	Northwest
Flux to underdrains	$m^3/s/m$	1.38×10^{-9}	3.27×10^{-7}	4.41×10^{-7}	3.44×10^{-9}	4.83×10^{-10}	6.32×10^{-8}
Representative length	m	500	550	800	700	1,350	800
Flow to underdrains	m^3/year	22	5,673	11,128	76	21	1,595
Total	**m^3/year**	**16,822**			**1,692**		

Table 4: Tailings underdrainage summary (295mAHD height)

Item	Unit	Cell 1 Representative Section			Cell 2 Representative Section		
		North	Northeast	South	South	West	Northwest
Flux to underdrains	$m^3/s/m$	3.72×10^{-6}	1.2×10^{-6}	1.59×10^{-6}	3.08×10^{-6}	7.01×10^{-7}	3.21×10^{-6}
Representative length	m	1,340	470	1,400	1,290	750	1,250
Flow to underdrains	m^3/year	157,340	17,786	70,199	125,299	16,580	126,538
Total	**m^3/year**	**245,326**			**268,417**		

The total underdrainage for Cell 1 and Cell 2 (foundation and tailings underdrainage at 295mAHD) is 262,148m^3/year and 270,109m^3/year, respectively. The original underdrainage system has been sized for the design minimum gradient of 0.5% and design flow of 28.4m^3/hr, providing an annual flow of 497,568m^3 per cell. The total seepage at the final height for Cell 1 and Cell 2 is less than the design (redundancy factor of 1.8), and therefore, additional underdrainage is not required for the Cell 1 1277.5mRL embankment raise design.

3B.3.4 Surface Water Management

Toe Drains and Catchment Areas

Downstream toe drains have been installed during previous raises to collect runoff from the waste rock portion of the embankment and catchment areas from both between the embankment toe and the drain, and some external catchment areas (Figure 19). Water collected in the toe drains is pumped into Cell 1 and returned to Clear Water Dam for recycling in the MWC.

The toe drains were located outside of the final position for the 295mAHD crest. No modification to the existing drains was required for the Cell 1 1277.5mRL embankment raise design.

Seepage Collection Sumps

No modification to the existing seepage collection sumps was required for the Cell 1 1277.5mRL raise design (Figure 20).

Embankment Crest

A crossfall of 2% was included to facilitate runoff from the embankment crests. For the perimeter embankments, the crest was graded towards the upstream edge of the embankment. For the divider embankment, the crest high point was located in the centre of the embankment and falls towards each edge of the crest.

The embankment crest design includes 500mm high safety windrows on Cell 1 (GHD, 2025) along the upstream and downstream edges of the crest. To facilitate drainage into the TSF, windrow breaks will be formed at 40m centres in the windrow along the upstream edge of the crest.

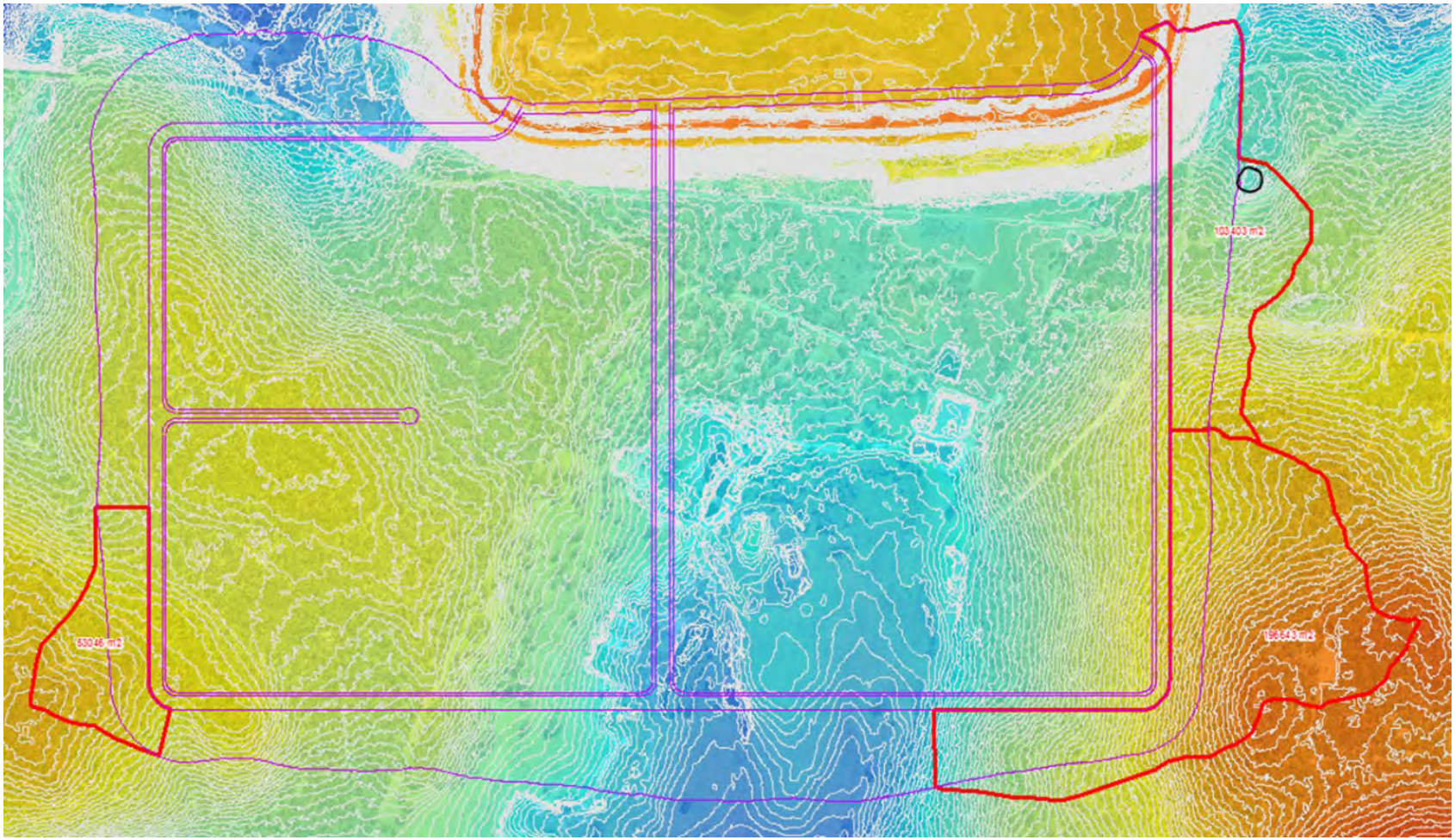

Figure 19: External catchment areas for surface water collection into the toe drain

Note: This figure shows an older TSF4 design footprint

Figure 20: Plan view of existing seepage sumps within TSF4

3B.4 Time Limited Operations

The infrastructure being constructed in the Cell 1 raise from 1270mRL to 1277.5mRL will require TLO from completion of construction until inclusion within the Licence. To provide sufficient time to submit and assess a licence amendment application after approval of the CCIR Talison requests that a TLO period for TSF4 Cell 1 1277.5mRL embankment raise is approved as per the existing Condition 15 of the Works Approval:

(a) For a period not exceeding 270 calendar days from the day the works approval holder meets the requirements of Condition 14 for that item of infrastructure; or
(b) Until such a 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 15(a).

DWER has already assessed and approved seepage and drainage risks associated the TSF4 at the full design height of 1,295mRL under W6618/2021/1. Additionally, TSF4 Cell 2 (crest height 1,275mRL) will be operational at the time of construction of the raise to 1277.5mRL (either under TLO or the Licence). A Licence amendment for the Cell 1 1277.5mRL embankment raise is expected to be submitted around Q2 2027, once a CCIR has been submitted and approved for the Cell 1 raise.

3B.5 Emission / Discharge Points

Emission and discharge points remain unchanged from W6618/2021/1. The figures showing potential seepage pathways from TSF4 (without controls) into surface water (Figure 21) and groundwater (Figure 22) have been provided below as aligned with the requirements of the Tailings Storage Facility checklist. Further information on emissions and discharges related to the Cell 1 1,277.5mRL raise, including proposed controls and identifying whether any variations from existing approvals are required, are provided in Attachment 6A.

405000 408000 411000 414000 417000

6255000 6252000 6249000 6246000 6243000

Dumpling Gully
GREENBUSHES
Spring Gully
Mt Jones Dam
Cornwall Hill Dam
Salt Water Gully
40 Catterick Rd, CATTERICK
Cornwall Pit
Southampton Dam
Austins Dam
Clear Water Dam
Norilup Dam
566 Spring Gully Rd, SOUTHAMPTON
Cowan Brook
Cowan Brook Dam
870 Southampton Rd, SOUTHAMPTON
Tin Shed Dam
TSF4
HESTER BROOK
Cascades Gully
985 Southampton Rd, SOUTHAMPTON
Woljenup Creek
23516 Sth Western Hwy, HESTER BROOK
40 Blackwood Park Rd, HESTER BROOK
39 Blackwood Park Rd, HESTER BROOK
179 Blackwood Park Rd, HESTER BROOK
600 Maranup Ford Rd, MARANUP
BLACKWOOD RIVER

Internal Ref: I:\Projects\2023\0146_00_2023_TSF4 Cell 1 Licence Amendment\2D_Emissions & Discharge

GREENBUSHES OPERATIONS

POTENTIAL SEEPAGE PATHWAY INTO SURFACE WATER FLOW WITHOUT CONTROLS

- Talison Premises Boundary (as per W6832/2021/1)
- Talison Tenements
- TSF4 Design
- Groundwater Flow Direction
- Dams

Groundwater Users

- Domestic Groundwater Use Bore
- Stock & Irrigation Groundwater Use Bore
- Bore on Property

Subcatchment Areas

- Balingup Brook Catchment
- Hester Brook Catchment
- Norilup Creek Catchment
- Woljenup Creek

Water Course

- Blackwood River
- Hester Brook
- Minor

Datum: GDA94
Projection: MGA Zone 50

0 0.75 1.5 3 Kilometers

SCALE: 1:50,000 @ A3

FIGURE 21: SURFACE WATER SEEPAGE PATHWAY

TALISON LITHIUM

414000

6252000

6249000

MB97/01
MB17/01 S/I
MB97/05
MB17/01 S/I
G 01/4
MB97/02
MB17/02 S/I/D
MB17/03I
MB97/04
MB01/11
MB17/04 I/D
MB03
MB17/05
M 01/3
TINSHED
MB17/06 S/I/D
M 01/6
TSF4, Cell 1
TSF4, Cell 2
MB20/01 S/I/D
MB18/05 S/I/D
MB22/21 S/I/D
L 70/244
G 70/267
PB001 S/I/D
M 70/765
MB22/23 S/I/D
L 70/232
E 70/5540
Woljenup Creek
FLOYDS STH
MB18/01 S/I/D
MB01/03
MB01/01
M 01/10
M 01/7
MB22/01 S/I/D
MB20/04 S/I/D
CEMETERY
MB22/08 S/I/D
MB20/03 I/D
MB22/22 S/I/D
L 70/246
G 70/268

Internal Ref: I:\Projects\2023\0146_00_2023_TSF4 Cell 1 Licence Amendment\2E_Shallow Groundwater

GREENBUSHES OPERATIONS

SHALLOW GROUNDWATER FLOWS WITHOUT CONTROLS

- Talison Premises Boundary (as per W6832/2021/1)
- Talison Tenements
- TSF4 Design
- Inferred Sands & Alluvial Dredge Spoil
- Inferred Flow Direction Surface Water
- Inferred Flow Direction Shallow Groundwater

Groundwater Monitoring

- Shallow Monitoring Bores
- Other Monitoring Bores
- Intermediate Monitoring Bores
- Deep Monitoring Bores

Surface Water Monitoring

- Process Dam
- Discharge Monitoring

Water Course

- Blackwood River
- Hester Brook
- Minor

- Dams

Datum: GDA94
Projection: MGA Zone 50

0 200 400 800 Meters

SCALE: 1:15,000 @ A3

FIGURE 22: SHALLOW GROUNDWATER SEEPAGE PATHWAYS (without controls)

TALISON LITHIUM

ATTACHMENT 5: OTHER APPROVALS AND CONSULTATION

5.1 EPBC Act

The Project, including TSF4, was determined to be a controlled action under the EPBC Act, given the likelihood of it having a significant impact on one or more Matters of National Environmental Significance. In November 2019, Talison received Commonwealth environmental approval under EPBC 2018/8206. Permit to Clear Native Vegetation CPS 5056/2 (purpose permit) was also assessed and approved pursuant to the EPBC Act under EPBC 2013/6904.

An additional EPBC Referral and Amendment were submitted in June 2024 and are currently under assessment. This Application is consistent with both EPBC instruments and the pending EPBC Referral/Amendment.

5.2 EP Act Part IV

Talison referred the Project, including TSF4, to the Environmental Protection Authority (**EPA**) and approval was granted on 19 August 2019 under Ministerial Statement 1111 (**MS 1111**). Modification to the Development Envelope (**DE**) was later sought under Section 45c of the EP Act and approved on 6 April 2020. A further expansion of the MS 1111 DE and inclusion of a Worker's Village was approved under s45C on 15 May 2023.

Talison referred a further expansion of the MS 1111 DE and increase in approved clearing area under Section 38 (s38) of the EP Act on 23 April 2025. The activities being assessed under the s38 application are not associated with the activities within this Application.

The Prescribed Premises boundary sits entirely within the existing MS 1111 DE and this Application is entirely consistent with existing approvals under Part IV of the EP Act.

5.3 EP Act Part V

5.3.1 Native Vegetation Clearing

In addition to the approved MS 1111 which authorises clearing of up to 350ha of native vegetation, clearing for approved mining activities is undertaken under Permit to Clear Native Vegetation CPS 5056/2 (purpose permit). The permit authorises clearing of no more than 120ha across M01/6, M01/7, M01/16, G01/1 and G01/2. This Application does not require any additional land clearing.

5.3.2 Works Approvals and Licences

The Premises operates in accordance with L4247/1991/13 (including amendment notices). In addition, Works Approval applications (WAA) have been lodged for regulated infrastructure such as TSFs, CGPs and water management infrastructure. Works Approval applications have been approved for construction of CGP3, CGP4, TRP, TSF4, WWTPs, and the Cowan Brook Dam embankment raise.

5.4 *Mining Act 1978* (WA)

Mining activities dating back to 1991 and covering the key current disturbance areas have been approved under the *Mining Act 1978* (**Mining Act**). Activities approved include open mine pits, ore and waste stockpiles, RoM pads, processing facilities, TSFs, water storages, a Mine Access Road and support infrastructure.

TSF4 was approved to 1295mRL under Reg ID 102901 on 10 January 2022. A Proforma for Notification of Minor Changes to a Mining Proposal was submitted to the Department of Energy, Mines, Industry Regulation and Safety (**DEMIRS**, now Department of Mines, Petroleum and Exploration (**DMPE**)) on 16 May 2023, detailing changes to the Cell 1 starter embankment height (staged construction) and the TSF4 rate of rise (Talison, 2023a). A further amendment under the Mining Act to TSF4 was approved under Reg ID 119573 in August 2023 to permit use of BGM liner for a portion of Cell 1 (Talison, 2023b). An additional amendment (under Reg ID 121397) to use a BGM liner for all of TSF4 Cell 2 was approved by DEMIRS on 8 December 2023. An updated MCP was submitted to DMPE in September 2025 (Revision 7) and is currently under assessment.

This Application is consistent with these Mining Act approvals.

5.5 Other Approvals

The activities associated with the Application have been considered under the following legislation with no specific approvals required:

- *Rights in Water and Irrigation Act 1914* (WA)*;*
- *Aboriginal Heritage Act 1972* (WA);
- Environmental Protection (Noise) Regulations 1997 (WA);
- *Contaminated Sites Act 2003* (WA); and
- *Biodiversity Conservation Act 2016* (WA).

5.6 Stakeholder Consultation

Talison maintains ongoing stakeholder consultation in relation to current operations and the Project. The town of Greenbushes is immediately adjacent to the operations, with the towns of Balingup and Bridgetown also located nearby. As the TSF4 embankment raise is part of an already approved structure and location, consultation to date has primarily focused on regulatory authorities, surrounding land holders and the immediate community.

The embankment raise proposed in this Application is part of a staged embankment construction that will increase the tailings storage capacity for TSF4 Cell 1 and 2 to accommodate planned production over the next few years. Talison has engaged with DMPE and DWER specifically regarding TSF4, including this application. Stakeholder engagement relevant to TSF4 and specifically this Application is summarised in Table 5.

5.6.1 Stakeholder Consultation Plan

Talison will continue to consult with stakeholders and maintain consultation records in their Stakeholder Engagement Plan throughout construction and operation of the premises.

It is anticipated that this Application will be advertised for public comment as per DWER's normal procedure.

Table 5: Stakeholder Engagement Register referencing information relevant to this Application

Stakeholder	Date/Time	Consultation Type	Purpose of Consultation	Stakeholder Comments/Issues
DMPE	24/3/26	Email	Advice of Minor Change	Talison advised DMPE of change from Cell 1 1,270-1,275mRL embankment raises to 7.5m lift, and the implications for approvals.
DWER/JTSI	5/3/26 – Quarterly meeting	Meeting	Quarterly Approvals Update	Quarterly discussion of Talison Part V approvals strategy, pathways and timelines. Included advice of proposed 7.5m lift, and general discussion of TSF4 Part V works approvals, amendments and licence applications.
DWER	19/2/26	Email	Advice of Minor Change	Talison advised DWER of minor change in the geometry of the TSF4 northern embankment raise from 1,270mRL to 1,275mRL, which will move the embankment crest into TSF4, and the implications for approvals.
DMPE	16/2/26	Email	Advice of Minor Change	Talison advised DMPE of minor change in the geometry of the TSF4 northern embankment raise from 1,270mRL to 1,275mRL, which will move the embankment crest into TSF4, and the implications for approvals.
DWER/JTSI	2025 – Monthly meeting	Meeting	Monthly Approvals Update	Monthly discussion of Talison Part V approvals strategy, pathways and timelines. Including discussion of TSF4 Part V works approvals, amendments and licence applications.
DEMIRS (now DMPE)	10/03/25	Meeting	Mining Act Approvals Overview	The current status of mining approvals was discussed, including the transition to an Approvals Statement. Talison proposed to incorporate updates in the next revision of the Mining Proposal and MCP (including information relevant to TSF4) to align with new guidelines (prior to the Amendment Act being implemented) to assist with transition.
DWER/JTSI	2024 – Monthly meeting	Meeting	Monthly Approvals Update	Monthly discussion of Talison Part V approvals strategy, pathways and timelines. Including discussion of TSF4 Part V works approvals, amendments and licence applications.

Stakeholder	Date/Time	Consultation Type	Purpose of Consultation	Stakeholder Comments/Issues
Landowner 1	2024	Various	Obtain access to property (dam) for water monitoring.	Access denied to property for water monitoring.
Landowner 1	19/8/24	Phone call	Phone call to advise of revised Part V licence and granting of WA6901.	No objections to licence/works approval.
Shire of Bridgetown-Greenbushes	7/6/24	Meeting	Presented information on approvals amendments (incl. TSF4).	Talison presented information on Talison Expansion Project and Approvals as part of monthly update.
Landholder 1	31/5/24	Phone Call	Phone call and email to stakeholder regarding Noise and Water complaints. Also provided update on RMS relocation, TSF4 wall lift and Village WWTP expansion.	Follow-up phone call and email regarding complaints regarding noise and water. Provided bore level data in response to complaint regarding low dam levels on property being linked to construction of TSF4. Bore data suggested depression in groundwater levels was regional and linked to low rainfall over summer period. Also provided update on TSF4 wall lift.
Shire of Bridgetown-Greenbushes	5/5/24	Meeting	Presented information on approvals amendments (incl. TSF4).	Talison presented information on Talison Expansion Project and Approvals as part of monthly update.

Stakeholder	Date/Time	Consultation Type	Purpose of Consultation	Stakeholder Comments/Issues
Shire of Bridgetown-Greenbushes	11/4/24	Meeting	Presented information on approvals amendments (incl. TSF4).	Talison presented information on Talison Expansion Project and Approvals as part of monthly update.
Grow Greenbushes Incorporated	4/4/24	Presentation	Presented information on approvals amendments (incl. TSF4).	Talison presented information on approval amendments.
Grow Greenbushes Incorporated	3/4/24	Email	Request for Talison to present information on Environmental Approvals Amendment for WW6618 TSF4 liner.	Grow Greenbushes sent an email: • to check that that Noise and Dust annual report would be presented at the April meeting of Grow Greenbushes on Thursday April 4 as previously arranged; • Reminder that Grow Greenbushes group wanted further information on Talison's impact on groundwater and water • Sent details of a DWER call for public submission on Talison's amendment to W6618 referring to the change from clay to BGM liner for the TSF4. Talison confirmed the presentation of the Noise and Dust annual report, confirmed that information would be presented on water and groundwater use and further information on the amendment would also be provided at the Grow meeting in April. Resident satisfied.
DWER/JTSI	2023 – Monthly meeting	Meeting	Monthly Approvals Update	Monthly discussion of Talison Part V approvals strategy, pathways and timelines. Including discussion of TSF4 Part V works approvals, amendments and licence applications.
DEMIRS (now DMPE)	26/6/23	Meeting	Discuss proposal to partially line TSF4 Cell 1	Talison proposed to advise DEMIRS of a non-significant change to Reg ID 115689 (partial BGM lining of TSF4 Cell 1).

Stakeholder	Date/Time	Consultation Type	Purpose of Consultation	Stakeholder Comments/Issues
			with BGM as a contingency against delays to clay liner construction caused by rain.	Talison to provide DEMIRS with TSF4 Cell 1 BGM Design and Risk Assessment Report for geotechnical review when finalised.
DEMIRS (now DMPE)	16/5/23	Letter (email)	Advise DEMIRS of a non-significant change to Reg ID 115689 (staged construction of Cell 1).	DEMIRS advised 19/6/23 that: • No further information is required at this time. DEMIRS will recommend additional tenement conditions be imposed regarding the changes to TSF4
Landholder 1, Landholder 2	28/3/23	Phone Calls	Notification of entry to take TSF4 Works Approval water samples.	Landholders had no objections.

ATTACHMENT 6A: EMISSIONS AND DISCHARGES

Potential emissions and discharges from TSF4 have been assessed by DWER and documented in the decision report for W6618/2021/1. In the decision report for W6618/2021/1, DWER completed a risk assessment and identified several potential emissions associated with the construction and operation of TSF4. The risk assessment by DWER has been updated as a result of amendments to W6618/2021/1, with the most recent Amendment Report and risk assessment dated 27 March 2024.

Risk assessments were also completed by DWER for the 1,270mRL and 1,275mRL TSF4 embankment raises approved under W6901/2024/1. The W6901/2024/1 decision report and amendment reports included considerations from W6618/2021/1 and L4247/1991/13.

Talison has re-assessed the potential emissions for this application with a summary provided in Table 6. No additional potential emissions and discharges are expected to occur from the construction of TSF4 Cell 1 to 1277.5mRL that have not already been assessed by DWER in L4247/1991/13, W6618/2021/1 and W6901/2024/1.

Table 6: Assessment of potential emissions and discharges

Source / Activity	Potential Emission	Potential Pathways and Impact	Controls	Further discussion required?
Construction				
Construction activities associated with TSF4 Cell 1 1,277.5mRL embankment raise.	Dust	Air/windborne pathway causing impacts to health, amenity and nearby native vegetation.	Existing works approval controls (W6618/2021/1): • Condition 1 - Construction phase of TSF4 requires dust management by water carts during dry and windy conditions targeting high risk areas. Existing works approval controls (W6901/2024/1): • Condition 1 - The works approval holder must manage dust generation at the premises by wetting down activities associated with construction of the tailings storage facility 4 (TSF4) embankment lift to 275 m AHD. Existing licence controls (L4247/1991/13): • Condition 17 – The licence holder must proactively manage dust generating activities on the premises by: o Ensuring that all dust suppression and dust extraction equipment used on the premises to manage dust emissions from plant, equipment and processing infrastructure is maintained in good working condition; o Proactively manage visible dust emissions observed on the premises through the application of additional dust suppression to plant and equipment, or through the use of watercarts on stockpiles, exposed areas, access roads as required; and o Utilising weather forecasting tools to inform daily work activities and dust suppression activities to target and mitigate dust emissions from premises activities. • Conditions 37, 38, 43 and 46 – dust monitoring and management. Other: • Implementation of the Trigger Action Response Plan (**TARP**), as previously required by L4247/1991/13, approved on 11 December 2023; and • Implementation of the Dust Management Plan (**DMP**).	**No.** **Further discussion included in Section 6A.1 for completeness with the TSF category checklist.** No increase in dust emissions – the surface area of tailings will not change and the construction materials are unchanged. Talison expects that dust emissions from the Cell 1 1277.5mRL lift proposed in this Application can be managed under current Licence and Works approval conditions (with a minor update to Condition 1 of W6901/2024/1 to reference the Cell 1 1277.5mRL embankment raise and implementation of the existing TARP and DMP.