Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6719/2022/1
Works approval holder	Lakewood Mining Pty Ltd
ACN	659 952 066
Registered business address	15-17 Altona Street WEST PERTH WA 6005
DWER file number	DER2022/000261
Duration	20/01/2023 to 19/01/2028
Date of issue	20/01/2023
Date of amendment	01/06/2023
Premises details	Lakewood Gold Processing Facility Legal description – Mining tenements M26/242 and M26/367 Mount Monger Road LAKEWOOD WA 6431

Prescribed premises category description **(Schedule 1, *Environmental Protection Regulations 1987*)**	**Assessed production / design capacity**
Category 5: Processing or beneficiation of metallic or non-metallic ore	1,200,000 tonnes per annual period

This amended works approval is granted to the works approval holder, subject to the attached conditions, on 1 June 2023, by:

Christine Pustkuchen
Digitally signed by Christine Pustkuchen
Date: 2023.06.01 11:16:17 +08'00'

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
20/01/2023	W6719/2022/1	Works approval granted.
01/06/2023	W6719/2022/1	Amendment to authorise construction and time limited operation of TSF1 Stage 8.

Interpretation

In this works approval:

(a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice in this works approval:

  (i) if dated, refers to that particular version; and

  (ii) if not dated, refers to the latest version and therefore may be subject to change over time;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

Works approval conditions

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

Construction phase

Infrastructure and equipment

1. The works approval holder must:

(a) construct and/or install the infrastructure and/or equipment;

(b) in accordance with the corresponding design and construction/installation requirements; and

(c) at the corresponding infrastructure location,

as set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure / equipment	Design and construction / installation requirements	Infrastructure location
1.	TSF1 Stage 8 embankment raise	• Perimeter embankment constructed to a maximum crest level of RL 349.0 m; • Embankments constructed using upstream construction method with compacted dried tailings or material of similar or lower permeability (1.0 x 10^{-7} m/s), placed and compacted in homogeneous horizontal layers not exceeding 300 mm loose lift thickness with density ratio greater than 95% of SMDD and within -2% and +2% of OMC, as determined by laboratory testing in accordance with AS 1289.5.1.1; • Downstream face of external embankment capped with at least 500 mm of mine waste rock with low fines content (<3% passing 75 µm) and maximum particle size not exceeding 300 mm; • Embankment crest has a 2% design crossfall towards the upstream side and nominal 0.5 m-high windrows at both the downstream and upstream edge, with regular drainage gaps in the upstream windrow; • Embankment slopes designed to 1V:2.75H downstream and 1V:2H upstream; • Decant tower raised with standard slotted precast concrete well liners stacked vertically and surrounded by clean filter rockfill; • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 7, Figure 8, Figure 9 and Figure 10. • Undertake routine dust suppression using water carts across work area, when required.	Labelled as 'Proposed Stage 8 Embankment Crest RL 349m', as depicted in Schedule 1: Maps, Figure 2.
2.	TSF1 Stage 9 embankment	• Perimeter embankment constructed to a maximum	Labelled as 'Proposed

	Infrastructure / equipment	Design and construction / installation requirements	Infrastructure location
	raise	crest level of RL 351.0 m; • Embankments constructed using upstream construction method with compacted dried tailings or material of similar or lower permeability (1.0 x 10^{-7} m/s), placed and compacted in homogeneous horizontal layers not exceeding 300 mm loose lift thickness with density ratio greater than 95% of SMDD and within -2% and +2% of OMC, as determined by laboratory testing in accordance with AS 1289.5.1.1; • Downstream face of external embankment capped with at least 500 mm of mine waste rock with low fines content (<3% passing 75 µm) and maximum particle size not exceeding 300 mm; • Embankment crest has a 2% design crossfall towards the upstream side and nominal 0.5 m-high windrows at both the downstream and upstream edge, with regular drainage gaps in the upstream windrow; • Embankment slopes designed to 1V:2.75H downstream and 1V:2H upstream; • Decant tower raised with standard slotted precast concrete well liners stacked vertically and surrounded by clean filter rockfill; • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 11 and Figure 12; and • Undertake routine dust suppression using water carts across work area, when required.	Stage 9 Embankment Crest RL 351m', as depicted in Schedule 1: Maps, Figure 2.
3.	TSF2 Stage 2 embankment raise	• Perimeter embankment constructed to a maximum crest level of RL 336.5 m; • Embankments constructed using upstream construction method with compacted dried tailings or material of similar or lower permeability (1.0 x 10^{-7} m/s), placed and compacted in homogeneous horizontal layers not exceeding 300 mm loose lift thickness with density ratio greater than 95% of SMDD and within -2% and +2% of OMC, as determined by laboratory testing in accordance with AS 1289.5.1.1; • Downstream face of external embankment capped with at least 500 mm of mine waste rock with low fines content (<3% passing 75 µm) and maximum particle size not exceeding 300 mm; • Embankment crest has a 2% design crossfall towards the upstream side and nominal 0.5m-high windrows at both the downstream and upstream edge, with regular drainage gaps in the upstream windrow;	Labelled as 'Proposed Stage 2 Embankment Crest RL 336.5m', as shown in Schedule 1: Maps, Figure 3.

	Infrastructure / equipment	Design and construction / installation requirements	Infrastructure location
		• Embankment slopes designed to 1V:2.75H downstream and 1V:2H upstream; • Decant tower raised with standard slotted precast concrete well liners stacked vertically and surrounded by clean filter rockfill; and • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 13; and • Undertake routine dust suppression using water carts across work area, when required.	
4.	TSF2 Stage 3 embankment raise	• Perimeter embankment constructed to a maximum crest level of RL 339.0 m; • Embankments constructed using upstream construction method with compacted dried tailings or material of similar or lower permeability (1.0 x 10^{-7} m/s), placed and compacted in homogeneous horizontal layers not exceeding 300 mm loose lift thickness with density ratio greater than 95% of SMDD and within -2% and +2% of OMC, as determined by laboratory testing in accordance with AS 1289.5.1.1; • Downstream face of external embankment capped with at least 500 mm of mine waste rock with low fines content (<3% passing 75 µm) and maximum particle size not exceeding 300 mm; • Embankment crest has a 2% design crossfall towards the upstream side and nominal 0.5m-high windrows at both the downstream and upstream edge, with regular drainage gaps in the upstream windrow; • Embankment slopes designed to 1V:2.75H downstream and 1V:2H upstream; • Decant tower raised with standard slotted precast concrete well liners stacked vertically and surrounded by clean filter rockfill; • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 13; • Install three automated inclinometers, in accordance with Schedule 2: Construction engineering drawings, Figure 19, at the locations depicted in Schedule 1: Maps, Figure 6; and • Undertake routine dust suppression using water carts across work area, when required.	Labelled as 'Proposed Stage 3 (Bench) Embankment Crest RL 339m', as shown in Schedule 1: Maps, Figure 3.
5.	TSF1 capture trench and soakwell	• Trench excavated to depth not exceeding 1.5 mbgl; • Minimum slope angle of approximately 1:100m at trench base, towards a soakwell;	Labelled as 'New interception drain', as

	Infrastructure / equipment	Design and construction / installation requirements	Infrastructure location
		• Soakwell constructed to depth of 3 m with diameter of 1.2 m and equipped with a low flow pump; and • Pump connected to pipeline to Process Water Pond; and • Undertake routine dust suppression using water carts across work area, when required.	depicted in Schedule 1: Maps, Figure 4.
6.	Carbon-in-leach circuit upgrade	• Installation of two 300 m^3 adsorption tanks, fitted within containment bund of existing adsorption tanks in the CIL circuit; • Re-configuration of CIL circuit to divert leach slurry flow into two streams after first adsorption tank (Tk11), with four adsorption tanks in each stream; and • Installed according to manufacturer specifications.	Labelled as 'Tk18' and 'Tk19', as depictured in Schedule 1: Maps, Figure 5.
7.	Dunford regrind mill	• Installation of regrind mill, fitted within the existing containment bund in the CIL circuit; and • Recommissioned according to manufacturer specifications.	Labelled as 'BM-02', as depictured in Schedule 1: Maps, Figure 5.
8.	Carbon regeneration kiln	• Installation of an Ansac Rotary-style gas-fired kiln; and • Installed according to manufacturer specifications.	Labelled as 'New Carbon Regen Kiln Location', as depictured in Schedule 1: Maps, Figure 5.

2. The works approval holder must:

(a) construct the critical containment infrastructure;

(b) in accordance with the corresponding design and construction requirements; and

(c) at the corresponding infrastructure location,

as set out in Table 2.

Table 2: Critical containment infrastructure design and construction requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1	TSF2 Stage 1 starter embankment	• Perimeter embankment constructed to a maximum crest level of RL 344.0 m; • Embankments constructed with compacted clayey fill or material or similar or lower permeability (2.5 x 10^{-9} m/s), placed and compacted in homogeneous horizontal layers not exceeding 300 mm loose lift thickness with density ratio greater than 95% of	Labelled as 'Proposed Stage 1 Embankment Crest RL 334m', as depicted in Schedule 1: Maps, Figure 3.

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		SMDD and within -2% and +2% of OMC, as determined by laboratory testing in accordance with AS 1289.5.1.1; • Downstream face of external embankment capped with at least 500 mm of mine waste rock with low fines content (<3% passing 75 µm) and maximum particle size not exceeding 300 mm; • Embankment crest has a 2% design crossfall toward the upstream side and nominal 0.5m-high windrows at both the downstream and upstream edge, with regular drainage gaps in the upstream windrow; • Embankment slopes designed to 1V:2.75H downstream and 1V:2H upstream; • A 4m-wide cut-off trench excavated to approximately 1.5 m in depth beneath the embankment footprint with side batter slopes of 1V:1H, backfilled with compacted clayey material; and • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 14; and • Undertake routine dust suppression using water carts across work area, when required.	
	TSF2 decant system	• Decant tower constructed with nominal 10m-wide design crest with standard slotted precast concrete well liners stacked vertically and surrounded by clean filter rockfill; • Decant tower equipped with dedicated submersible pump and pipeline to send supernatant pond water to Process Water Pond; and • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 14.	Labelled as 'Proposed Decant Structure', as depicted in Schedule 1: Maps, Figure 3.
	TSF 2 pipelines	• Tailings pipeline comprises a 200mm-diameter HDPE pipeline from the Lakewood processing plant to TSF2 embankment crest; • Return water pipeline comprises a 160mm-diameter HDPE pipeline from TSF2 decant tower to Process Water	Tailings pipeline and return water pipeline labelled as 'Proposed Tailings Slurry Delivery Pipeline from Plant to TSF2' and

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		Pond; • Both pipelines equipped with telemetry systems and pressure sensors, as well as automatic cut-offs; and • Both pipelines installed within earthen bunded corridors with scour pits or sumps along the length as secondary containment; and • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 15.	'Proposed Tailings Return Water Pipeline From TSF2 to Process Water Pond', respectively, as depicted in Schedule 2: Construction engineering drawings, Figure 15.
	TSF2 tailings distribution system	• Tailings distribution line comprise welded HDPE pipelines joined with Victaulic couplings or bolted flange rings and valving; • Teed offtakes (spigots) installed at intervals of nominally 18m to 20m centres along the ring mains and fitted with conductor (slotted) pipes; and • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 15.	Labelled as 'Proposed TSF2 Tailings Slurry Ring Main' , as depicted in Schedule 2: Construction engineering drawings, Figure 15.
	TSF2 underdrainage system	• Comprises slotted panel drainpipes (Megaflo 450 and 150) spaced at nominal 50 m intervals on the basin surface; • Pipework surrounded by filter material and geofrabrics; • Drainage network graded towards Return Water Pond; and • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 16, Figure 17 and Figure 18.	Labelled as 'Underdrainage Main Line' and 'Underdrainage Feeder Lines', as depicted in Schedule 2: Construction engineering drawings, Figure 16.
	TSF2 seepage cut-off trench	• Trench excavated to nominal depth of between 1.2 m to 1.5 m; • Slotted pipeworks (Draincoil DN100) wrapped in geofrabric and installed at base of trench; • Drainage network graded towards Return Water Pond; • Trench backfilled with filter rock; and • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings;	Labelled as 'Proposed Seepage Recovery Trench', as depicted in Schedule 1: Maps, Figure 3.

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		Figure 17 and • Undertake routine dust suppression using water carts across work area, when required.	
	TSF2 diversion drains	• Drain excavated to nominal depth of 1m, with base width of 3m.	Labelled as 'Proposed New Diversion Drain', as depicted in Schedule 1: Maps, Figure 3.
	TSF2 Return Water Pond	• Constructed with storage capacity of 245 m^3; • Lined with 1.5mm-thick HDPE at base and upstream batters; • Constructed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 17.	Labelled as 'Proposed New Return Water Pond, as depicted in Schedule 1: Maps, Figure 3.
	TSF2 monitoring infrastructure	• Install five VWPs at nominally 0.5m above the natural ground foundation surface level and near the downstream toe of the Stage 1 starter embankment; • Install 10 survey prisms; and • Installed in accordance with engineer specifications, as depicted in Schedule 2: Construction engineering drawings, Figure 19.	As depicted in Schedule 1: Maps, Figure 6.

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

Table 3: Infrastructure requirements – groundwater monitoring bores and seepage recovery bores

Infrastructure	Design, construction, and installation requirements	Monitoring bore locations	Timeframe
Monitoring bore network for TSF2, comprising: • CMB9A; • CMB9B; • CMB10. Seepage	<u>Bore design and construction:</u> Designed and constructed in accordance with *ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores*. Monitoring bores CMB9B and CMB10 must be screened within the shallow superficial (sediment) aquifer, while CMB9A must be screened within the fractured rock aquifer. The depth to the target aquifers should be determined	As depicted in Schedule 1: Maps, Figure 6.	Must be constructed, developed (purged), and determined to be operational prior to the commencement of time limited operation activities under condition 10.

Infrastructure	Design, construction, and installation requirements	Monitoring bore locations	Timeframe
recovery bores for TSF2, comprising: • RB01; • RB02; • RB03.	and ascertained during borehole advancement. Seepage recovery bore screens must target the part, or parts, of the aquifer most likely to be affected by contamination[1].		
	<u>Logging of borehole:</u> Soil samples must be collected and logged during the installation of the monitoring bores. A record of the geology encountered during drilling must be described and classified in accordance with the *Australian Standard Geotechnical Site Investigations AS1726*. Any observations of staining / odours or other indications of contamination must be included in the bore log.		
	<u>Bore construction log:</u> Bore construction details must be documented within a bore construction log to demonstrate compliance with *ASTM D5092/D5092M-16*. The construction logs shall include elevations of the top of casing position to be used as the reference point for water-level measurements, and the elevations of the ground surface protective installations.		
	<u>Bore development:</u> All installed monitoring bores must be developed after drilling to remove fine sand, silt, clay and any drilling mud residues from around the bore screen to ensure the hydraulic functioning of the bore. A detailed record should be kept of bore development activities and included in the bore construction log.		
	<u>Installation survey:</u> The vertical (top of casing) and horizontal position of each monitoring bore must be surveyed and subsequently mapped by a suitably qualified surveyor.		
	<u>Bore network map:</u> A bore location map (using aerial image overlay) must be prepared and include the location of all monitoring bores in the monitoring network and their respective identification numbers.		

Note 1: Refer to Section 8 of Schedule B2 of the *Assessment of Site Contamination NEPM* for guidance on bore

screen depth and length.

Compliance reporting

4. The works approval holder must within 60 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:

(a) undertake an audit of their compliance with the requirements of condition 1; and

(b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

5. The Environmental Compliance Report required by condition 4, must include as a minimum the following:

(a) certification by a suitably qualified engineer that the items of infrastructure / equipment or component(s) thereof, as specified in condition 1, been constructed in accordance with the relevant requirements specified in condition 1;

(b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and

(c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

6. The works approval holder must within 60 calendar days of an item of critical containment infrastructure identified by condition 2 being constructed:

(a) undertake an audit of their compliance with the requirements of condition 2; and

(b) prepare and submit to the CEO a Critical Containment Infrastructure Report on that compliance.

7. The Critical Containment Infrastructure Report required by condition 6 must include as a minimum the following:

(a) certification by a suitably qualified civil or geotechnical engineer that each item of the critical containment infrastructure or component thereof, as specified in condition 2, has been built and installed in accordance with the requirements specified in condition 2;

(b) as constructed plans and a detailed site plan showing the location and dimensions for each item of the critical containment infrastructure or component thereof, as specified in condition 2;

(c) photographic evidence of the installation of the critical containment infrastructure;

(d) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person; and

(e) monitoring data indicating the baseline ambient environmental conditions at the critical containment infrastructure, as specified in condition 18.

8. The works approval holder must, within 30 calendar days of the monitoring bores being constructed, submit to the CEO a well construction report certified by a suitably qualified hydrogeologist evidencing compliance with the requirements of condition 3.

Time limited operations phase

Commencement and duration

9. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 12, where the Environmental Compliance Report as required by condition 4 has been submitted by the works approval holder for that item of infrastructure.

10. The works approval holder may only commence time limited operations for an item of critical containment infrastructure identified in condition 12:

(a) where the CEO has notified the works approval holder that the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 6 meets the requirements of that condition; or

(b) where at least 45 business days have passed after the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 6 has been submitted to the CEO.

11. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 12:

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of conditions 4 or 6 for that item of infrastructure; or

(b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 11(a).

Time limited operations requirements and emission limits

12. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 4 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 4.

Table 4: Infrastructure and equipment requirements during time limited operations

	Infrastructure / equipment	Design and construction / installation requirements	Infrastructure location
1.	TSF1 Stage 8 embankment raise	• Tailings slurry discharged sub-aerially and cyclically from the perimeter embankment; • Dust suppression must be undertaken using water carts, where required; • Supernatant pond area must not exceed 43,240 m^2 (Eastern Cell) and 24,600 m^2 (Western Cell), or 50% of distance between the supernatant pond and the nearest perimeter embankment crest, whichever is smaller; • Supernatant pond boundary must be at least 105m and 90m away from nearest perimeter embankment of the Eastern Cell and Western Cell, respectively; • Maintain operational freeboard of 300mm and beach freeboard of 200mm	Labelled as 'TSF1 – Western Cell' and 'TSF1 – Eastern Cell', as depicted in Schedule 1: Maps, Figure 2.
2.	TSF1 Stage 9 embankment raise		

	Infrastructure / equipment	Design and construction / installation requirements	Infrastructure location
		at Eastern Cell and Western Cell; • Maintain telemetry system and pressure sensor and automatic cut-off in event of pipe failure in tailings and return water pipelines; • Inspected TSF, supernatant pond and tailings/return water pipeline twice daily; • Maintain and operate seepage recovery bores at locations depicted in Schedule 1: Maps, Figure 6; and • Undertake monitoring of VWP, survey prisms and inclinometers on monthly basis at locations depicted in Schedule 1: Maps, Figure 6.	
3.	TSF2 Stage 1 starter embankment	• Tailings slurry discharged sub-aerially and cyclically from the perimeter embankment; • Dust suppression must be undertaken using water carts, where required; • Supernatant pond boundary must be at least 120m away from nearest perimeter embankment; • Maintain operational freeboard of 300mm and beach freeboard of 200mm; • Maintain telemetry system and pressure sensor and automatic cut-off in event of pipe failure in tailings and return water pipelines; • Inspected TSF, supernatant pond and tailings/return water pipeline twice daily; • Maintain and operate seepage recovery bores, as depicted in Schedule 1: Maps, Figure 6; and • Undertake monitoring of VWP, survey prisms and inclinometers (inclinometer survey only during time limited operation of Stage 3 embankment raise) on monthly basis at locations depicted in Schedule 1: Maps, Figure 6.	Labelled as 'Proposed TSF2', as depicted in Schedule 1: Maps, Figure 3.
4.	TSF2 Stage 2 embankment raise		
5.	TSF2 Stage 3 embankment raise		
6.	Process Water Pond and Return Water Pond	• Maintain a minimum freeboard of 500 mm; and • Maintain integrity of HDPE liner.	Labelled as 'Process Water Pond' and 'Return Water Pond' as depicted in Schedule 1: Maps, Figure 1.
7.	Carbon-in-leach circuit upgrade	• Bunding integrity and containment volumes monitored routinely; • Sumps routinely inspected and collected	Labelled as 'Tk18' and 'Tk19', as depicted in Schedule 1: Maps, Figure

	Infrastructure / equipment	Design and construction / installation requirements	Infrastructure location
		material removed; and • Maintained according to manufacturer specifications.	5.
8.	Dunford regrind mill	• Undertake routine dust suppression using water carts and/or water sprays across work area, when required; and • Bunding integrity and containment volumes monitored routinely; and • Maintained according to manufacturer specifications.	Labelled as 'BM-02', as depictured in Schedule 1: Maps, Figure 5.
9.	Carbon regeneration kiln	• Maintained according to manufacturer specifications.	Labelled as 'New Carbon Regen Kiln Location', as depicted in Schedule 1: Maps, Figure 5.

13. During time limited operations, the works approval holder must ensure that the emissions / discharges listed in Table 5 are emitted / discharged from the corresponding points and only at the corresponding point locations in accordance with Table 5.

Table 5: Authorised emission and discharge points during time limited operation

Emission point reference	Description	Source	Emission point location
TSF1 (Eastern Cell)	Tailings slurry	Tailings produced from gold processing at the Lakewood processing plant.	Labelled as 'TSF1 – Western Cell', 'TSF1 – Eastern Cell', as depicted in Schedule 1: Maps, Figure 2.
TSF1 (Western Cell)			
TSF2			Labelled as 'Proposed TSF2', as depicted in Schedule 1: Maps, Figure 3.
Carbon regeneration kiln	Air emission	Produced from carbon regeneration kiln at the Lakewood processing plant.	Labelled as 'New Carbon Regen Kiln Location', as depicted in Schedule 1: Maps, Figure 5.

Monitoring during time limited operations

14. During time limited operation, the works approval holder must ensure that:

(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;

(b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and

(c) all laboratory samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured.

15. During time limited operation, the works approval holder must ensure that all monitoring equipment used on the premises to comply with conditions 17and 18 is calibrated in accordance with the manufacturer specification.

16. During time limited operation, the works approval holder must ensure that:

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

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

17. During time limited operation, the works approval holder must monitor discharges:

(a) at the corresponding monitoring location;

(b) for the corresponding parameter;

(c) at the corresponding frequency;

(d) for the corresponding averaging period;

(e) in the corresponding unit, and

(f) must not exceed the corresponding limit,

as set out in Table 6.

Table 6: Monitoring of emissions and discharges

Monitoring location	Parameter	Units	Limit	Averaging period	Frequency
Supernatant pond at: • TSF1 (Eastern Cell); • TSF1 (Western Cell); • TSF2, as depicted in Schedule 1: Maps, Figure 2 and Figure 3.	pH[1]	pH unit	-	Spot sample	Quarterly during time limited operation of a TSF infrastructure, such that there are a minimum of two sampling events.
	Electrical conductivity (EC) [1]	µS/cm	-		
	Total dissolved solids (TDS)	mg/L	-		
	Sulfate (SO_4)	mg/L	-		
	Total cyanide	mg/L	-		
	Weak acid dissociable cyanide (WAD CN)	mg/L	-		

Monitoring location	Parameter	Units	Limit	Averaging period	Frequency
	Dissolved metals and metalloids: • arsenic (As); • cadmium (Cd); • cobalt (Co); • chromium (Cr); • copper (Cu); • lead (Pb); • mercury (Hg); • molybdenum (Mo); • nickel (Ni); • selenium (Se); • thallium (Th); • uranium (U); • vanadium (V); and • zinc (Zn)	mg/L	-		

Note 1: In-field non-NATA-accredited analysis permitted.

18. During time limited operation, the works approval holder must undertake monitoring of ambient groundwater:

(a) at the corresponding monitoring points;

(b) for the corresponding parameters;

(c) in the corresponding unit;

(d) at no less than the corresponding frequency;

(e) for the corresponding averaging period; and

(f) must not exceed the corresponding limit,

as set out in Table 7.

Table 7: Monitoring of ambient groundwater

Monitoring point (bore reference)	Parameter	Units	Limit	Averaging period	Frequency
TSF1 monitoring network: • CMB1(1); • CMB1(2a); • CMB2;	Standing water level (SWL)	mbgl	-	Spot sample	One sampling event undertaken prior to commencement of time limited operation of a TSF infrastructure; and Monthly during time limited operation of a

Monitoring point (bore reference)	Parameter	Units	Limit	Averaging period	Frequency
• CMB3; • CMB4(1); • CMB4(2a); • CMB4(3); • CMB4(4); • CMB5; • CMB6(1); • CMB6(2a); • CMB7; • CMB8(1); • CMB8(2a); • CMB8(2b), as depicted in Schedule 1: Maps, Figure 6. TSF2 monitoring network: • CMB9A; • CMB9B; • CMB10, as depicted in Schedule 1: Maps, Figure 6.					TSF infrastructure.
	pH[1]	pH unit	-		One sampling event undertaken prior to commencement of time limited operation of a TSF infrastructure; and Quarterly during time limited operation of a TSF infrastructure, such that there are a minimum of two sampling events.
	Electrical conductivity (EC)[1]	µS/cm	-		
	Total dissolved solids (TDS)	mg/L	-		
	Sulfate (SO_4)	mg/L	-		
	Total cyanide	mg/L	-		
	Weak acid dissociable cyanide (WAD CN)	mg/L	0.5 mg/L		
	Dissolved metals and metalloids: • arsenic (As); • cadmium (Cd); • cobalt (Co); • chromium (Cr); • copper (Cu); • lead (Pb); • mercury (Hg); • molybdenum (Mo); • nickel (Ni); • selenium (Se); • thallium (Th); • uranium (U); • vanadium (V); and • zinc (Zn)	mg/L	-		

Note 1: In-field non-NATA-accredited analysis permitted.

19. During time limited operation, the works approval holder must undertake the monitoring for the parameters in according to the specifications detailed in Table 8.

Table 8: Processing monitoring

Monitoring point reference	Parameter	Units	Frequency	Method
TSF1 (Western Cell)	Amount of tailings deposited; and Amount of return water from decant system.	m^3	Continuous	None specified.
TSF1 (Eastern Cell)				
TSF2				
Lakewood processing plant	Amount of ore beneficiated.	tonnes	Continuous	
Carbon regeneration kiln	Amount of barren carbon regenerated.	kg	Continuous	

Compliance reporting

20. 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 sooner.

21. The works approval holder must ensure the report required by condition 20 includes the following:

(a) a summary of the time limited operations, including timeframes and amounts of ore processed and tailings deposited during time limited operation;

(b) a summary of monitoring results obtained during time limited operations under conditions 17 and 18;

(c) a summary of process monitoring measured undertaken during time limited operation under condition 19;

(d) a review of operational performance and compliance against the conditions of the works approval during time limited operation; and

(e) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting

22. 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.

23. 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, 2 and 3;

(b) any maintenance of infrastructure that is performed in the course of complying with condition 12;

(c) monitoring programmes undertaken in accordance with conditions 17, 18 and 19; and

(d) complaints received under condition 22.

24. The books specified under condition 23 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 9 have the meanings defined.

Table 9: Definitions

Term	Definition
annual period	a 12-month period commencing from 1 January until 31 December of the immediately following year.
AS 1289.5.1.1	refers to the Australian Standard for 'Methods of testing soils for engineering purposes, Method 5.1.1: Soil compaction and density tests - Determination of the dry density/moisture content relation of a soil using standard compactive effort'.
AS/NZS 5667.1	refers to the Australian Standard for 'Water quality – Sampling, Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples'.
AS/NZS 5667.11	refers to the Australian Standard for 'Water quality – Sampling, Guidance on sampling of groundwaters'.
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
CIL	means carbon in leach.
critical containment infrastructure	means the items of infrastructure listed in condition 2.
Critical Containment Infrastructure Report	means a report to satisfy the CEO that works of critical containment infrastructure have been constructed in accordance with the works approval.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V Division 3 of the EP Act.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	*Environmental Protection Act 1986* (WA).

Term	Definition
EP Regulations	*Environmental Protection Regulations 1987* (WA).
HDPE	means high-density polyethylene.
mbgl	means metres below ground level.
OMC	means optimal moisture content.
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.
SMDD	means standard maximum dry density – standard compaction.
suitably qualified civil or geotechnical engineer	means a person who: • holds a Bachelor of Engineering recognised by the Australian Institute of Engineers; and • has a minimum of five years of experience working in civil or geotechnical engineering, including experience in the design of tailings storage facilities.
suitably qualified engineer	means a person who: • holds a Bachelor of Engineering recognised by the Australian Institute of Engineers; and • has a minimum of five years of experience working in the design and/or implementation of the relevant infrastructure, or who is otherwise approved by the CEO to act in this capacity.
suitably qualified hydrogeologist	means a person who: • holds a tertiary qualification specialising in environmental science, geology or equivalent; and • has a minimum of five years of experience working in the area of hydrogeology, including investigation and assessment of groundwater resources, or who is otherwise approved by the CEO to act in this capacity.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

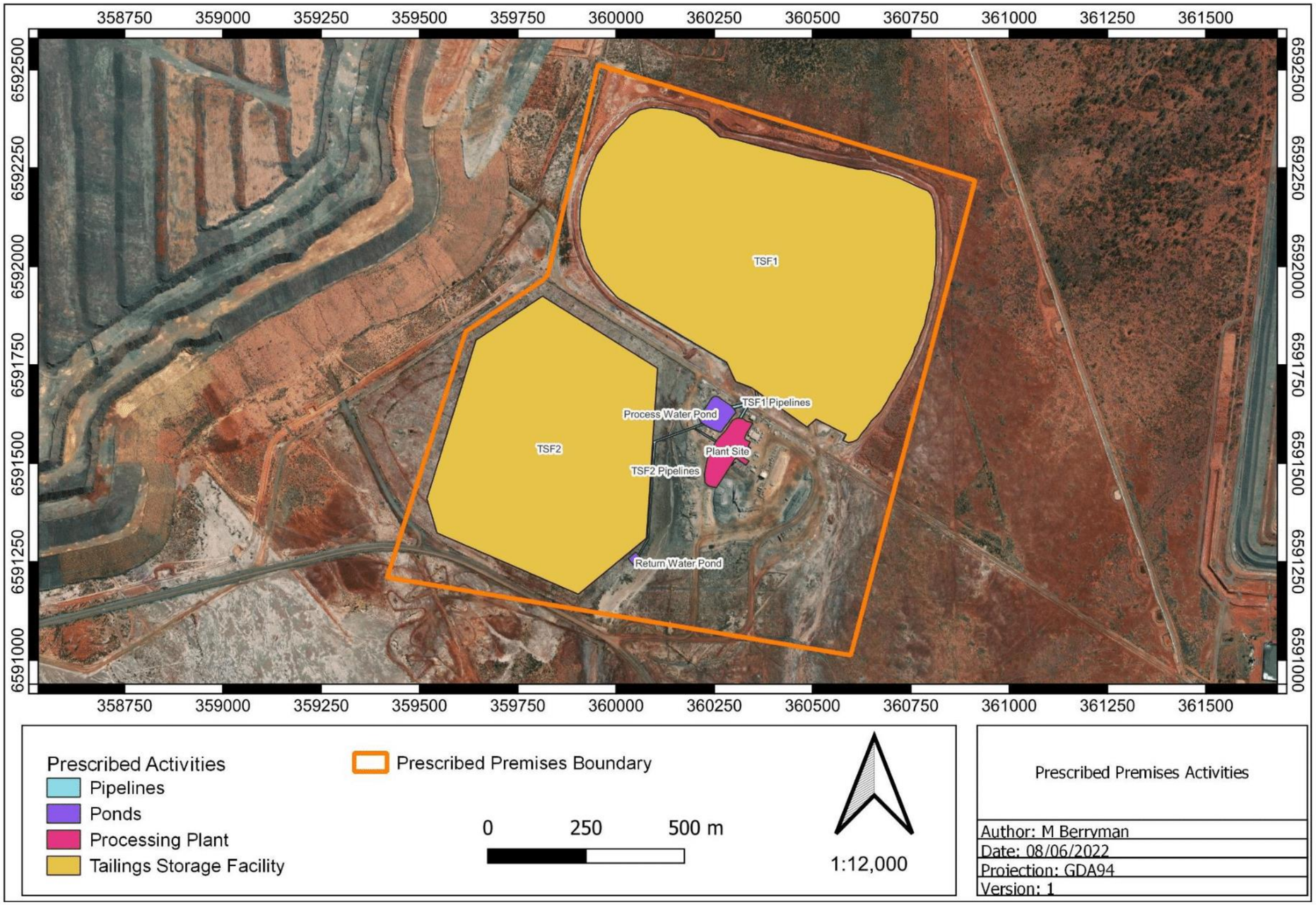
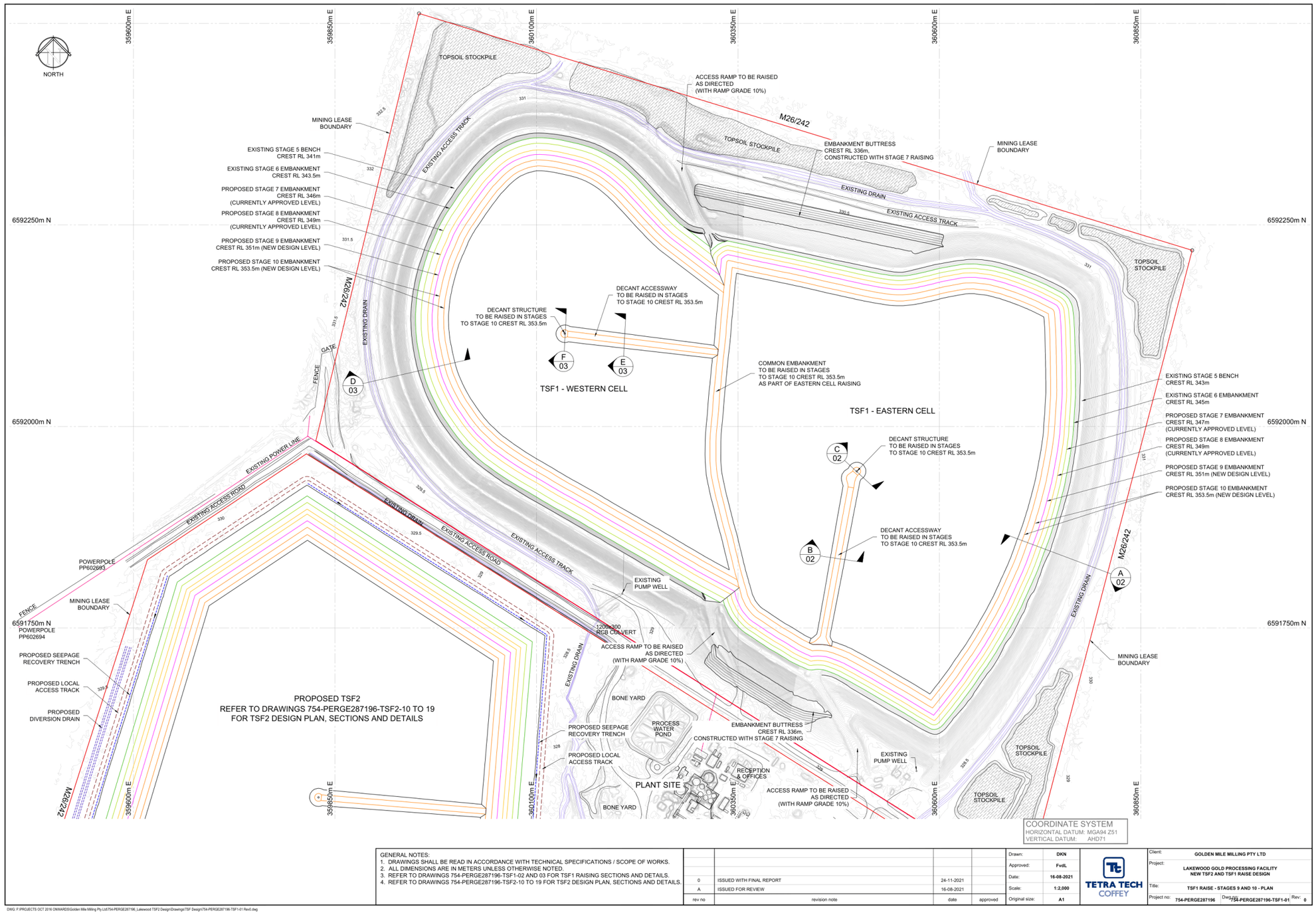


Figure 1: Map of the boundary of the prescribed premises



GENERAL NOTES:
1. DRAWINGS SHALL BE READ IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS / SCOPE OF WORKS.
2. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
3. REFER TO DRAWINGS 754-PERGE287196-TSF1-02 AND 03 FOR TSF1 RAISING SECTIONS AND DETAILS.
4. REFER TO DRAWINGS 754-PERGE287196-TSF2-10 TO 19 FOR TSF2 DESIGN PLAN, SECTIONS AND DETAILS.

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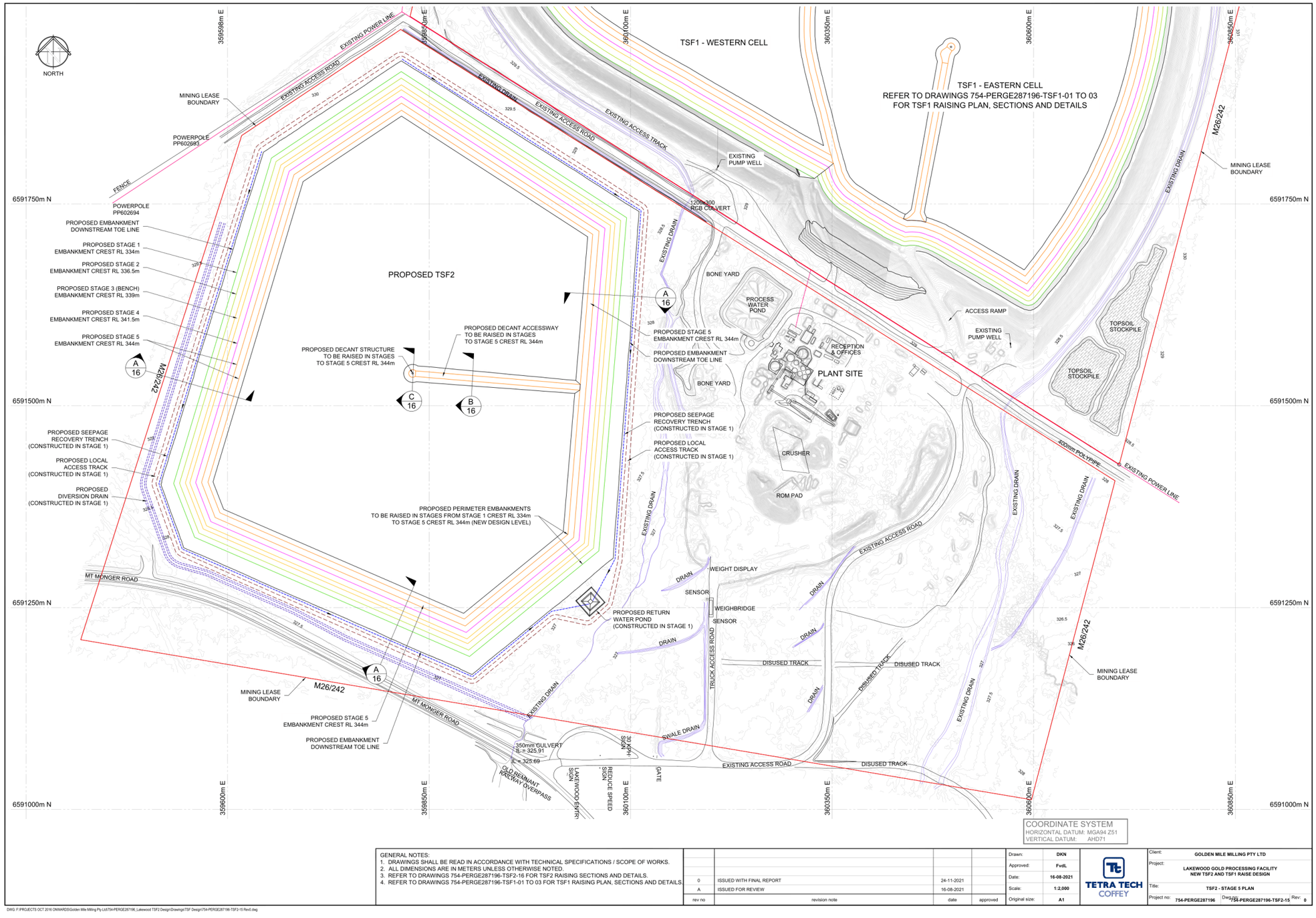
Approved:	FvdL
Date:	16-08-2021
Scale:	1:2,000
Original size:	A1

TETRA TECH COFFEY

Client: GOLDEN MILE MILLING PTY LTD
Project: LAKEWOOD GOLD PROCESSING FACILITY NEW TSF2 AND TSF1 RAISE DESIGN
Title: TSF1 RAISE - STAGES 9 AND 10 - PLAN
Project no: 754-PERGE287196 Dwg no: 754-PERGE287196-TSF1-01 Rev: 0

DWG: F:\PROJECTS OCT 2016 ONWARDS\Golden Mile Milling Pty Ltd\754-PERGE287196_Lakewood TSF2 Design\Drawings\TSF Design\754-PERGE287196-TSF1-01-Rev0.dwg

Figure 2: TSF1 – Site layout plan



GENERAL NOTES:
1. DRAWINGS SHALL BE READ IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS / SCOPE OF WORKS.
2. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
3. REFER TO DRAWINGS 754-PERGE287196-TSF2-16 FOR TSF2 RAISING SECTIONS AND DETAILS.
4. REFER TO DRAWINGS 754-PERGE287196-TSF1-01 TO 03 FOR TSF1 RAISING PLAN, SECTIONS AND DETAILS.

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Approved:	FvdL
Date:	16-08-2021
Scale:	1:2,000
Original size:	A1

TETRA TECH COFFEY

Client: GOLDEN MILE MILLING PTY LTD
Project: LAKEWOOD GOLD PROCESSING FACILITY NEW TSF2 AND TSF1 RAISE DESIGN
Title: TSF2 - STAGE 5 PLAN
Project no: 754-PERGE287196 Dwg no: 754-PERGE287196-TSF2-15 Rev: 0

DWG: F:\PROJECTS OCT 2016 ONWARDS\Golden Mile Milling Pty Ltd\754-PERGE287196_Lakewood TSF2 Design\Drawings\TSF Design\754-PERGE287196-TSF2-15 Rev0.dwg

Figure 3: TSF2 – Site layout plan

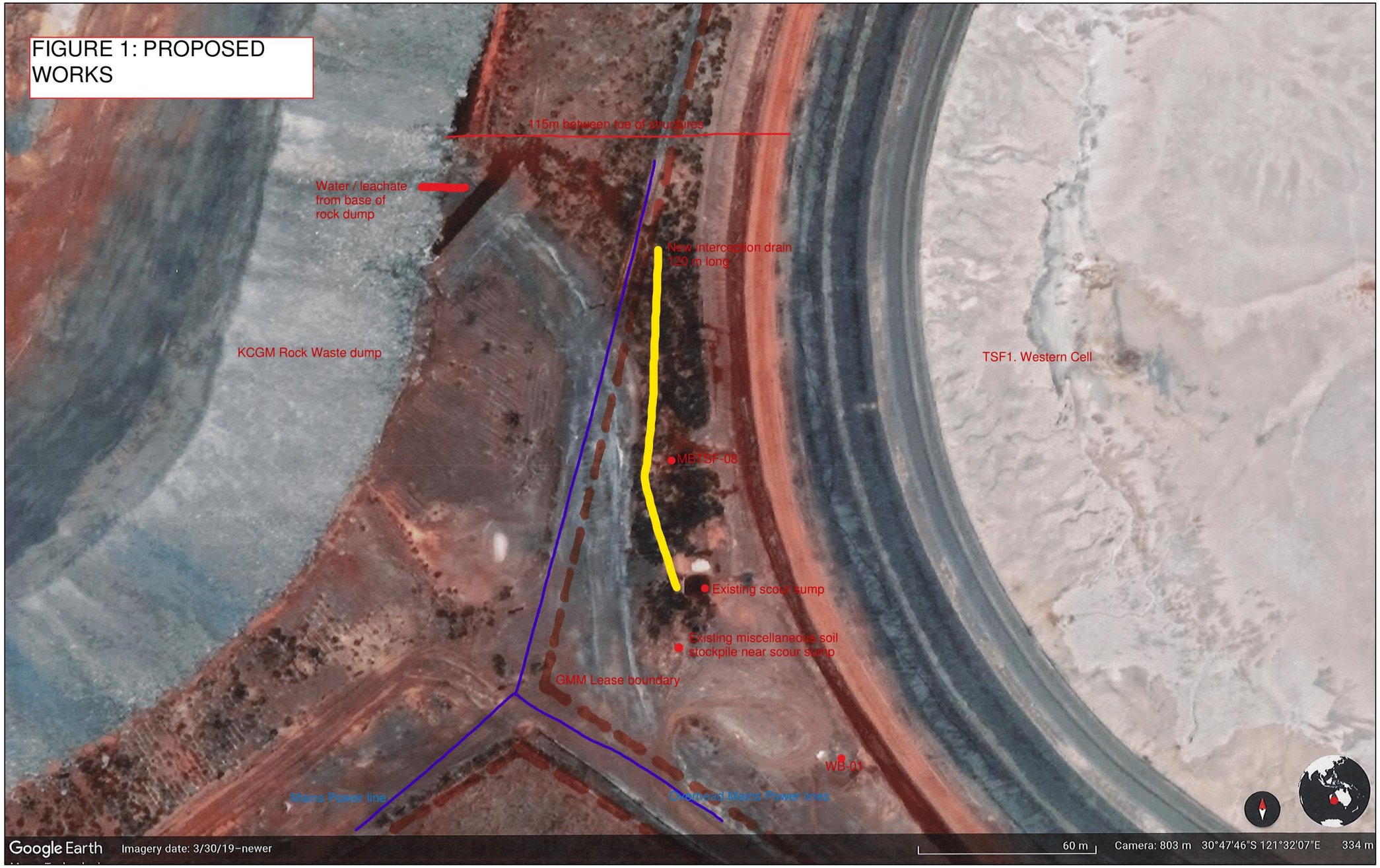


Figure 4: TSF1 capture trench layout

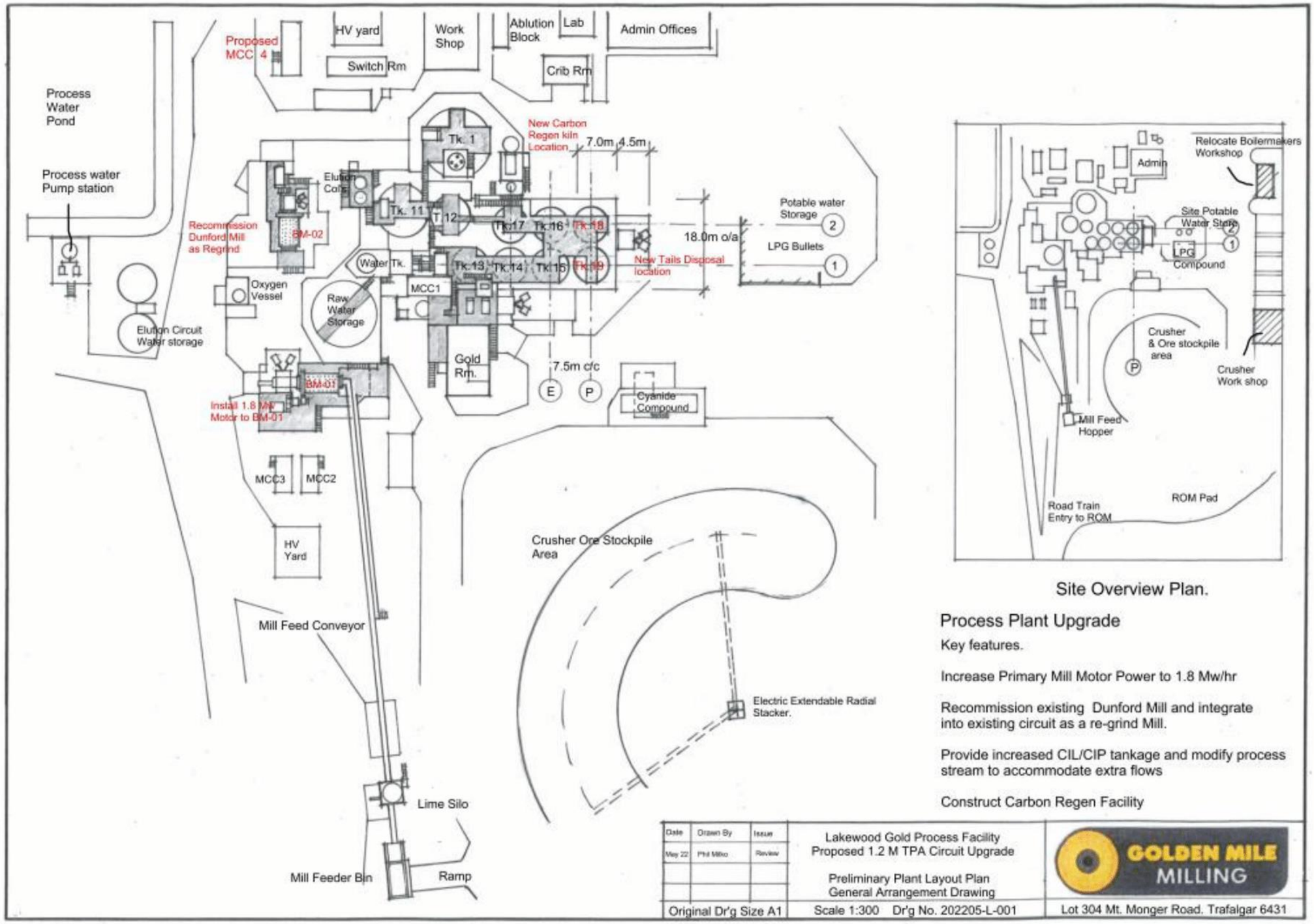


Figure 5: Lakewood processing plant layout – infrastructure upgrades

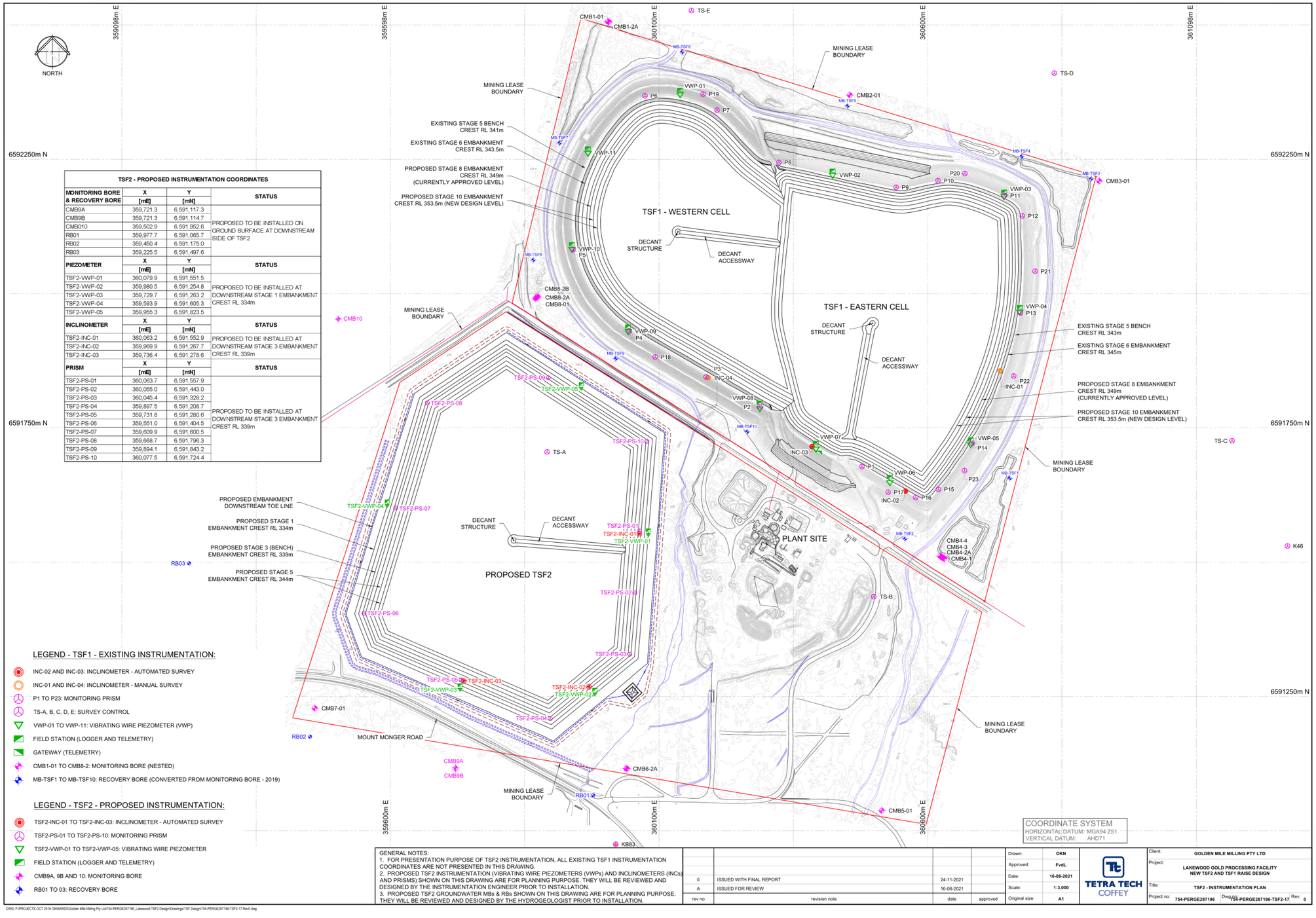


Figure 6: TSF monitoring instrumentations

Schedule 2: Construction engineering drawings

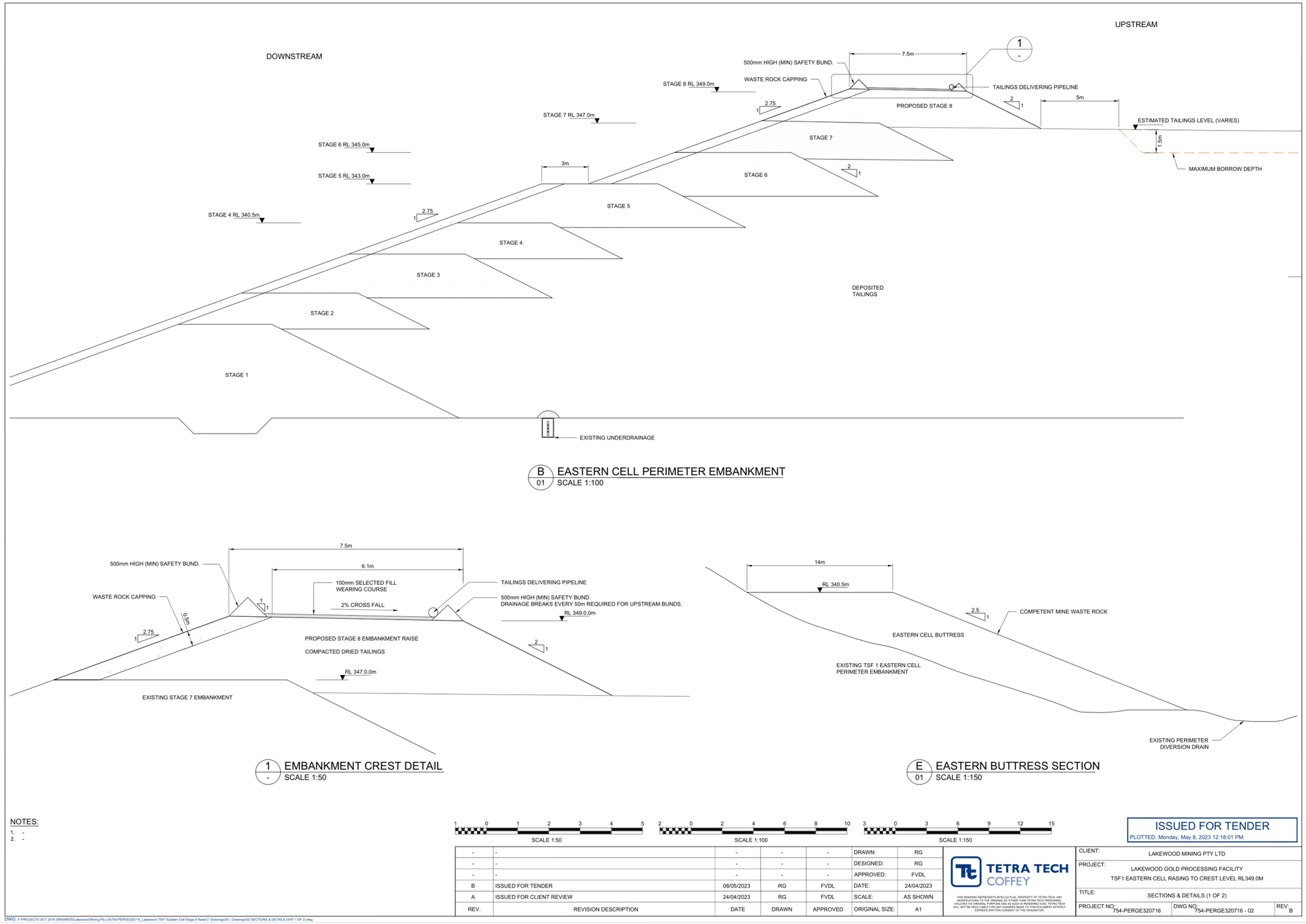


Figure 7: TSF1 – Eastern Cell – Stage 8 Construction drawings

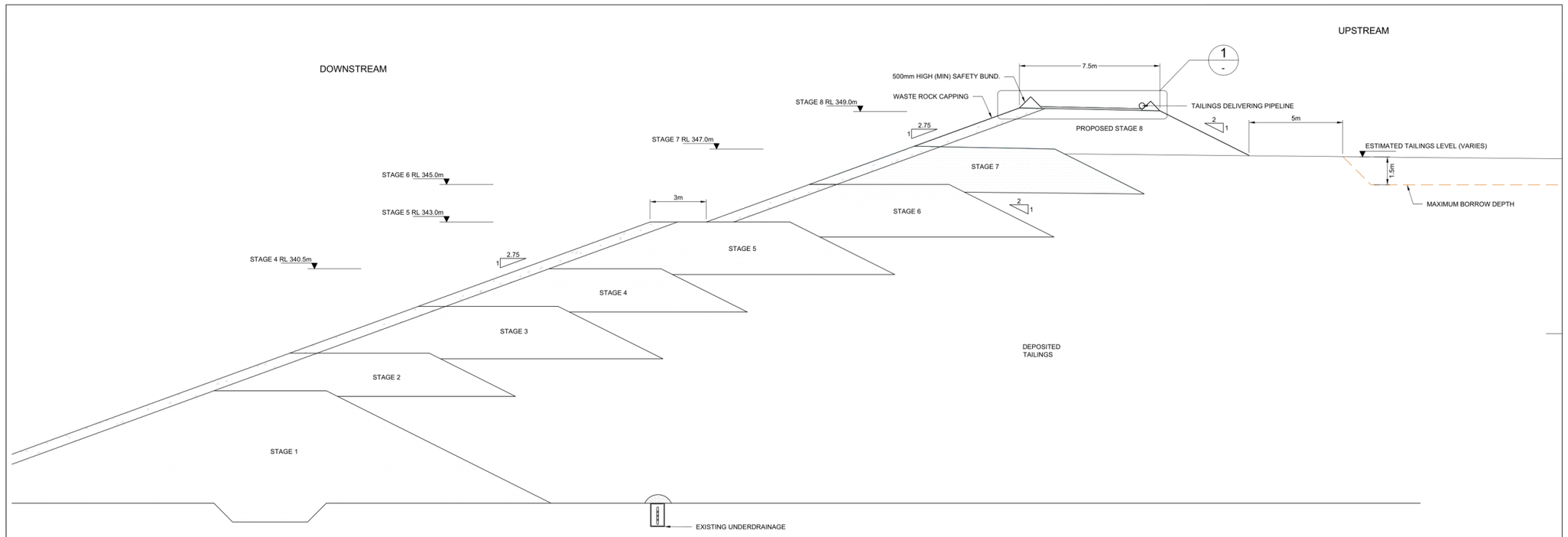
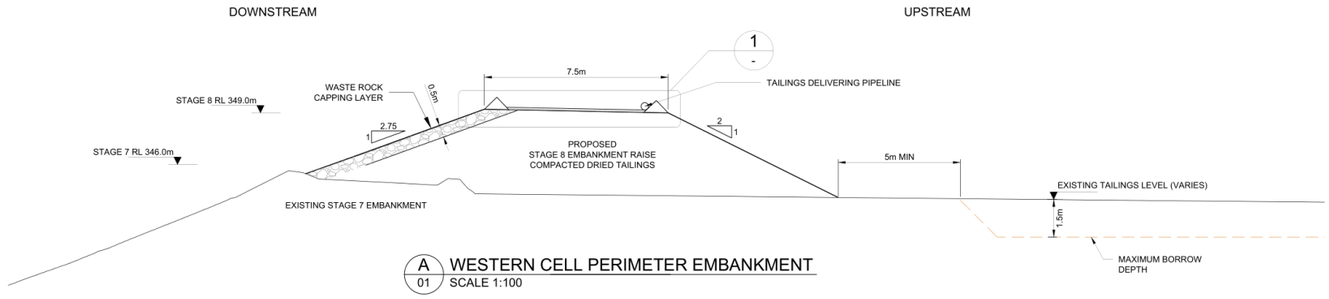


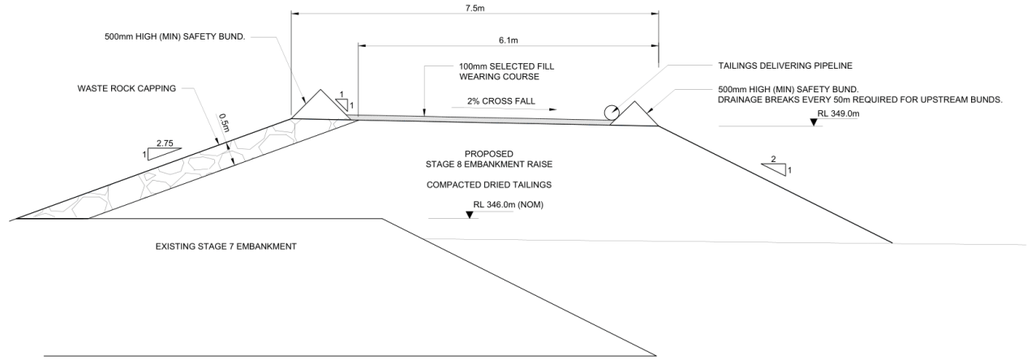
Figure 8: TSF1 – Eastern Cell – Stage 8 Construction drawings

W6719/2022/1 (Amendment Date: 01 June 2023)

IR-T05 Works approval template (v6.0) (September 2022)



A / 01 WESTERN CELL PERIMETER EMBANKMENT
SCALE 1:100



1 / - EMBANKMENT CREST DETAIL
SCALE 1:50

NOTES:
1. -
2. -

SCALE 1:100 SCALE 1:50

ISSUED FOR TENDER
PLOTTED: Monday, May 8, 2023 12:25:38 PM

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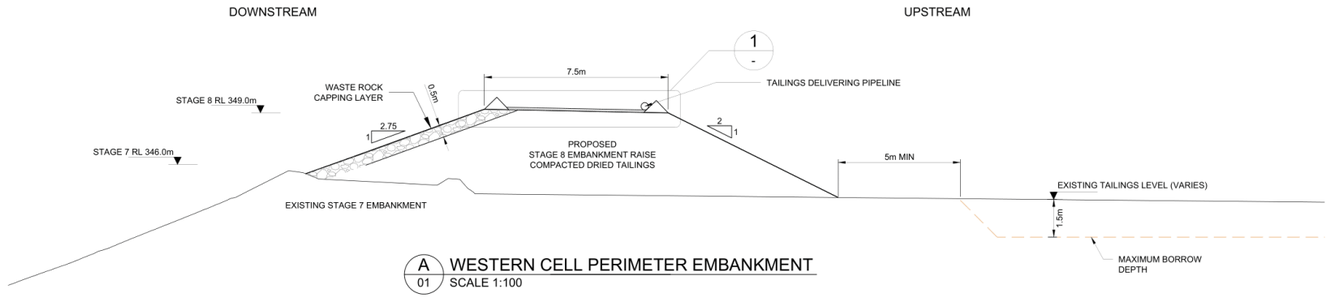
-	-	-	-	-	DESIGNED:	RG
-	-	-	-	-	APPROVED:	FVDL
B	ISSUED FOR TENDER	08/05/2023	RG	FVDL	DATE:	26/04/2023
A	ISSUED FOR CLIENT REVIEW	26/04/2023	RG	FVDL	SCALE:	AS SHOWN

TETRA TECH COFFEY

CLIENT:	LAKEWOOD MINING PTY LTD
PROJECT:	LAKEWOOD GOLD PROCESSING FACILITY TSF1 WESTERN CELL RASING TO CREST LEVEL RL349.0M
TITLE:	SECTIONS & DETAILS (1 OF 2)
PROJECT NO: 754-PERGE321623	DWG NO: 754-PERGE321623 - 02 / REV: B

DWG: F:\projects oct 2016 onwards\lakewood mining pty ltd\754-perge321623_lakewood tsf1 western cell stage 8 raise\7. drawings\00 - drawings\754-PERGE321623 - 02 & 03.dwg

Figure 9: TSF1 – Western Cell – Stage 8 Construction drawings



A 01 WESTERN CELL PERIMETER EMBANKMENT
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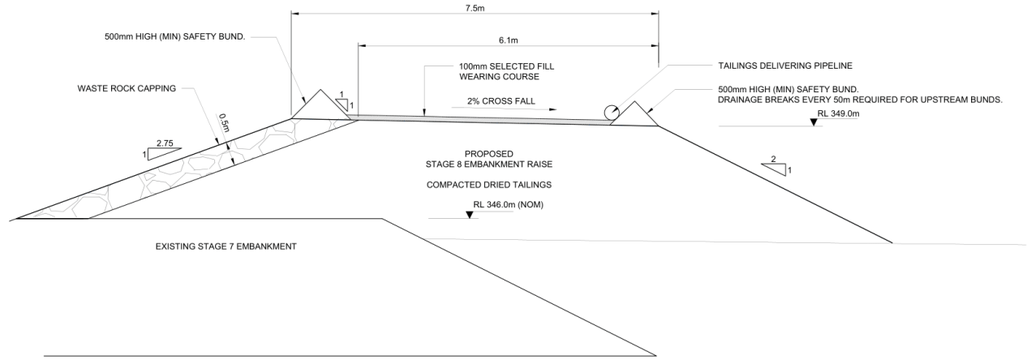

1 - EMBANKMENT CREST DETAIL
SCALE 1:50

NOTES:
1. -
2. -

SCALE 1:100 SCALE 1:50

ISSUED FOR TENDER
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B	ISSUED FOR TENDER	08/05/2023	RG	FVDL	DATE:	26/04/2023
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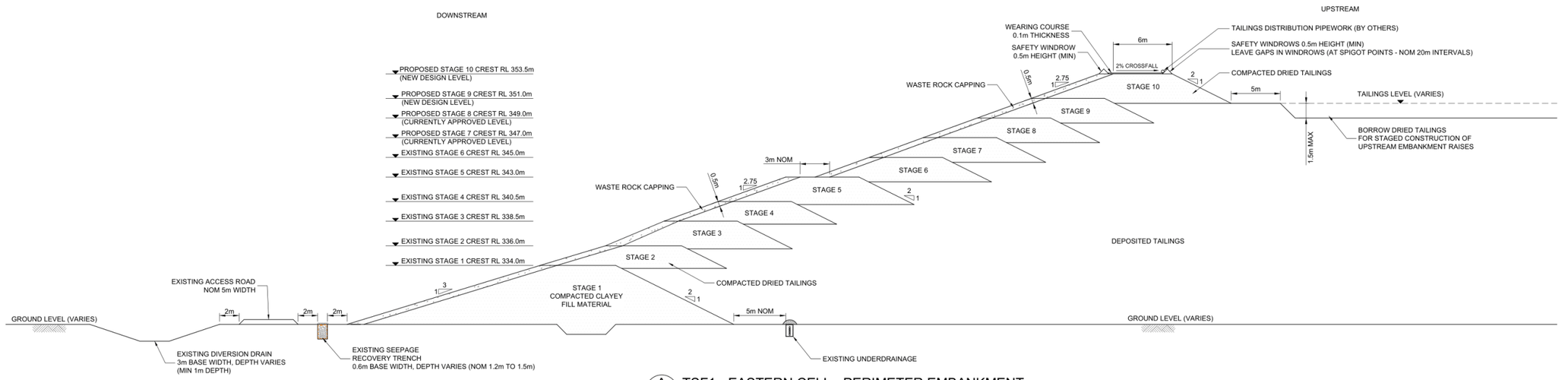
TETRA TECH COFFEY

CLIENT:	LAKEWOOD MINING PTY LTD
PROJECT:	LAKEWOOD GOLD PROCESSING FACILITY TSF1 WESTERN CELL RASING TO CREST LEVEL RL349.0M
TITLE:	SECTIONS & DETAILS (1 OF 2)
PROJECT NO: 754-PERGE321623	DWG NO: 754-PERGE321623 - 02 / REV: B

DWG: F:\projects oct 2016 onwards\lakewood mining pty ltd\754-perge321623_lakewood tsf1 western cell stage 8 raise\7. drawings\00 - drawings\754-PERGE321623 - 02 & 03.dwg

Figure 10: TSF1 – Western Cell – Stage 8 Construction drawings



A 01 TSF1 - EASTERN CELL - PERIMETER EMBANKMENT
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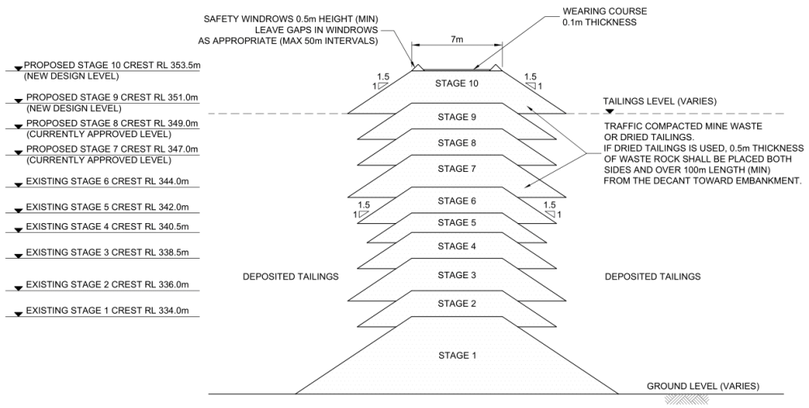
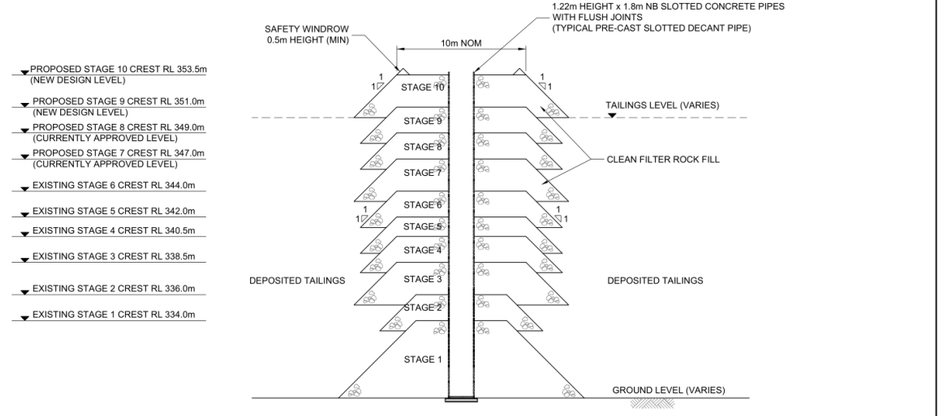


B 01 TSF1 - EASTERN CELL - DECANT ACCESSWAY
TYPICAL SECTION - SCALE 1:200



C 01 TSF1 - EASTERN CELL - DECANT STRUCTURE
TYPICAL SECTION - SCALE 1:200

GENERAL NOTES:
1. DRAWINGS SHALL BE READ IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS / SCOPE OF WORKS.
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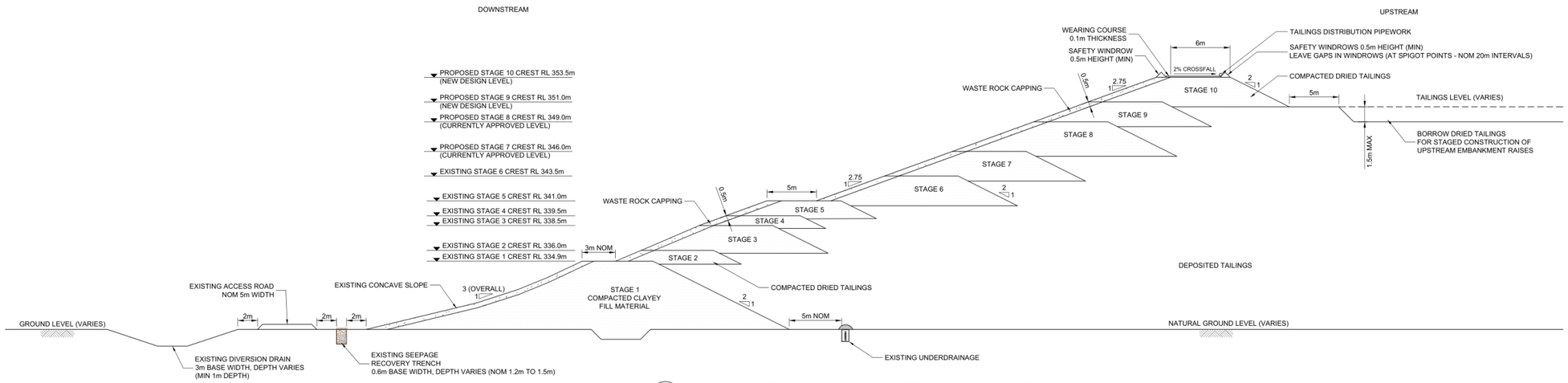
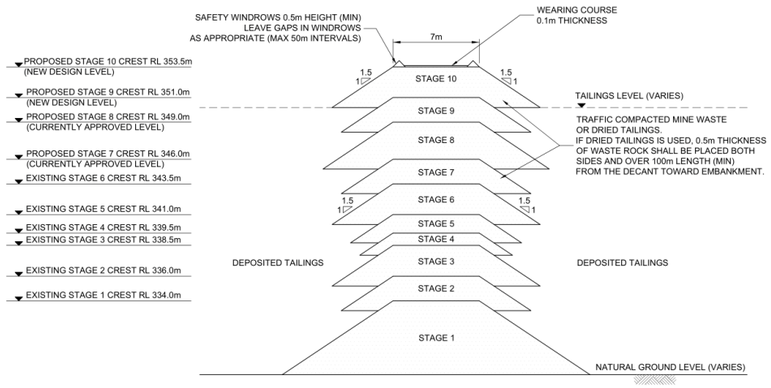
TETRA TECH COFFEY

Client: GOLDEN MILE MILLING PTY LTD
Project: LAKEWOOD GOLD PROCESSING FACILITY NEW TSF2 AND TSF1 RAISE DESIGN
Title: TSF1 RAISE - EAST CELL - STAGES 9 AND 10 - SECTIONS & DETAILS
Project no: 754-PERGE287196 Drawing no: 754-PERGE287196-TSF1-02 Rev: 0

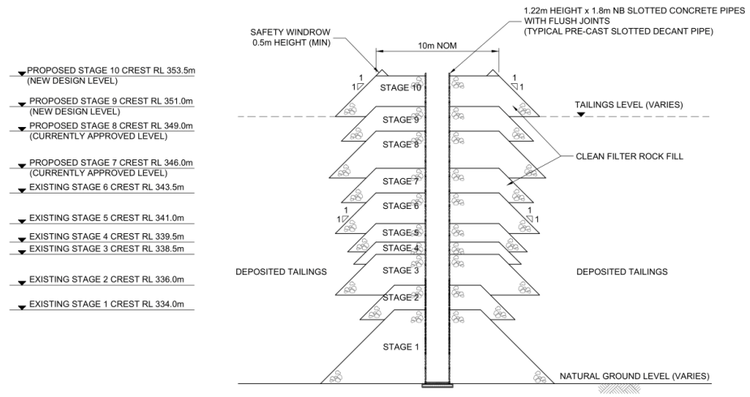
Figure 11: TSF1 Eastern Cell – Stage 9 Construction drawings



D 01 TSF1 - WESTERN CELL - PERIMETER EMBANKMENT
TYPICAL SECTION - SCALE 1:200



E 01 TSF1 - WESTERN CELL - DECANT ACCESSWAY
TYPICAL SECTION - SCALE 1:200



F 01 TSF1 - WESTERN CELL - DECANT STRUCTURE
TYPICAL SECTION - SCALE 1:200

GENERAL NOTES:
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Approved: FvdL
Date: 16-08-2021
Scale: AS SHOWN
Original size: A1

TETRA TECH COFFEY

Client: GOLDEN MILE MILLING PTY LTD
Project: LAKEWOOD GOLD PROCESSING FACILITY NEW TSF2 AND TSF1 RAISE DESIGN
Title: TSF1 RAISE - WEST CELL - STAGES 9 AND 10 - SECTIONS & DETAILS
Project no: 754-PERGE287196 Dwg no: 754-PERGE287196-TSF1-03 Rev: 0

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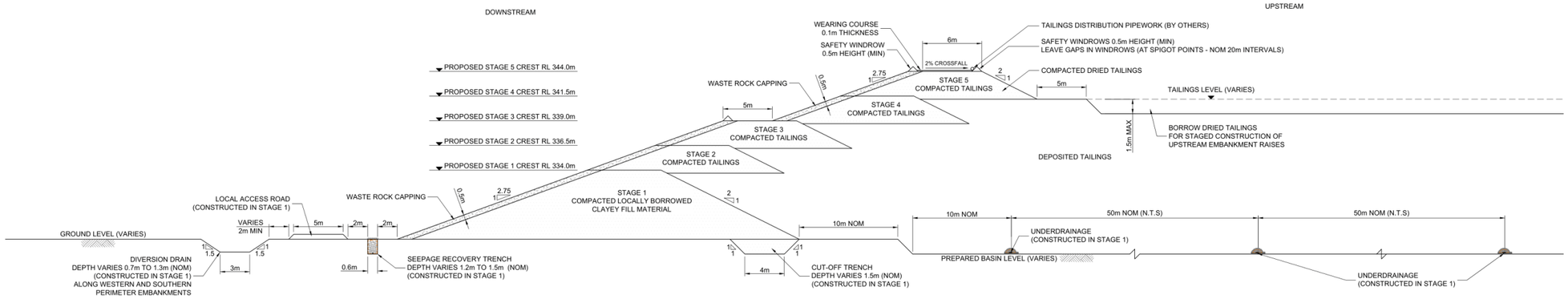
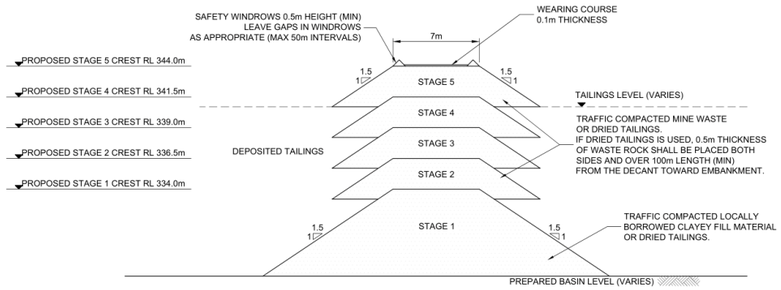
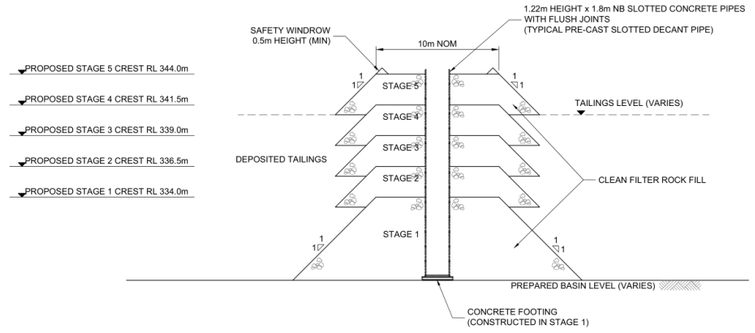
Figure 12: TSF1 Western Cell – Stage 9 Construction drawings



A 15 TSF2 - PERIMETER EMBANKMENT
TYPICAL SECTION - SCALE 1:200



B 15 TSF2 - DECANT ACCESSWAY
TYPICAL SECTION - SCALE 1:200



C 15 TSF2 - DECANT STRUCTURE
TYPICAL SECTION - SCALE 1:200

GENERAL NOTES:
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TETRA TECH COFFEY

Client: GOLDEN MILE MILLING PTY LTD
Project: LAKEWOOD GOLD PROCESSING FACILITY
NEW TSF2 AND TSF1 RAISE DESIGN
Title: TSF2 - STAGE 5 - SECTIONS & DETAILS
Project no: 754-PERGE287196 Dwg no: 754-PERGE287196-TSF2-16 Rev: 0

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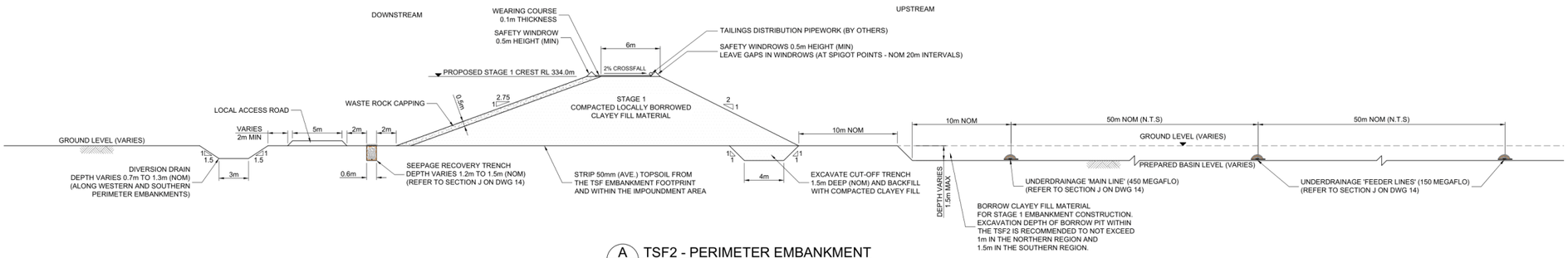
Figure 13: TSF2 – Stage 2 to 3 construction drawings



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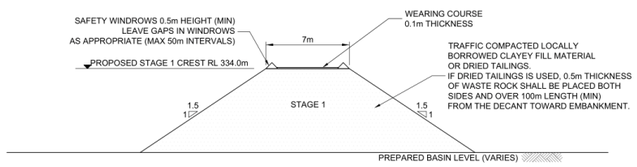

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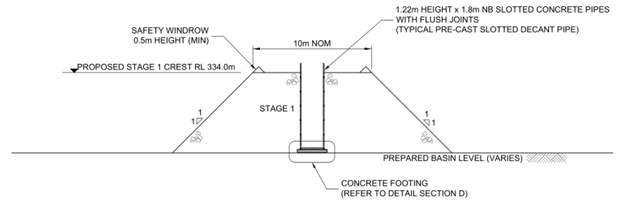
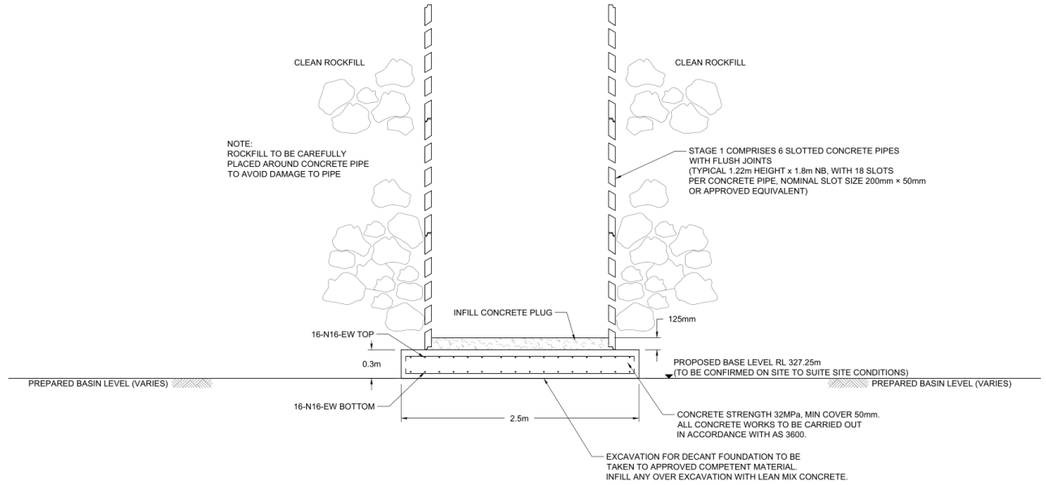


C 10 TSF2 - DECANT STRUCTURE
TYPICAL SECTION - SCALE 1:200



D - DECANT STRUCTURE - CONCRETE FOOTING
DETAIL SECTION - SCALE 1:25

GENERAL NOTES:
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Scale:	AS SHOWN
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TETRA TECH COFFEY

Client: GOLDEN MILE MILLING PTY LTD
Project: LAKEWOOD GOLD PROCESSING FACILITY
NEW TSF2 AND TSF1 RAISE DESIGN
Title: TSF2 - STAGE 1 - SECTIONS & DETAILS (SHEET 1 OF 3)
Project no: 754-PERGE287196 Dwg no: 754-PERGE287196-TSF2-12 Rev: 0

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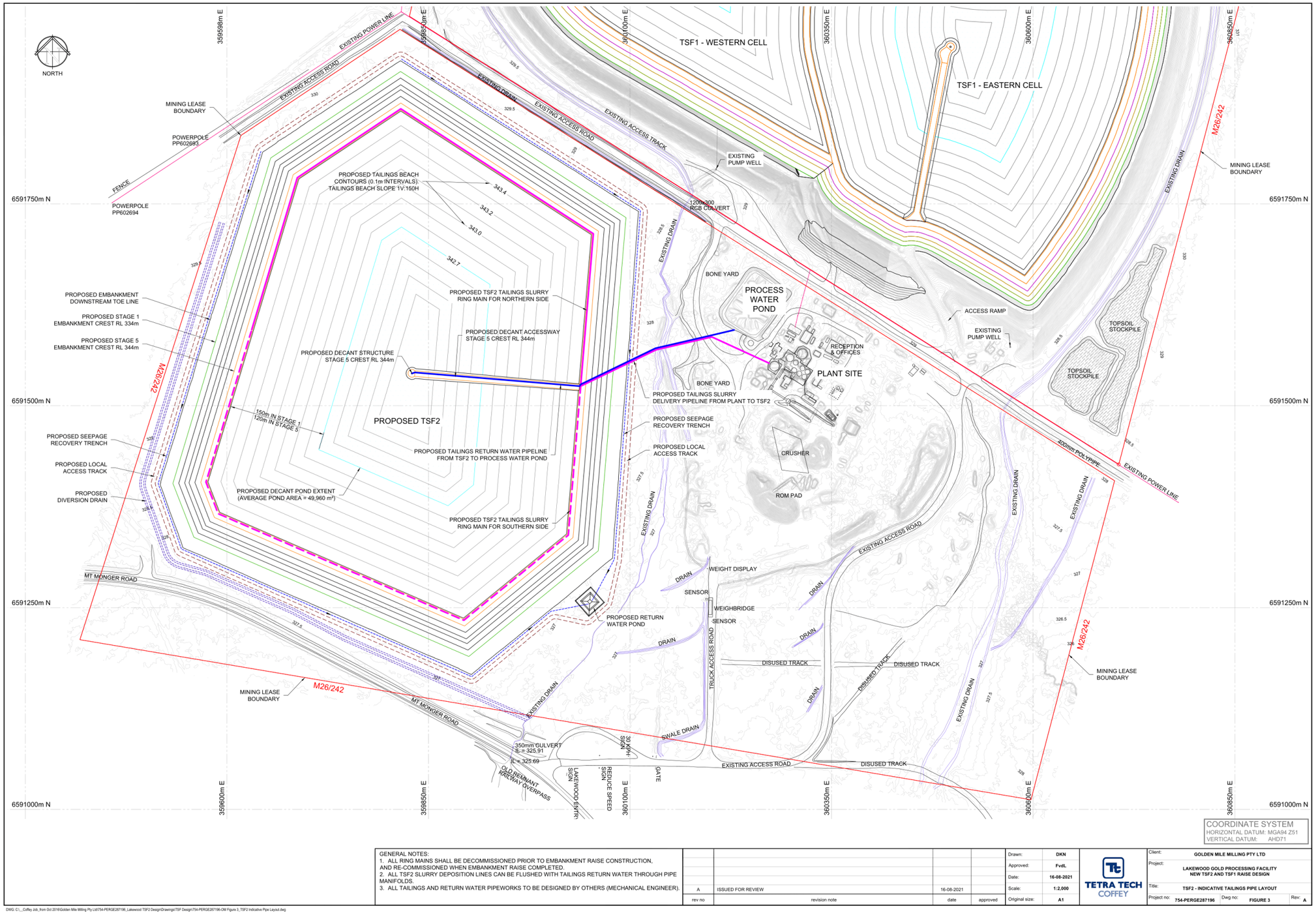
Figure 14: TSF2 – Stage 1 Construction drawings



GENERAL NOTES:
1. ALL RING MAINS SHALL BE DECOMMISSIONED PRIOR TO EMBANKMENT RAISE CONSTRUCTION, AND RE-COMMISSIONED WHEN EMBANKMENT RAISE COMPLETED.
2. ALL TSF2 SLURRY DEPOSITION LINES CAN BE FLUSHED WITH TAILINGS RETURN WATER THROUGH PIPE MANIFOLDS.
3. ALL TAILINGS AND RETURN WATER PIPEWORKS TO BE DESIGNED BY OTHERS (MECHANICAL ENGINEER).

rev no	revision note	date	approved
A	ISSUED FOR REVIEW	16-08-2021	

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Approved:	FvdL
Date:	16-08-2021
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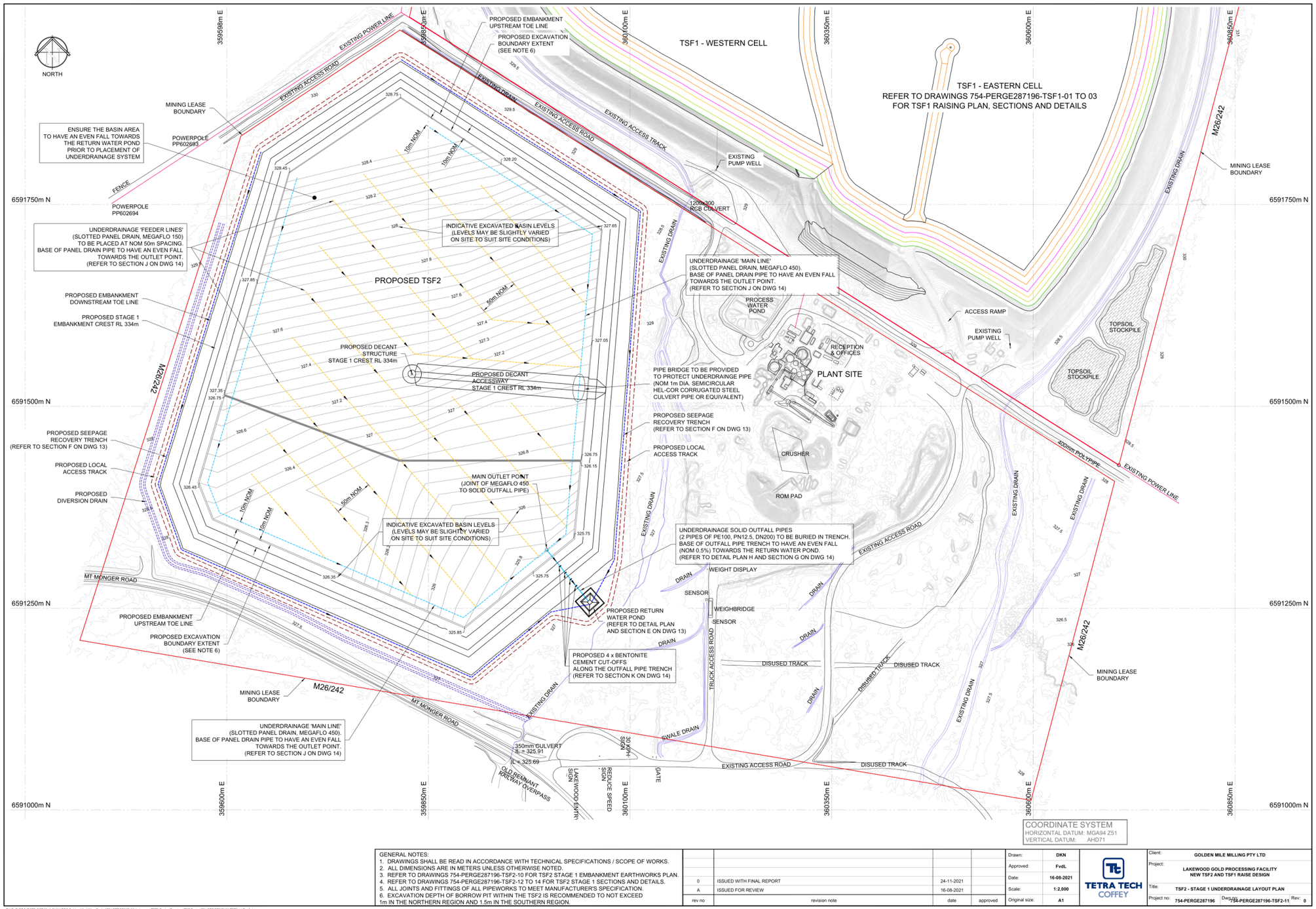
Original size:	A1

TETRA TECH COFFEY

Client: GOLDEN MILE MILLING PTY LTD
Project: LAKEWOOD GOLD PROCESSING FACILITY NEW TSF2 AND TSF1 RAISE DESIGN
Title: TSF2 - INDICATIVE TAILINGS PIPE LAYOUT
Project no: 754-PERGE287196 | Dwg no: FIGURE 3 | Rev: A

DWG: C:_Coffey Job_from Oct 2016\Golden Mile Milling Pty Ltd\754-PERGE287196_Lakewood TSF2 Design\Drawings\TSF Design\754-PERGE287196-DWI Figure 3_TSF2 Indicative Pipe Layout.dwg

Figure 15: TSF2 – Tailings delivery and return water pipeline layout and construction drawing



GENERAL NOTES:
1. DRAWINGS SHALL BE READ IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS / SCOPE OF WORKS.
2. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
3. REFER TO DRAWINGS 754-PERGE287196-TSF2-10 FOR TSF2 STAGE 1 EMBANKMENT EARTHWORKS PLAN.
4. REFER TO DRAWINGS 754-PERGE287196-TSF2-12 TO 14 FOR TSF2 STAGE 1 SECTIONS AND DETAILS.
5. ALL JOINTS AND FITTINGS OF ALL PIPEWORKS TO MEET MANUFACTURER'S SPECIFICATION.
6. EXCAVATION DEPTH OF BORROW PIT WITHIN THE TSF2 IS RECOMMENDED TO NOT EXCEED 1m IN THE NORTHERN REGION AND 1.5m IN THE SOUTHERN REGION.

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TETRA TECH COFFEY

Client: GOLDEN MILE MILLING PTY LTD
Project: LAKEWOOD GOLD PROCESSING FACILITY NEW TSF2 AND TSF1 RAISE DESIGN
Title: TSF2 - STAGE 1 UNDERDRAINAGE LAYOUT PLAN
Project no: 754-PERGE287196 Dwg no: 754-PERGE287196-TSF2-11 Rev: 0

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Figure 16: TSF2 – Underdrainage system construction drawing

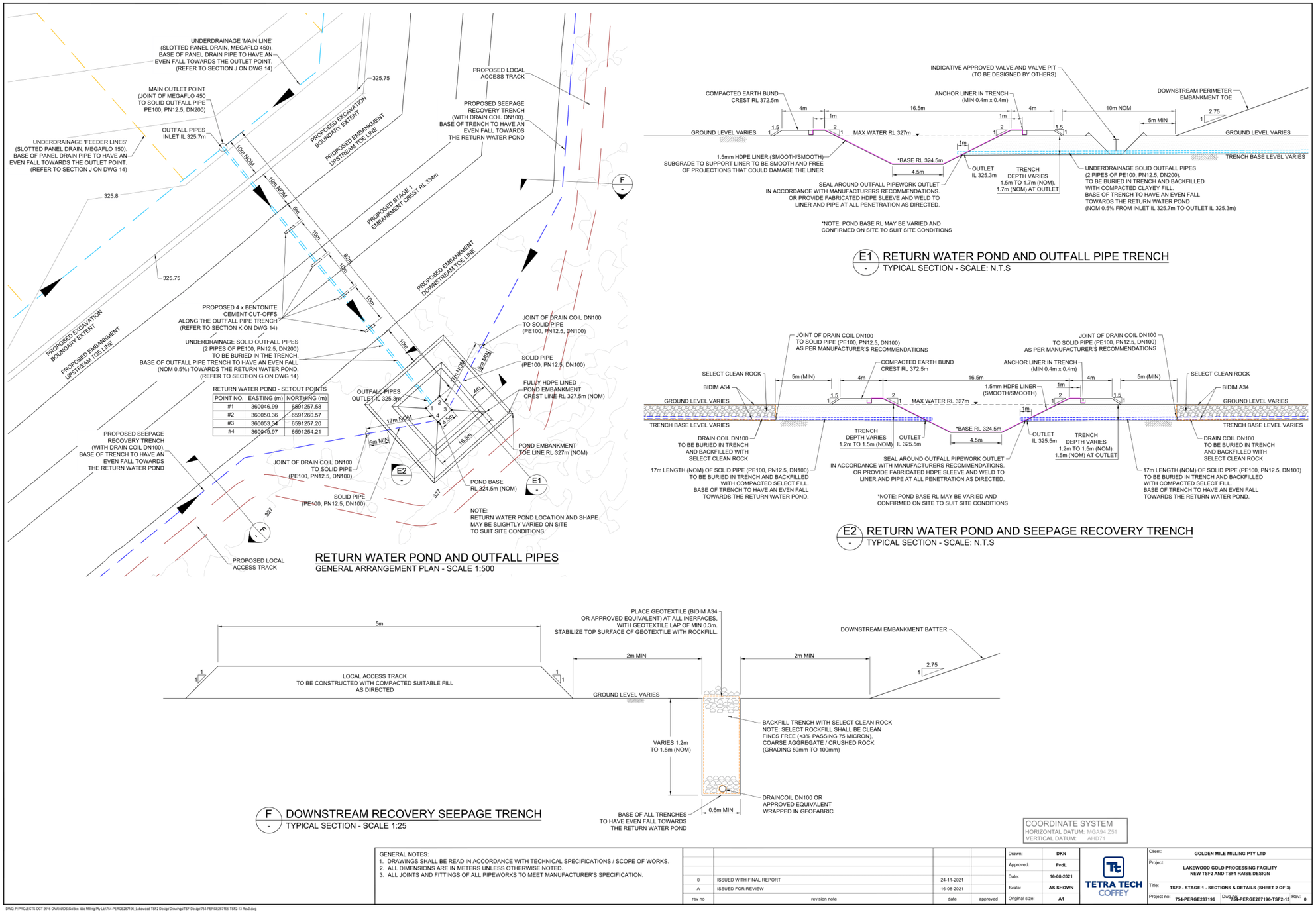
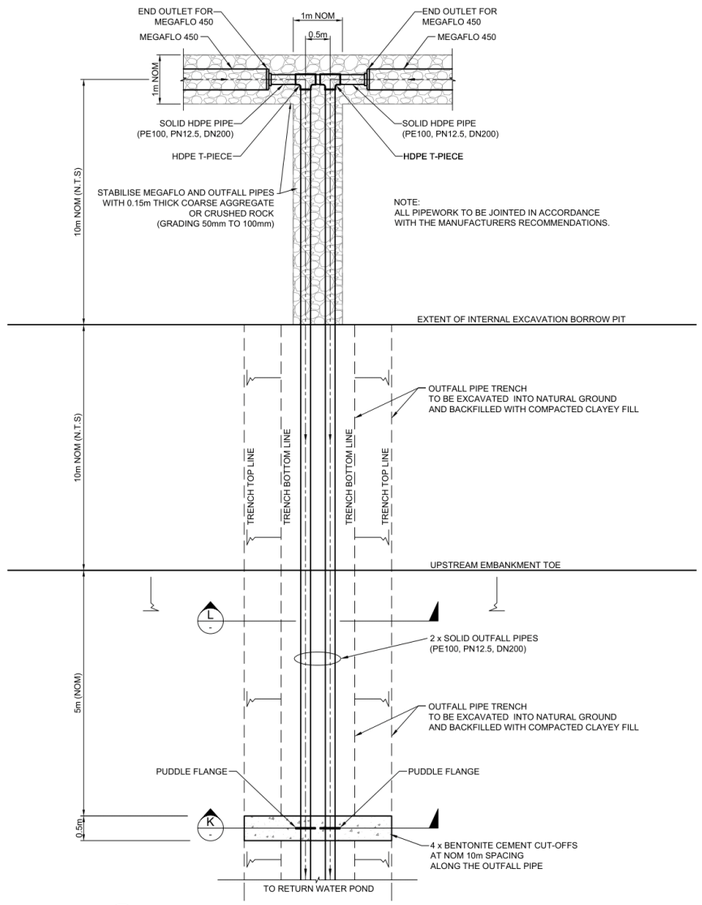
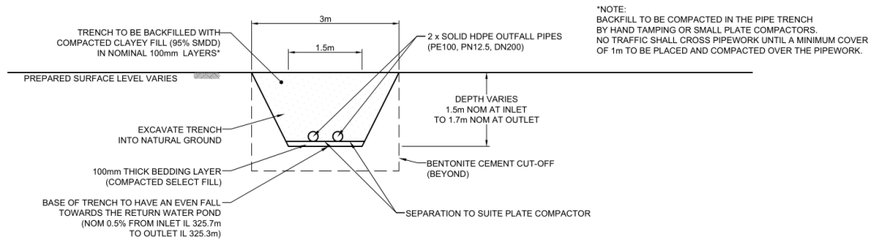


Figure 17: TSF2 – Stage 1 return water pond, outfall pipe and seepage recovery trench construction drawings

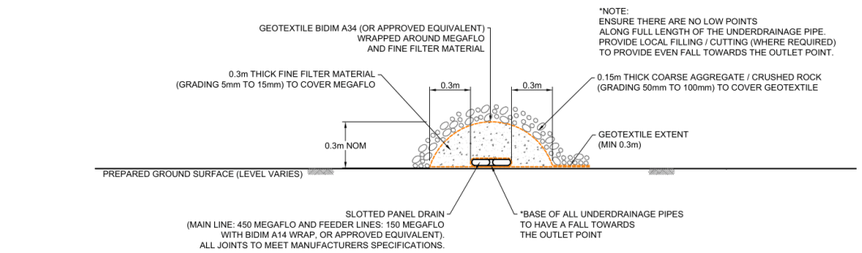


H 11 UNDERDRAINAGE OUTFALL JOINT AND PIPE TRENCH
DETAIL PLAN - SCALE: N.T.S

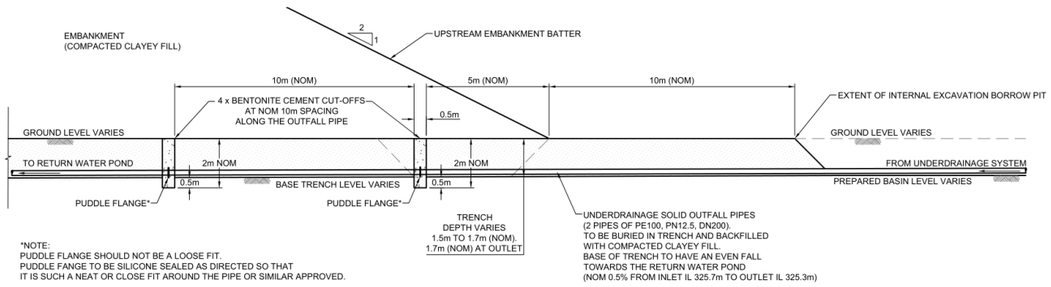


*NOTE:
BACKFILL TO BE COMPACTED IN THE PIPE TRENCH BY HAND TAMPING OR SMALL PLATE COMPACTORS. NO TRAFFIC SHALL CROSS PIPEWORK UNTIL A MINIMUM COVER OF 1m TO BE PLACED AND COMPACTED OVER THE PIPEWORK.

L - OUTFALL PIPE TRENCH
TYPICAL SECTION - SCALE: 1:50



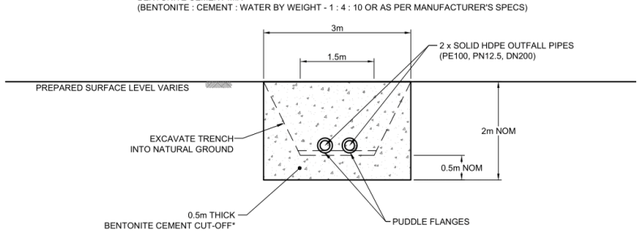
J 11 MEGAFLO UNDERDRAINAGE
TYPICAL SECTION - SCALE: 1:20



*NOTE:
PUDDLE FLANGE SHOULD NOT BE A LOOSE FIT.
PUDDLE FANGE TO BE SILICONE SEALED AS DIRECTED SO THAT IT IS SUCH A NEAT OR CLOSE FIT AROUND THE PIPE OR SIMILAR APPROVED.

G 11 OUTFALL PIPE THROUGH EMBANKMENT
TYPICAL LONG SECTION - SCALE: 1:100

*NOTE:
CAST BENTONITE CEMENT CUT-OFF AGAINST TRENCH EXCAVATION.
NO FORMWORK EXCEPT ACROSS TRENCH EXCAVATION.
BENTONITE CEMENT MIX
(BENTONITE : CEMENT : WATER BY WEIGHT - 1 : 4 : 10 OR AS PER MANUFACTURER'S SPECS)



K - BENTONITE CEMENT CUT-OFF COLLAR
TYPICAL SECTION - SCALE: 1:50

GENERAL NOTES:
1. DRAWINGS SHALL BE READ IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS / SCOPE OF WORKS.
2. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
3. ALL JOINTS AND FITTINGS OF ALL PIPEWORKS TO MEET MANUFACTURER'S SPECIFICATION.

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TETRA TECH COFFEY

Client: GOLDEN MILE MILLING PTY LTD
Project: LAKEWOOD GOLD PROCESSING FACILITY NEW TSF2 AND TSF1 RAISE DESIGN
Title: TSF2 - STAGE 1 - SECTIONS & DETAILS (SHEET 3 OF 3)
Project no: 754-PERGE287196 Dwg no: 754-PERGE287196-TSF2-14 Rev: 0

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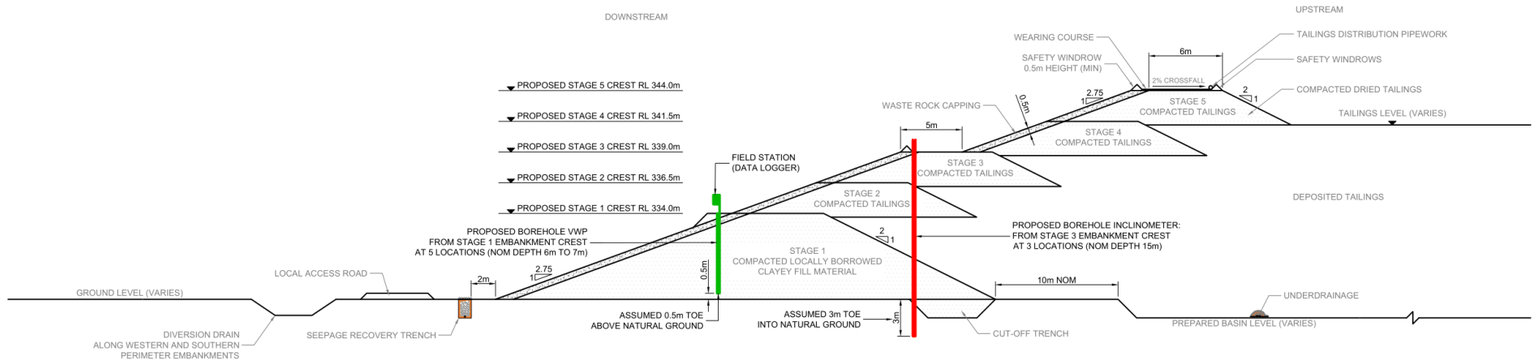
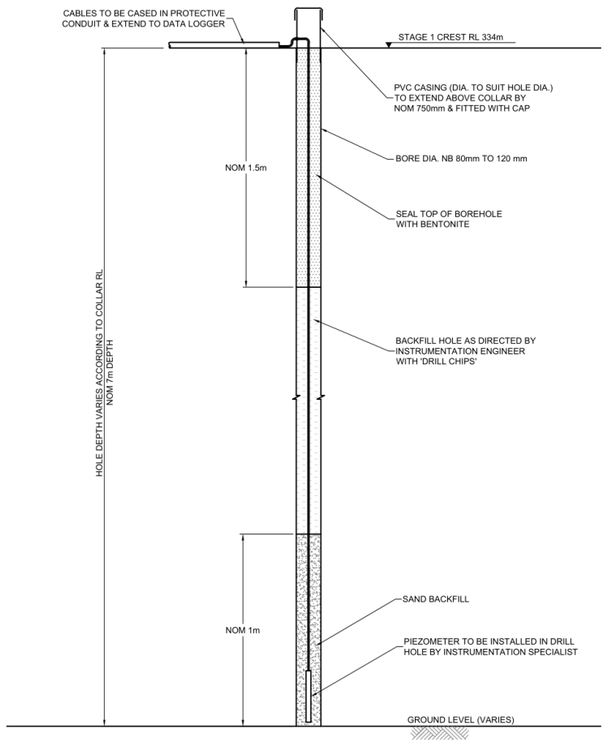
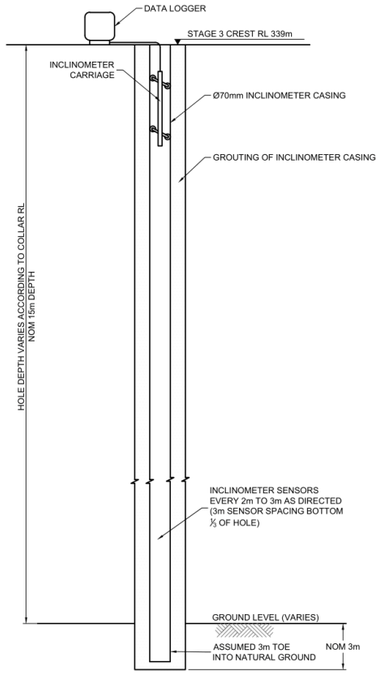
Figure 18: TSF2 – Stage 1 underdrainage and outfall pipe trench construction drawings



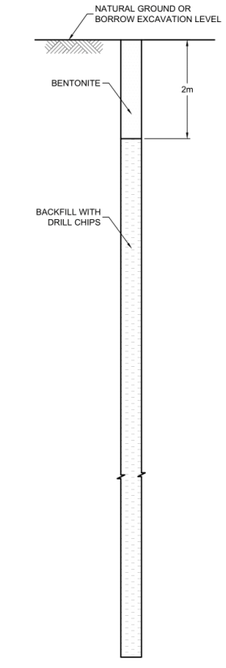
M - EMBANKMENT WITH BOREHOLE VWP AND INCLINOMETER
TYPICAL SECTION
SCALE: N.T.S



N - VIBRATING WIRE PIEZOMETER
TYPICAL DETAIL SECTION
SCALE: N.T.S



P - INCLINOMETER
TYPICAL DETAIL SECTION
SCALE: N.T.S



Q - BOREHOLE SEALING
TYPICAL DETAIL SECTION
SCALE: N.T.S

GENERAL NOTES:
1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
2. TYPICAL DETAILS OF VIBRATING WIRE PIEZOMETERS (VWPs) AND INCLINOMETERS (INCs) SHOWN ON THIS DRAWING ARE FOR PLANNING PURPOSE ONLY. THEY WILL BE REVIEWED AND DESIGNED BY THE INSTRUMENTATION ENGINEER PRIOR TO INSTALLTION.

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TETRA TECH COFFEY

Client: GOLDEN MILE MILLING PTY LTD
Project: LAKEWOOD GOLD PROCESSING FACILITY
NEW TSF2 AND TSF1 RAISE DESIGN
Title: TSF2 - INSTRUMENTATION SECTIONS & DETAILS
Project no: 754-PERGE287196 Dwg no: 754-PERGE287196-TSF2-18 Rev: 0

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Figure 19: Monitoring instrumentation – installation drawings