



<b>Licence Number</b>	L4680/1988/13
<b>Licence Holder</b>	FMR Investments Pty Ltd
<b>ACN</b>	009 411 349
<b>Registered business address</b>	Level 2, 2 Hardy Street SOUTH PERTH WA 6151
<b>File Number</b>	2013/003899
<b>Duration</b>	22/10/2015 to 31/10/2034
<b>Date of Amendment</b>	23/07/2020
<b>Premises details</b>	Greenfields Processing Site Part mining tenement M15/1836 and Lot 102 on Plan 40393 Great Eastern Highway COOLGARDIE WA 6429

<b>Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)</b>	<b>Assessed production capacity</b>
<b>Category 5:</b> 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; (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	1,400,000 tonnes per annual period

This Licence amendment is granted to the Licence Holder, subject to the following conditions, on 23 July 2020, by:

**A/MANAGER, RESOURCE INDUSTRIES  
REGULATORY SERVICES**

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

## Licence history

Instrument	Date	Description of changes
L4680/1988/8	09/09/2002	Licence re-issue
L4680/1988/9	30/09/2003	Licence re-issue
L4680/1988/10	01/11/2004	Licence re-issue
L4680/1988/11	26/10/2007	Licence re-issue
L4680/1988/12	01/11/2010	Licence re-issue
L4680/1988/13	22/10/2015	Licence re-issue
L4680/1988/13	8/12/2017	Amendment notice 1: amendment to allow the construction of embankment raise to TSF3 Cells A, B and C by 2.5m
L4680/1988/13	19/09/2019	Amendment notice 2: amendment to allow the construction of an embankment raise to TSF3 Cells A, B and C to a height of RL400m
L4680/1988/13	23/07/2020	Licence amendment to amalgamate Amendment Notice 1 and Amendment Notice 2 into the licence document and to allow the construction and operation of an embankment raise to TSF3 cells A, B and C by 2.5m to an embankment height of RL 402.5m.

## Interpretation

In this licence:

- (a) the words ‘including’, ‘includes’ and ‘include’ in conditions mean “including but not limited to”, and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this licence:
  - (i) if dated, refers to that particular version; and
  - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
  - (iii) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
  - (iv) unless specified otherwise, all definitions are in accordance with the EP Act.

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

# Licence conditions

## Infrastructure and equipment

1. The licence holder shall operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.
2. The licence holder shall maintain the TSF stormwater diversion channels, located as shown in Figure 4, Schedule 1.
3. The licence holder shall ensure that all pipelines containing environmentally hazardous materials are either:
  - (a) equipped with telemetry systems and pressure sensors along pipelines to allow the detection of leaks and failures; and/or
  - (b) equipped with automatic cut-outs in the event of a pipe failure; and
  - (c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.
4. The licence holder shall ensure that tailings and decant water are only discharged into containment cells, dams and ponds with the relevant infrastructure requirements and at the locations specified in Table 1.

**Table 1. Containment Infrastructure**

Containment point reference	Material	Infrastructure requirements
TSF1 and TSF2	Tailings	Lined with in-situ clay. Decommissioned TSFs.
TSF3 Cell A, B and C	Tailings	Lined with in-situ clay to limit seepage to groundwater
Process water pond	Return (decant) water	Lined with HDPE
Return water pond	Tailings seepage	Lined with HDPE

5. The licence holder shall manage containment cells and ponds in Table 1.3.1 such that a minimum top of embankment freeboard of 500mm or a 1 in 100 year/72 hour storm event (whichever is greater) is maintained.
6. The licence holder shall manage TSFs such that:
  - (a) a seepage collection and recovery system is provided and used to capture seepage from the TSF;
  - (b) seepage is returned to the TSF or re-used in process;
  - (c) the supernatant pond on the TSF does not exceed 15% of the total surface area; and
  - (d) the supernatant pond is maintained around the decant pump within each cell and is kept away from the perimeter embankments at all times.
7. The licence holder shall:
  - (a) undertake inspections as detailed in Table 2;
  - (b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and

- (c) maintain a record of all inspections undertaken.

**Table 2: Inspection of infrastructure**

Scope of inspection	Type of inspection	Frequency of inspection
Tailings pipelines	Visual integrity	Twice daily
Return water lines	Visual integrity	Twice daily
TSF Embankment freeboard	Visual to confirm required freeboard of 300m is available	Daily
TSF Embankment integrity	Visual inspection for signs of erosion, embankment cracking, damp or wet areas on batter slopes or toe areas.	Daily
TSF Supernatant ponds	Visual inspection of size and location.	Daily
TSF stormwater diversion channels	Visual integrity	Daily

8. The licence holder shall ensure that each item of infrastructure or equipment specified in column 1 of Table 3 is designed and constructed in accordance with the requirements specified in column 2 of Table 3.

**Table 3: Construction of TSF3 Embankment Raises**

Column 1		Column 2
Item	Infrastructure	Requirements
<b>Cells B and C Stage 5 / Cell A Stage 2 - Embankment lift.</b>		
1.	Upstream perimeter embankment raise of TSF3 Cell A	<ul style="list-style-type: none"> <li>Perimeter tailings pipeline removed and reinstated;</li> <li>Constructed to a maximum height of RL 399.6.</li> <li>Construction to be supervised by an engineering or geotechnical specialist.</li> <li>Dust to be minimised by using water carts to wet down work areas</li> </ul>
2.	Upstream perimeter embankment raise of TSF3 Cell B and C	<ul style="list-style-type: none"> <li>Perimeter tailings pipeline removed and reinstated;</li> <li>Constructed to a maximum height of RL 400</li> <li>Construction to be supervised by an engineering or geotechnical specialist.</li> <li>Dust to be minimised by using water carts to wet down work areas</li> </ul>
3.	Decant towers and causeways for TSF Cell A, B and C	<ul style="list-style-type: none"> <li>Relocate the decant towers and causeways to the internal embankment of each cell. Decant raised to RL 399.7 and Decant B and C to 400.</li> <li>Dust to be minimised by using water carts to wet down work areas</li> </ul>
4.	Vibrating Wire Piezometers (VWPs)	Install a deep and shallow VWP (VWP201 – VWP 208) at the eight locations in the TSF 3 embankment as shown in Figure 2 of this Amendment Notice 1.
<b>Cells B &amp; C Stage 6 / Cell A Stage 3 - Embankment lift</b>		
5.	Upstream perimeter embankment and decant raise of TSF3 Cell A	<ul style="list-style-type: none"> <li>Perimeter tailings pipeline removed and reinstated;</li> <li>Embankments constructed to a maximum height of RL 402.5m as per Figures 5, 6 and 7 in Schedule 1;</li> </ul>

		<ul style="list-style-type: none"> <li>Decant structure raised to RL 402.5m as per Figure 8 in Schedule 1;</li> <li>Reinstate pumps, pipework and electrical equipment to decant structures;</li> <li>Dust to be minimised by using water carts to wet down work areas; and</li> <li>Construction to be supervised by an engineering or geotechnical specialist.</li> </ul>
6.	Upstream perimeter embankment and decant raise of TSF3 Cell B and C	<ul style="list-style-type: none"> <li>Perimeter tailings pipeline removed and reinstated;</li> <li>Embankments constructed to a maximum height of RL 402.5m as per Figure 5, 6 and 7 in Schedule 1;</li> <li>Decant structure raised to RL 402.5m as per Figure 8 in Schedule 1;</li> <li>Reinstate pumps, pipework and electrical equipment to decant structures;</li> <li>Dust to be minimised by using water carts to wet down work areas; and</li> <li>Construction to be supervised by an engineering or geotechnical specialist.</li> </ul>

9. The licence holder must not depart from the requirements specified in Table 3 except:
- where such departures are minor in nature and do not materially change or affect the infrastructure; or
  - where such departure improves the functionality of the infrastructure and does not increase the risks to public health, public amenity or the environment.
- If (a) applies, then the Licensee must provide the CEO with a list of departures and demonstrate that these have not increased the risk to public health, public amenity or the environment.

## Specified Action

10. Within three months of the date of this amendment, the Licence Holder must submit to the CEO a TSF3 seepage management plan which must include but not be limited to;
- An investigation into the cause and extend of groundwater mounding near TSF3;
  - A hydrogeological characterisation of the groundwater environment beneath TSF3;
  - Review and propose additional groundwater monitoring bore locations that will better monitor the extend of groundwater mounding near TSF3 in consultation with a qualified hydrogeologist; and
  - Actions to be taken for the long term management of seepage from TSF3 to prevent further mounding of the groundwater.

## Monitoring

11. The licence holder shall ensure that:
- all water samples are collected and preserved in accordance with AS/NZS 5667.1;
  - all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and

- (c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.
12. The licence holder shall ensure that:
- monthly monitoring is undertaken at least 15 days apart; and
  - quarterly monitoring is undertaken at least 45 days apart.
13. The licence holder shall record production or throughput data and any other process parameters relevant to any non-continuous or CEMS monitoring undertaken.
14. The licence holder shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications and the requirements of the Licence.
15. The licence holder shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

### Process monitoring

16. The licence holder shall undertake the monitoring in Table 5 according to the specifications in that table.

**Table 5: Process monitoring**

Process description	Parameter	Units	Frequency	Method
Tailings deposition	Volumes of tailings deposited into the TSF	tonnes	Continuous via a flow meter	None specified
	Volumes of water recovered from the TSF			
	Volumes of seepage recovered			

### Ambient environmental quality monitoring

17. The licence holder shall undertake the monitoring in Table 6 according to the specifications in that table.

**Table 6: Monitoring of ambient groundwater quality and supernatant total dissolved solids**

Monitoring point reference and location	Parameter	Units	Limits	Averaging period	Frequency
MB301, MB303, MB306, MB307 and MB308	Standing water level <sup>1</sup>	mbgl	4	Spot sample	Monthly
	pH <sup>2</sup>	-	-		Quarterly
	Total dissolved solids <sup>2</sup>	mg/L	-		
	Weak acid dissociable cyanide		0.5		

	Cadmium, copper, lead, mercury, zinc, arsenic, chromium, iron, magnesium, nickel, sodium, potassium, calcium and chloride.		-		
Any active TSF cell - supernatant	Total dissolved solids <sup>2</sup>	mg/L	-	Spot sample	Weekly

Note 1: SWL shall be determined prior to the collection of other water samples

Note 2: In-field non-NATA accredited analysis permitted.

## Records and reporting

- 18.** All information and records required by the Licence shall:
- be legible;
  - if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
  - except for records listed in 18(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
  - for those following records, be retained until the expiry of the Licence and any subsequent licence:
    - off-site environmental effects; or
    - matters which affect the condition of the land or waters.
- 19.** The licence holder shall ensure that:
- any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
  - any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.
- 20.** The licence holder shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.
- 21.** The licence holder shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

## Reporting

- 22.** The licence holder shall submit to the CEO an Annual Environmental Report by 30 September in each year. The report shall contain the information listed in Table 7 in the format or form specified in that table.

**Table 7: Annual Environmental Report**

Condition or table	Parameter	Format or form
-	Summary of any failure or malfunction of any pollution control equipment and any	None specified

	environmental incidents that have occurred during the annual period and any action taken	
Condition 16	Process monitoring	None specified
Condition 17	Ambient groundwater monitoring	None specified
Condition 20	Compliance	Annual Audit Compliance Report (AACR)
Condition 21	Complaints summary	None specified

- 23.** The licence holder shall ensure that the Annual Environmental Report also contains:
- (a) any relevant process, production or operational data recorded under Condition 13; and
  - (b) an assessment of the information contained within the report against previous monitoring results and Licence limits.
- 24.** The licence holder shall submit the information in Table 8 to the CEO according to the specifications in that table.

**Table 8: Non-annual reporting requirements**

Condition or table	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties

- 25.** For the Stage 5 (Cells B and C) and Stage 2 (Cell A) embankment lifts of TSF3, the licence holder shall submit an Environmental Compliance Report to the CEO within 60 days of the completion of the works, indicating construction in accord with condition 8.
- 26.** For the Stage 6 (Cells B and C) and Stage 3 (Cell A) embankment lifts of TSF3, the licence holder must within 60 calendar day of an item of infrastructure required by condition 8 being constructed:
- (a) undertake an audit of their compliance with the requirements of condition 8; and
  - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
- 27.** The licence holder must ensure the Environmental Compliance Reports required by conditions 25 and 26:
- (a) are certified by a suitably qualified professional engineer stating that each item of infrastructure specified in condition 8, Table 3 has been constructed or completed in accordance with the conditions of the Licence;
  - (b) include the records of all construction quality control testing, the basis of any method specification adopted, and any significant modifications to the original design together with the reasons why the modifications were necessary;



- (c) include copies of the as-built drawings for the embankment earthworks and pipework; and
- (d) be signed by a person authorised to represent the licence holder and contain the printed name and position of that person within the company.

**28.** An engineering or geotechnical specialist shall audit and review the active cell of the Tailings Storage Facility on an annual basis. The specialist shall review past performance, validate the design, examine water management, and review the results of monitoring. Any deficiencies noted in the audit and review report shall be suitably addressed and improved. The audit and review report shall be submitted to the CEO and the Inspector of Mines – Geotechnical, Resources Safety, DMIRS.

## Notification

**29.** The licence holder shall ensure that the parameters listed in Table 9 are notified to the CEO in accordance with the notification requirements of the table

**Table 9: Notification requirements**

Condition or table (if relevant)	Parameter	Notification requirement1	Format or form
Condition 17	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1
-	Notification of care and maintenance status	Within seven days of the decision to enter care and maintenance status	None specified
-	Intention to resume normal operations from care and maintenance status	At least 30 days before operations recommence.	None specified
Condition 7, Table 2	Any evidence of potential for the structural integrity of the tailings storage facility to be compromised such as: <ul style="list-style-type: none"> <li>erosion or cracking of embankment or internal wall; or</li> <li>damp or wet areas on batter slopes or toe areas.</li> </ul>	Within 24 hours of identification of any potential for the structural integrity of the tailings storage facility to be compromised.  Notify both DWER and DMIRS safety Directorate.	None specified

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act

## Definitions

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

**Table 10: Definitions**

Term	Definition
ACN	Australian Company Number.
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	a 12 month period commencing from 1 August until 30 July of the immediately following year.
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples.</i>
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 <i>Water Quality – Sampling – Guidance on sampling of groundwaters.</i>
averaging period	means the time over which a limit is measured or a monitoring result is obtained.
CEO	means Chief Executive Officer of the Department. “submit to / notify the CEO” (or similar), means either: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 or: <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure has been constructed in accordance with the Licence.
environmentally hazardous materials	means any liquors or slurries (solid and liquids in solution) that are either alkaline, acidic, saline, toxic or have the potential to cause environmental harm if released to the environment.
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point.
HDPE	means high density polyethylene.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.

Term	Definition
discharge	has the same meaning given to that term under the EP Act.
DMIRS	Department of Mines, Industry Regulation and Safety
emission	has the same meaning given to that term under the EP Act.
EP Act	<i>Environmental Protection Act 1986 (WA).</i>
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
NATA	means the National Association of Testing Authorities, Australia.
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
quarterly	means the 4 inclusive periods from 1 April to 30 June, 1 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March.
Schedule 1	means Schedule 1 of this Licence unless otherwise stated.
Schedule 2	means Schedule 2 of this Licence unless otherwise stated.
spot sample	means a discrete sample representative at the time and place at which the sample is taken.
TSF	Tailing storage facility.
usual working day	means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia.

## Schedule 1: Maps

### Premises map

The Premises are shown in the map below. Note that M158/154 is now M15/1836 (tenement boundary remains the same).

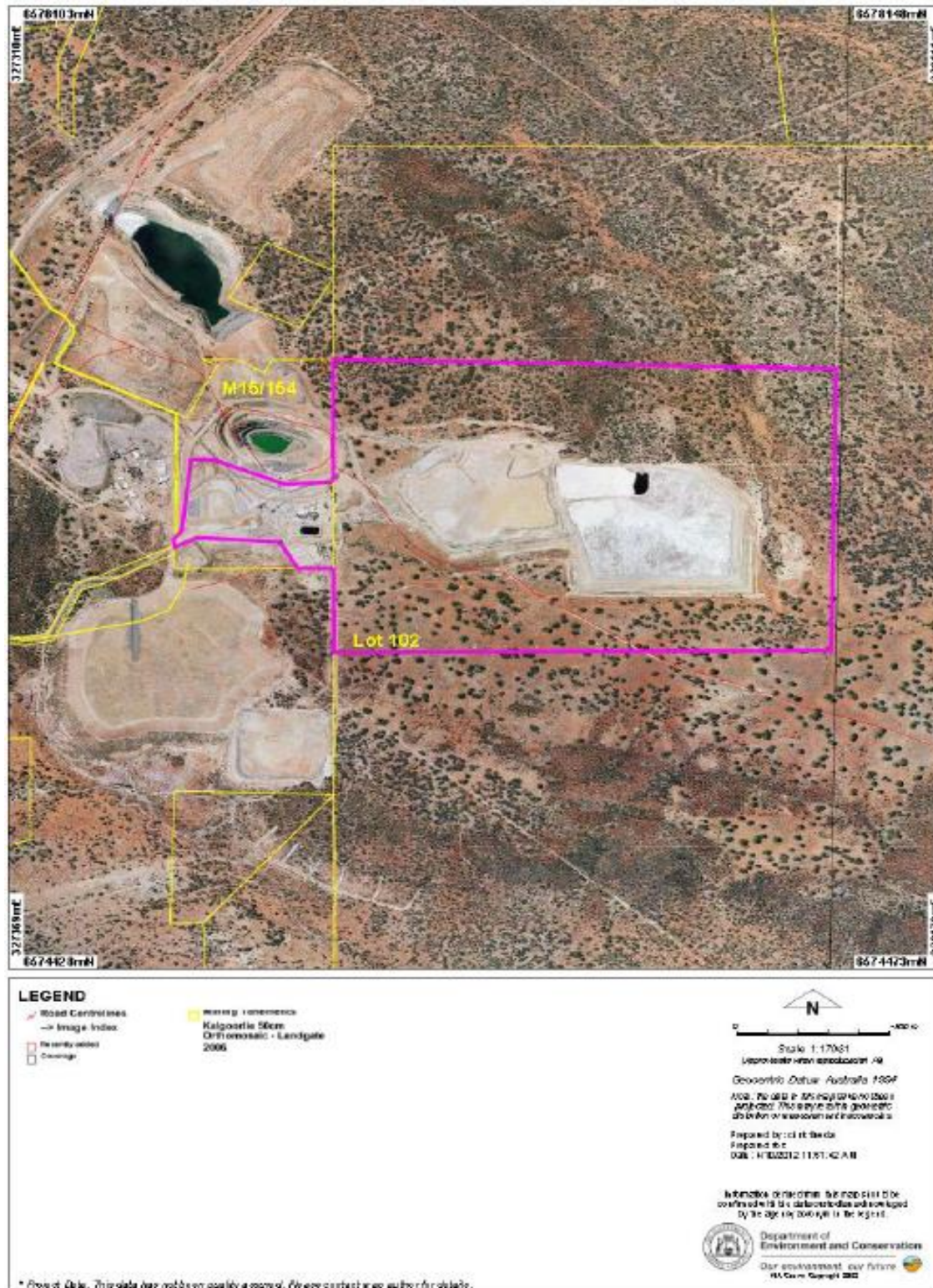
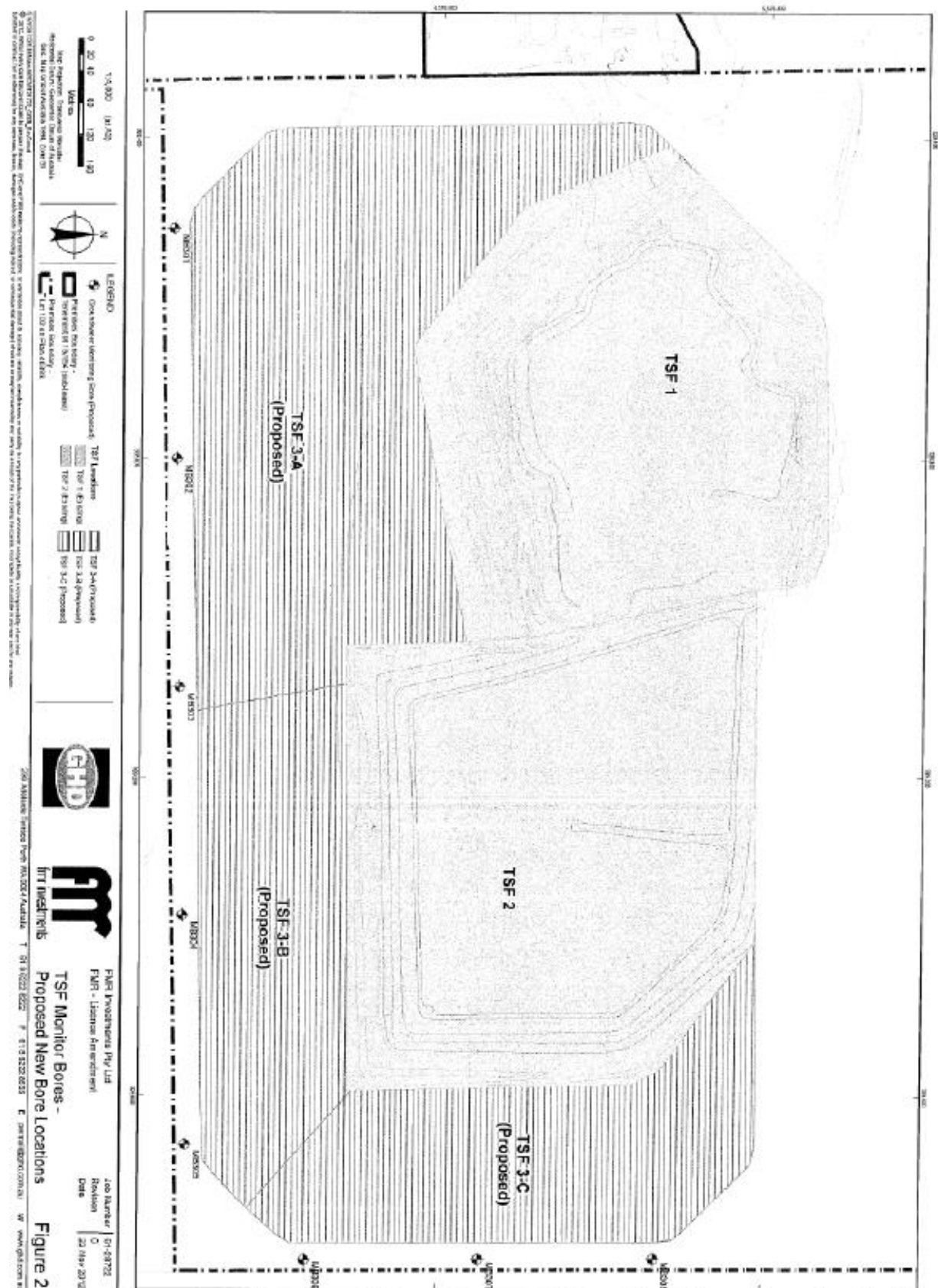


Figure 1: Premises boundary map



The locations of the monitoring points defined in Table 6 are shown below.



**Figure 2: Location of groundwater monitoring bores surrounding the TSF**

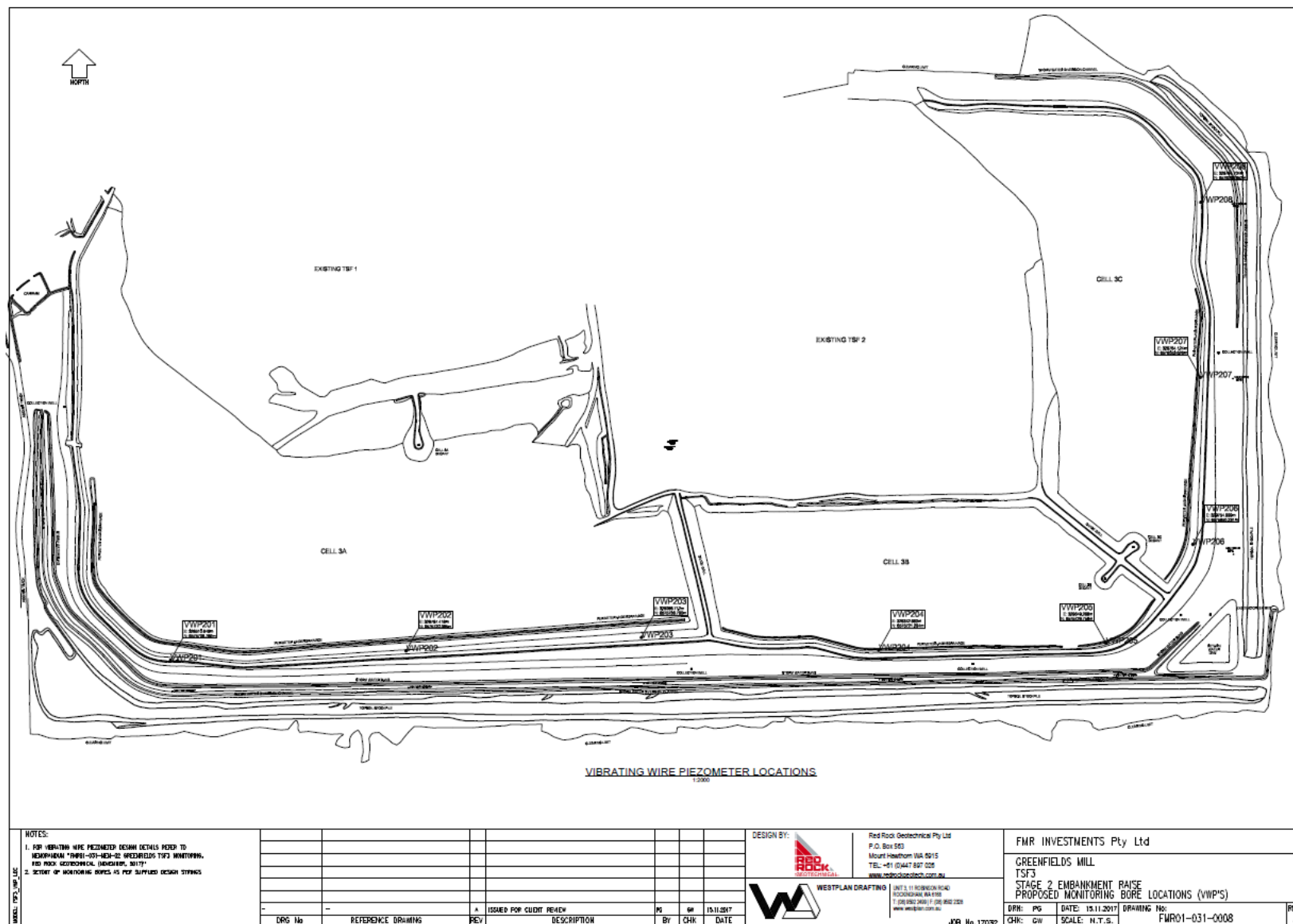


Figure 3: Vibrating Wire Piezometer locations – TSF Cell 3A, Cell 3B & Cell 3C



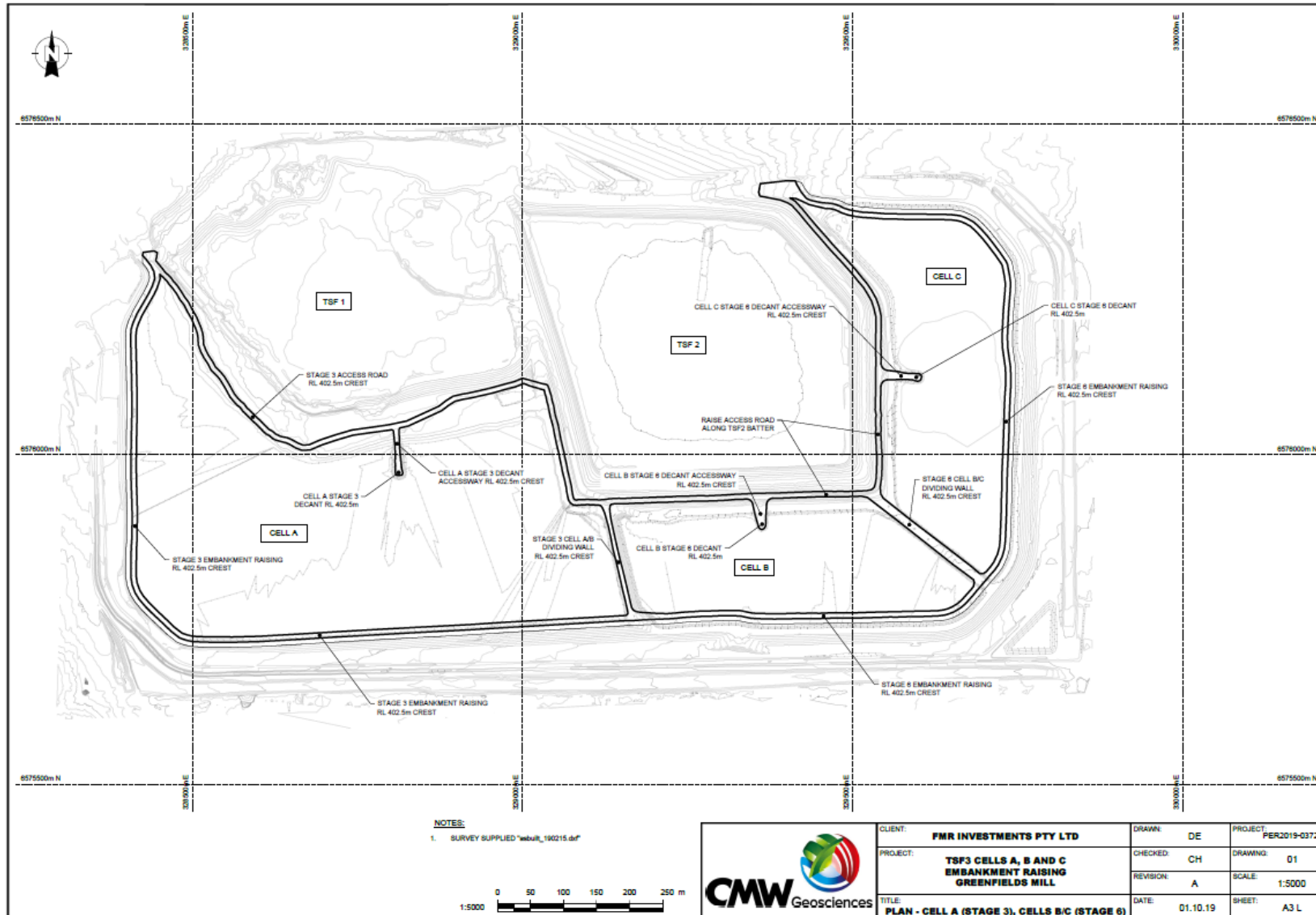


Figure 5: Design drawing for TSF3 lift Cell A (Stage 3), Cells B and C (Stage 6)



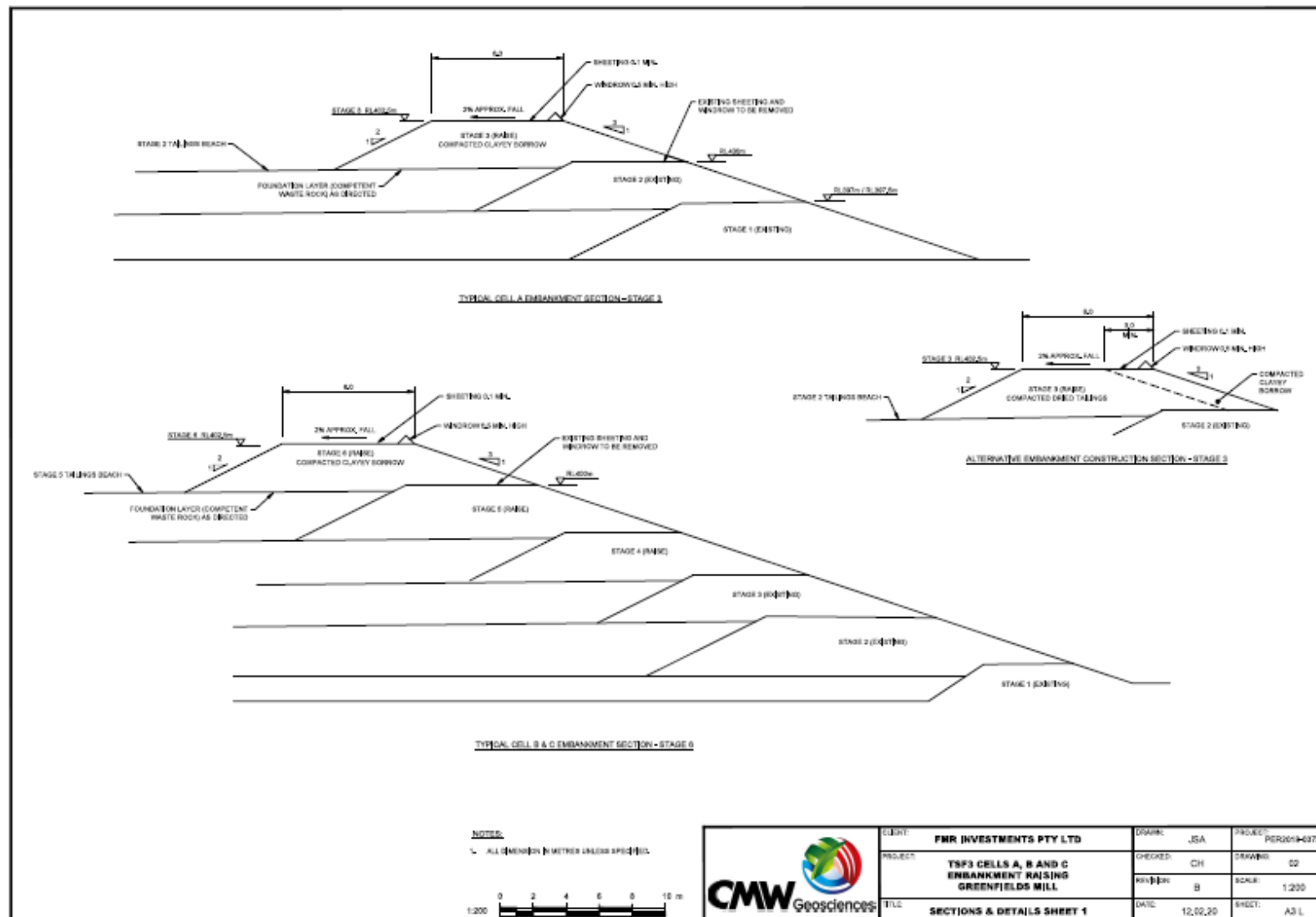


Figure 6: Design drawing (cross sections)for TSF3 lift Cell A (Stage 3), Cells B and C (Stage 6) embankments

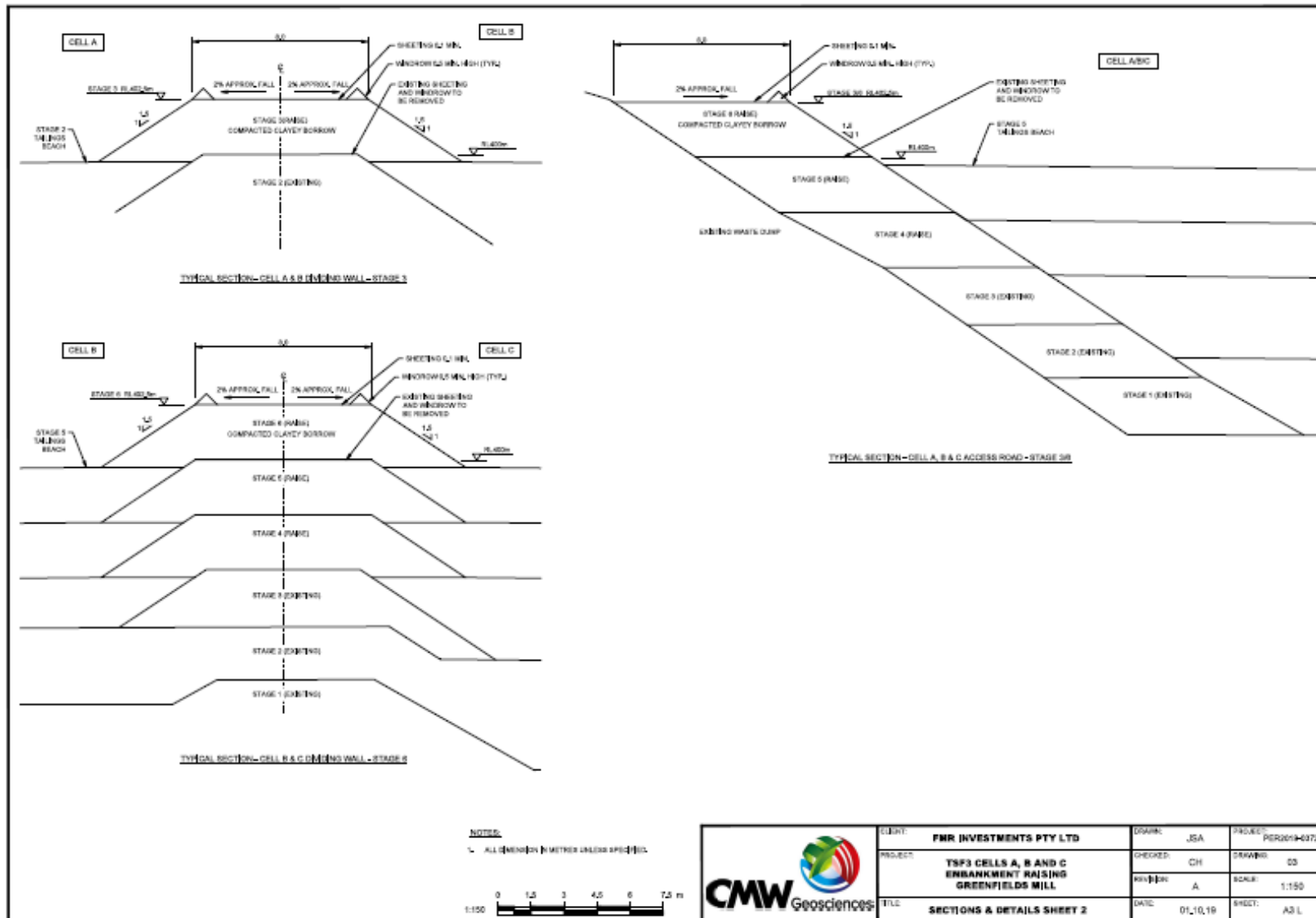


Figure 7: Design drawing for TSF3 lift Cell A (Stage 3), Cells B and C (Stage 6) – deiving walls and access roads

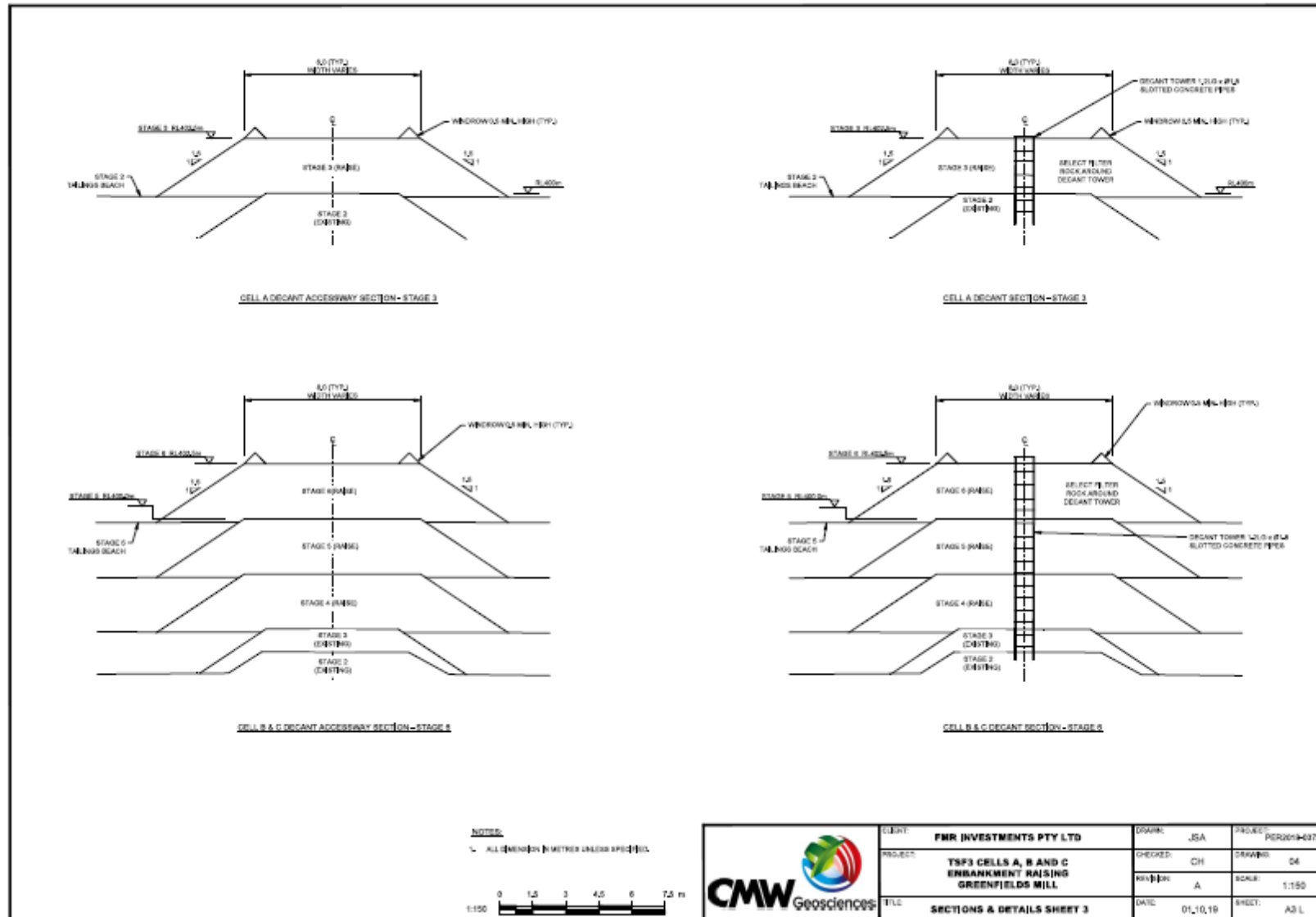


Figure 8: Design drawing for TSF3 lift Cell A (Stage 3), Cells B and C (Stage 6) – decants and accessways

## Schedule 2: Notification & Forms

Licence:

Form: N1

Licence Holder:

Date of breach:

### Notification of detection of the breach of a limit

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

### Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

#### Notification requirements for the breach of a limit

Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

### Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of	
Date	