27 February 2026

Application Submissions
Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DC WA 6919
info@dwer.wa.gov.au

To Whom It May Concern

RE: Mt Celia Category 7 Works Approval Application Supporting Document

Legacy Iron Ore Ltd are submitting this works approval application to undertake activity at the Mt Celia Gold Operation located on tenements M39/1127, M39/1128 and M39/1145, approximately 95km south of the town of Laverton.

This Works Approval Application (IR-F09 form and supporting document) is seeking approval to establish infrastructure associated with Category 7 -Vat or in situ leaching of metal: premises on which metal is extracted from ore with a chemical solution.

Should you have any questions associated with this work approval application, please contact Belinda Bastow at Integrate Sustainability belinda@integratesustainability.com.au or 0418 950 670.

Regards,

[redacted]

[redacted]
Chief Executive Officer
Legacy Iron Ore Ltd

Legacy Iron Ore Ltd

Supporting Information for Cat 7 Works Approval Application for the Mt Celia Gold Operation located on tenements M39/1127, M39/1128 and M39/1145.

Revision	Prepared By	Reviewed By	Approved By	Date
1	ISPL	Belinda Bastow	Dr. Ranajit Das	27/02/2026

Contact for DWER Enquiries:

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Advisor to Legacy Iron Ore Ltd
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Chandra Bhushan Verma
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Legacy Iron Ore Ltd
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TABLES

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1. APPLICATION TYPE

This document has been created to support a works approval application for the Mt Celia Gold Operation (Mt Celia) located on tenements M39/1127, M39/1128 and M39/1145.

The application seeks works approval for the establishment of infrastructure associated with Category 7 – Vat or in situ leaching of metal: premises on which metal is extracted from ore with a chemical solution.

2. APPLICANT DETAILS

The applicant details for this works approval application are shown in Table 1:

Table 1 - Applicant Details

Applicant Name:	**Legacy Iron Ore Ltd**
ACN:	125 010 353
Authorised Representative:	[redacted] Chief Executive Officer Legacy Iron Ore Ltd
Registered Address:	Level 6, 200 Adelaide Terrace, PERTH, WA 6004
Postal Address:	PO Box 5768, St. George's Terrace, Perth, WA 6831
Contact Person for DWER Enquiries:	Belinda Bastow Advisor to Legacy Iron Ore Ltd [redacted] Chandra Bhushan Verma Sr Geologist - Legacy Iron Ore Ltd [redacted]
Occupier Status:	Legacy Iron Ore Ltd – M39/1127 – Expiry 06/06/2039 Legacy Iron Ore Ltd – M39/1128 – Expiry 06/11/2039 Legacy Iron Ore Ltd – M39/1145 – Expiry 22/05/2044

2.1 Proof of Occupier Status (Attachment 1A)

Legacy Iron Ore Ltd (Legacy) proposes to use mobile crushing and screening equipment to process ore under Category 7 on M39/1145. A tenement summary report showing Legacy Iron Ore as the current tenement holder is provided in Appendix A.

2.2 ASIC Company Extract (Attachment 1B)

A copy of the current company ASIC extract is attached in Appendix B.

2.3 Authorisation to act as representative of the Occupier (Attachment 1C).

The Applicant of the works approval is the same as the Occupier; therefore, no authorisation documents have been included.

3. PREMISES DETAILS

The proposed works approvals for Mt Celia is located approximately 95 km south of the town of Laverton (Figure 1) on the Mt Weld Pastoral Station (PL No: N049826) and Yundamindra Pastoral Station (PL No: N049876) in the Shire of Menzies.

Figure 1 - Location of Mt Celia Project

Legacy will be the holder of the Works Approvals issued under Part V of the *Environmental Protection Act 1986* for the following Prescribed Premises Categories defined under Schedule 1 of the *Environmental Protection Regulations 1987*.

Table 2 - Prescribed Premise Category

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Category Production or Design Capacity**	**Proposed Licence Production/ Designed Capacity**
Category 7 - Vat or in situ leaching of metal: premises on which metal is extracted from ore with a chemical solution	5,000 tonnes or more per year	150,000 tonnes per year

The prescribed premise boundary coordinates are outlined in Table 3 and shown in Figure 2.

Table 3 - Prescribed Premises Boundary Coordinates (GDA2020/MGA Zone 51)

X coordinates	Y coordinates	X coordinates	Y coordinates
449055	6740424	447569	6744967
448277	6741208	449059	6743578
448152	6741079	450791	6742046
447873	6741333	453132	6739863
446663	6742029	453140	6739345
446656	6743878	452112	6738388
446576	6743878	449493	6740903
449055	6740424		

3.1 Premises Maps (Attachment 2)

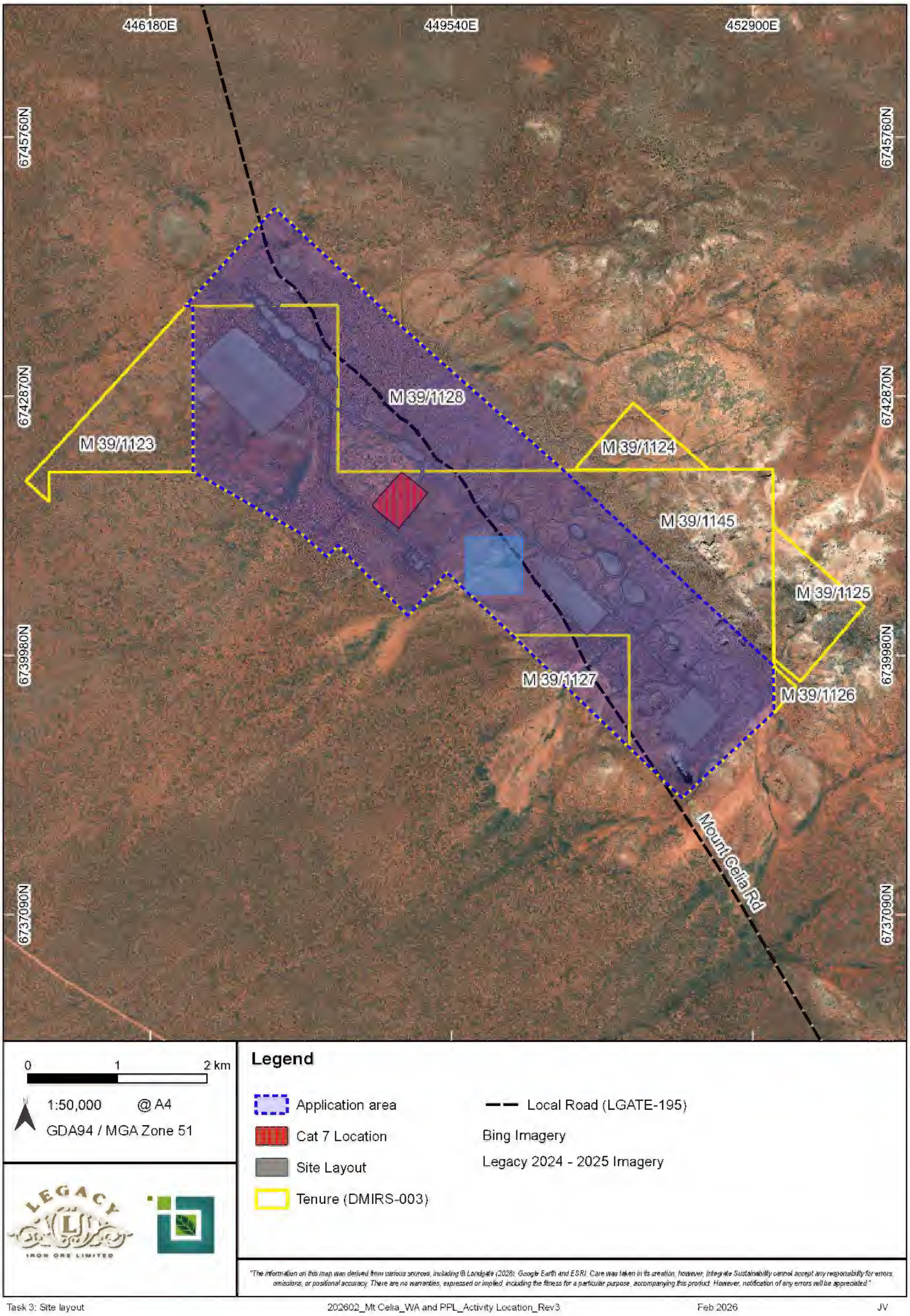


Figure 2 - Application Boundary

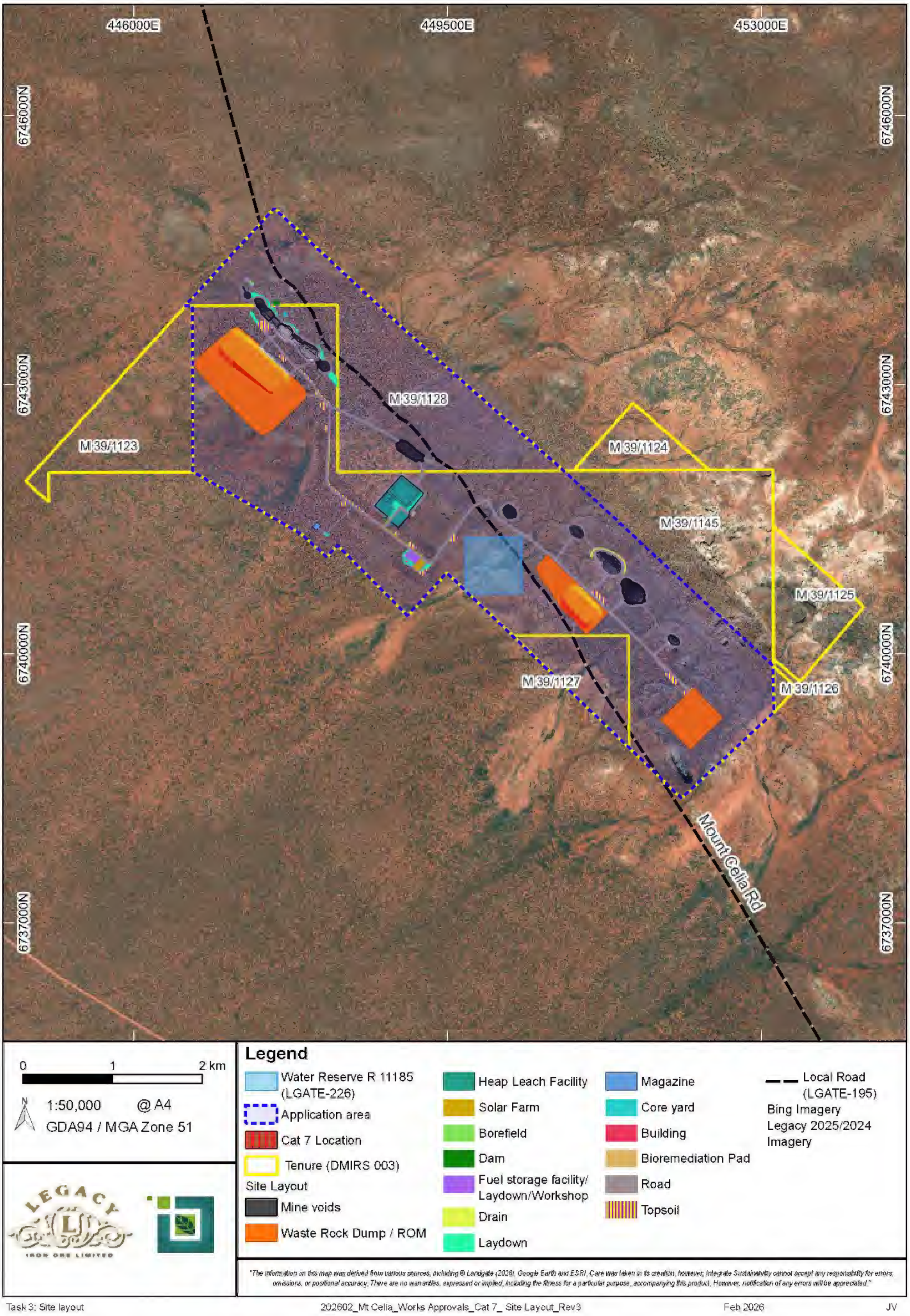


Figure 3 – Site Layout

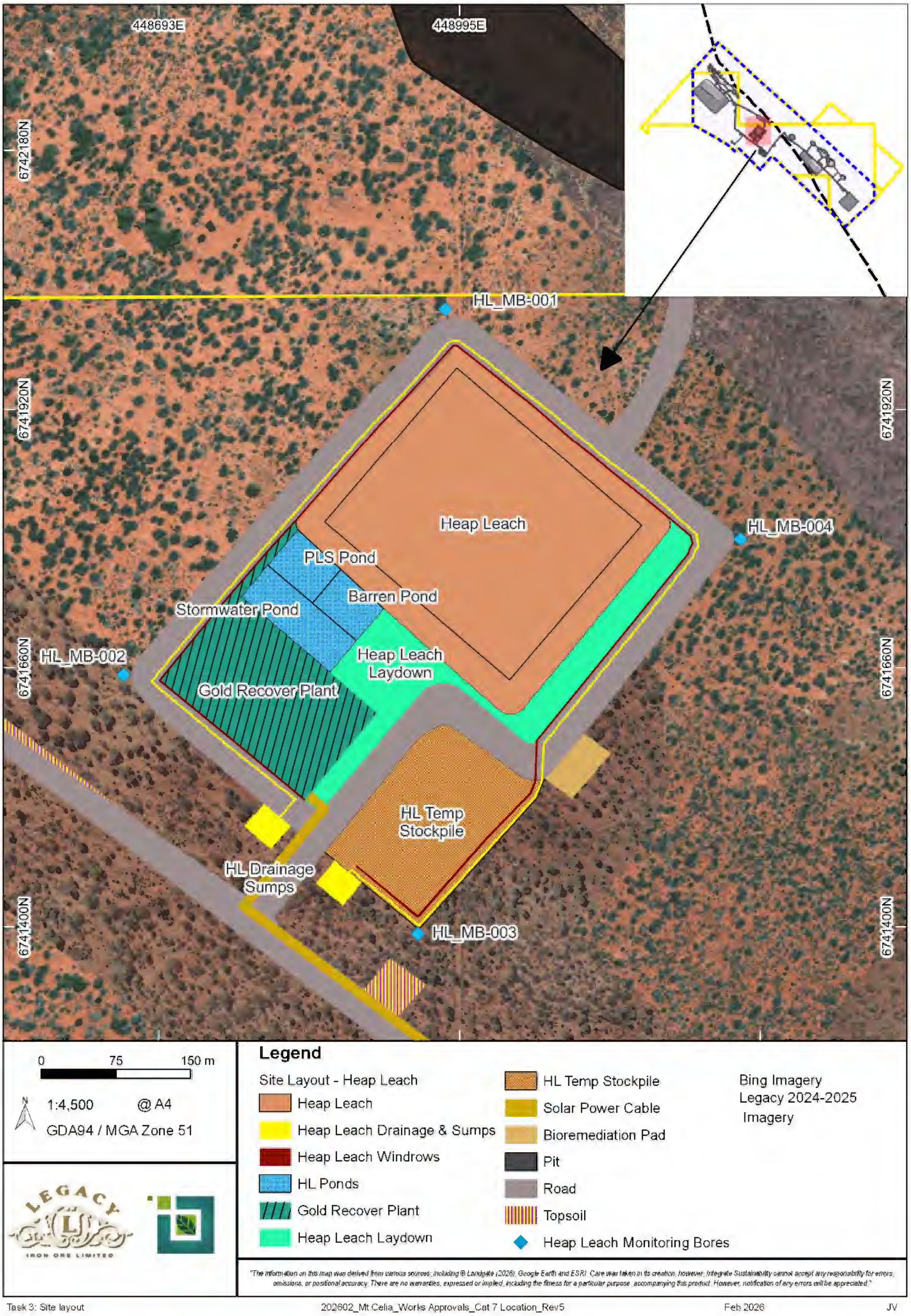
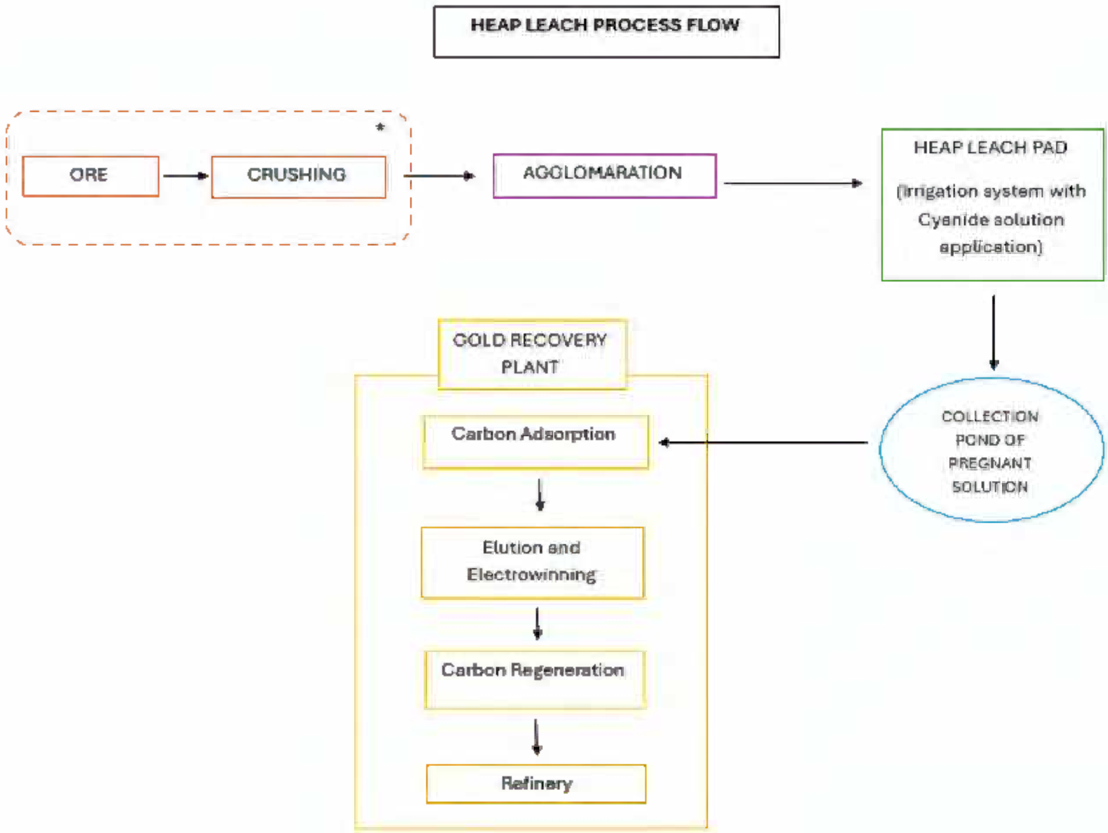


Figure 4 - Category 7 Activity location

4. PROPOSED ACTIVITIES (ATTACHMENT 3B)

Legacy is proposing to establish and operate a Cat 7. Modular Heap Leach Facility and Gold Recovery Plant at Mt Celia to treat low-grade oxide ore through a conventional crushing–agglomerate–heap leach–adsorption–electrowinning (AARL) process flow (Figure 5).



*Activities occurring in the ROM pad areas are currently under assessment for a Category 5 Works Approval (crushing plant) by DWER (Instrument No. W3131/2025/1; Reference APP-0031789).

Figure 5 - Block Process Flow Diagram.

The proposed facility and plant will be located on mining tenement M39/1145, where the BP Central ROM Pad was located. This area is currently under assessment for a Category 5 Works approval (crushing plant) by the DWER (Instrument No W3131/2025/1; Reference APP-0031789), together with three alternative locations.

The selected area for the heap leach facility has already been cleared and established under the site's Native Vegetation Clearing Permit (10213/1) and Mining Proposals (REGID: 122281) (Figure 3). The purpose of selecting an already disturbed area was to minimise the need for clearing, and if required, this will be covered by the NVCP No.10213/1.

4.1 Prescribed Premises Infrastructure and Equipment

Details of the proposed processing activities to be constructed at the Mt Celia operations site as part of this Works Approval application are presented in the following Table 4

Table 4 Infrastructure and Equipment

Indicative Equipment	Relevant Categories (if known)	Site Plan Reference	Design and Construction Key Considerations	Key Considerations for Operations
Mobile Agglomerator Equipment	Category 7	Figure 4 (HL Temp Stockpile)	The mobile rotary agglomeration drum with cement addition (approximately 0.6kg/t) and raw water to achieve a target moisture content of around 10% to improve heap permeability and stability. Installed within the Heap Leach Temp Stockpile (HL Temp Stockpile).	The agglomerator will be located on the HL Temp Stockpile. It operates at nominal throughput of approximately 100-150t/h. Produces uniform agglomerates to support percolation and controlled leaching performance.

<table>
<tr><th>Indicative Equipment</th><th>Relevant Categories (if known)</th><th>Site Plan Reference</th><th>Design and Construction Key Considerations</th><th>Key Considerations for Operations</th></tr>
<tr><td>Heap Leach Pad</td><td rowspan="4">Category 7</td><td>Figure 4 (Heap Leach facility)</td><td>Constructed with a compacted soil layer and a double liner system, including a 0.3m low-permeability compacted sub-liner or GCL, a 1.5mm secondary HDPE geomembrane, a geonet leak detection layer, and a 2mm primary HDPE geomembrane. A 0.5m over-liner drainage and protection layer will be placed above the liner.

The stocked ore on the heap leach is irrigated with a cyanide solution. The irrigation system includes:
• 125 mm and 25 mm irrigation header pipes
• Flexible soaker hoses at 5-metre spacing
• 37.5 m³/h barren solution pump
• 100 mm perforated drainage pipes at 6-metre spacing
• HDPE pipelines for pregnant and barren solution transfer</td><td>This facility is designed as a staged, above-ground, two-lift facility with a maximum height of approximately 15.7m and an overall leach cycle of 60–90 days.</td></tr>
<tr><td>PLS Pond</td><td>Figure 4 (Heap Leach facility)</td><td>Fully lined pond with design capacity of approximately 7,000m3. Liner system comprising 2.00mm HDPE primary geomembrane over 1.5mm HDPE secondary geomembrane with geonet leak detection layer draining to recovery sump. Sizing includes 72-hour drain-down (active area) plus 50% residual drainage allowance, direct precipitation for a 24-hour, 1:100 AEP event (139mm), minimum operating head of 1m and 0.5m freeboard.</td><td>Receives pregnant solution from the HLF via conveyance pipe prior to processing within the gold recovery plant. Operated within a closed-loop system with no discharge to the environment.</td></tr>
<tr><td>Barren Pond</td><td>Figure 4 (Heap Leach facility)</td><td>Double-lined pond with design capacity of approximately 7,000m3 constructed using the same liner configuration as the PLS pond. Sizing includes 72-hour drain-down (active-area) plus 50% residual drainage allowance, direct precipitation from a 24-hour, 1:100AEP event (139mm), minimum operating head of 1m and 0.5m freeboard.</td><td>Provides operational surge storage for recycled leach solution returned from the gold recover process plant and supplies irrigation solution to the heap leach pad.</td></tr>
<tr><td>Stormwater Pond</td><td>Figure 4(Heap Leach facility)</td><td>Single-lined pond with design capacity of approximately 10,000m3. Liner system comprising 2mm HDPE primary geomembrane over a 0.3m compacted clay layer. Sizing includes HLF runoff from full stack and pad and direct precipitation from a 24-hour, 1:100AEP event (139mm), with 0.5m freeboard allowance.</td><td>Receives stormwater from the HLF via spillway from the PLS pond and maintains containment of contact runoff from process areas.</td></tr>
<tr><td>Gold Recovery Plant</td><td>Category 7</td><td>Figure 4 (Gold Recovery Plant)</td><td>Includes Carbon adsorption (CIC) Columns, elution circuit, electrowinning cells, carbon</td><td>Pregnant solution processed via adsorption, chemical stripping using heated caustic-</td></tr>
</table>

Indicative Equipment	Relevant Categories (if known)	Site Plan Reference	Design and Construction Key Considerations	Key Considerations for Operations
			regeneration kiln and refinery furnace. All cyanide handling areas are constructed within impervious bunded containment areas fitted with sump recovery systems.	cyanide solution and electrowinning. Regenerated carbon returned to CIL circuit and electrowon sludge smelted to produce doré bullion.
Groundwater monitoring bores		Figure 4 (Heap Leach Monitoring bores)	Four monitoring bores will be installed upgradient and downgradient of the HLF and process ponds to monitor groundwater quality and detect potential seepage from lined containment infrastructure.	Routine monitoring of groundwater levels and quality parameters to verify containment performance.
Heap Leach Temporary Stockpile		Figure 4 (HL Temp Stockpile)	This area is enclosed by a perimetral bunding of approximately 1m in height to capture the runoff within its area and direct flows towards a designated sump for collection and management.	The HL Temp Stockpile area is used to store the ore and is the location where agglomeration activities will be conducted.

4.2 Detailed Description of Proposed Activities

This section provides a detailed overview of the key components and operations of the proposed Heap Leach and Gold Recovery Facility. It describes the heap leach pad and associated infrastructure, the process solution and water management system, and the gold recovery plant. Key design and operational elements are outlined, including containment systems and environmental management controls incorporated to minimise risk and ensure regulatory compliance.

A Heap Leach Monitoring Plan has been developed to define the monitoring and inspection requirements, actions, and procedures for the Heap Leach and Gold Recovery Facility. The plan has been designed to protect environmental receptors and surrounding ecosystems (Appendix C).

In addition, the Heap Leach Facility and Gold Recovery Plant will be enclosed by perimeter fencing to limit access by cattle and other large animals and to ensure public safety.

Mincore prepared the Preliminary Heap Leach and Gold Recovery Design (Mincore, 2026) (Appendix D). Tailex prepared the Heap Leach Facility Design (Tailex, 2026a) and the HL Preliminary Geotechnical Site Investigation for the Heap Leach Facility (Tailex, 2026b)(Appendix E).

4.2.1 Agglomeration

Crushed ore is reclaimed from the stockpile and fed into the agglomeration circuit, where cement and raw water are added to improve heap permeability and structural stability (Figure 6). The agglomerator operates at a nominal throughput of 100-150tonnes per hour, matching the crushing circuit.

Cement is metered into the feed at a controlled rate of approximately 0.6kg per tonne of ore, with raw water to achieve a target moisture content of around 10%. The rotating drum provides thorough mixing, producing uniform agglomerates suitable for stacking on the heap.

The agglomeration area is fully bunded to capture the runoff within its area and direct flows towards a designated sump for collection and management.

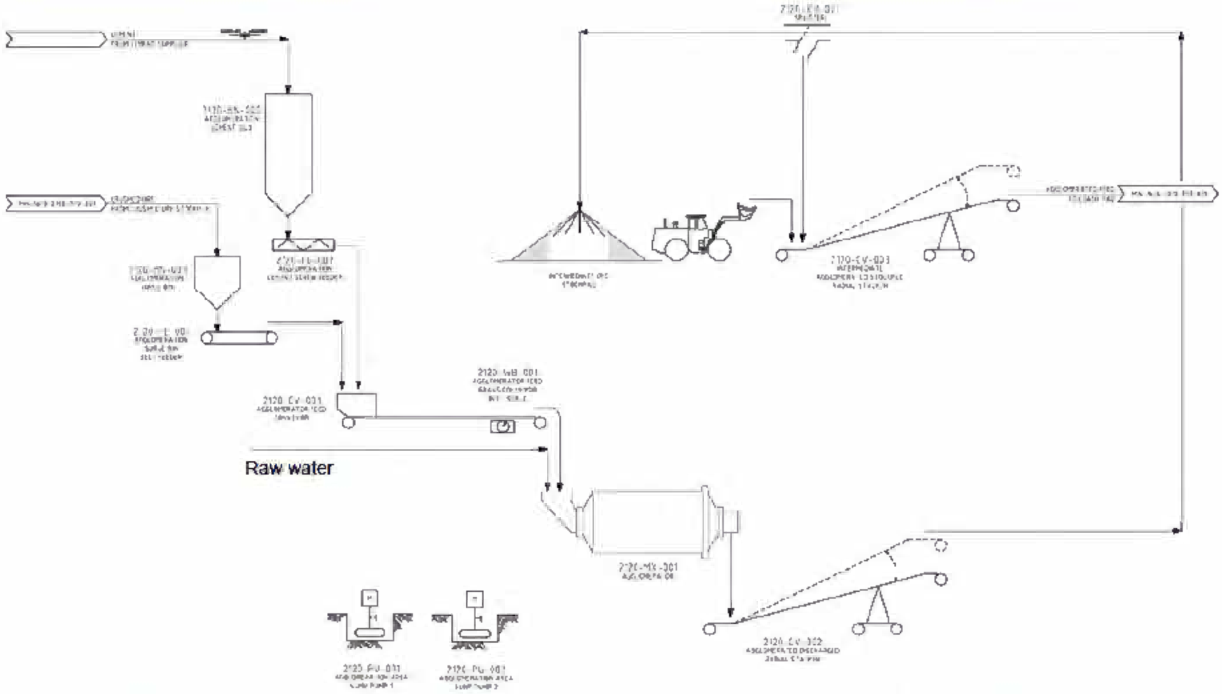


Figure 6 - Agglomeration circuit diagram (Mincore, 2026).

4.2.2 Heap Leach Pad (HLP)

The proposed processing activities comprise a low-throughput, fully contained heap leach operation designed to recover gold from agglomerated ore through cyanide leaching and downstream carbon-based recovery circuits. The processing infrastructure will be installed within a cleared area to optimise land use (Figure 4) and is designed to treat approximately 150,000t/annum during the initial operating years, reducing progressively as ore availability declines.

The HLP represents the primary metallurgical processing component of the operation and includes the heap leach pad, liner system, solution irrigation system, underdrainage recovery and collection network, and associated containment infrastructure.

The ore will be agglomerated prior to stacking and placed on the heap leach pad, in a staged, above-ground configuration comprising two lifts with a maximum height of approximately 15.7m. The constructed pad height ranges from approximately 1 to 2.6m, supporting two ore lifts, each 6m thick (Figure 7). The facility is designed to accommodate up to 850,000 tonnes of ore over an eight-year life-of-mine. This equates to around 494,000m^3 of ore based on the adopted dry bulk density of 1.72 t/m^3. Ore will be staked in a panelised configuration, with panels typically 30m wide, to allow controlled stacking and leaching cycles.

The preliminary geotechnical text works suggests that in-situ material may be suitable as a secondary liner, potentially allowing a single HDPE liner system (Tailex, 2026b). Pending the receipt of additional results and the seepage assessment, the pad liner conservatively adopts a double composite liner system comprising:

- A 0.3m low-permeability compacted sub-liner or GCL,
- A 1.5mm secondary HDPE geomembrane,
- A geonet leak detection layer,
- A 2mm primary HDPE geomembrane, and
- A 0.5m over-liner drainage and protection layer.

The pad base will be constructed above natural ground level, heights varying between 1 m and 4, using engineered mine waste, with a longitudinal slope of approximately 0.7% to promote gravity drainage. The above-ground construction of the pad acts as a containment control, limiting potential surface spillages and lateral migration of solutions.

The leak detection layer will drain to a dedicated sump for monitoring and recovery of any solution reporting to the secondary liner system (Figure 8). Stability of the heap leach has been assessed under both static and pseudo-static loading conditions. Overall, heap slopes are generally 1V:2H between lifts and 1V:1.43H globally (Tailex, 2026a).

Leaching will occur over an operational cycle of approximately 60 to 90 days. Stacked ore will be irrigated at an average application rate of 10 L/h/m^2 using drip emitters and/or sprinklers supplied from the barren solution pond. A dilute cyanide solution (0.05% NaCN) at pH 10 will be applied to facilitate gold dissolution.

Pregnant leach solution (PLS) will be collected and recovered via a fully contained under-drainage system and conveyed via lined pipelines to the to the PLS/stormwater pond, to avoid open-channel flow (Figure 8) (Tailex, 2026a).The proposed Heap Leach facility solution collection comprises:

- Perforated collector pipes: 100 mm OD HDPE (dual-wall, smooth interior, perforated) installed at 6 m spacing under the ore footprint. Collector pipes run at 45° to the header pipes.
- Panel header pipes: 200 mm OD HDPE (smooth interior, solid) at ~19.5 m spacing under the ore footprint. Header pipes run parallel to the pad slopes. Panel header pipes receive flows from perforated collector pipes.
- Cell header pipes: 300 mm OD HDPE (smooth interior, solid) at 30 m spacing under the ore footprint. Header pipes run parallel to the pad, running the full length of each cell. Cell header pipes receive flows from the panel header pipes.
- PLS pipe: 500 mm OD HDPE (smooth interior, solid) along the downstream boundary of the pad within the stormwater channel, with a slope of ~0.5%. The conveyance pipe receives flows from the header pipes, and discharges into the PLS/stormwater pond.

The HLP is designed to manage irrigation flows, operational surges and rainfall from a 1:100 annual exceedance probability (AEP), 24-hour storm event.

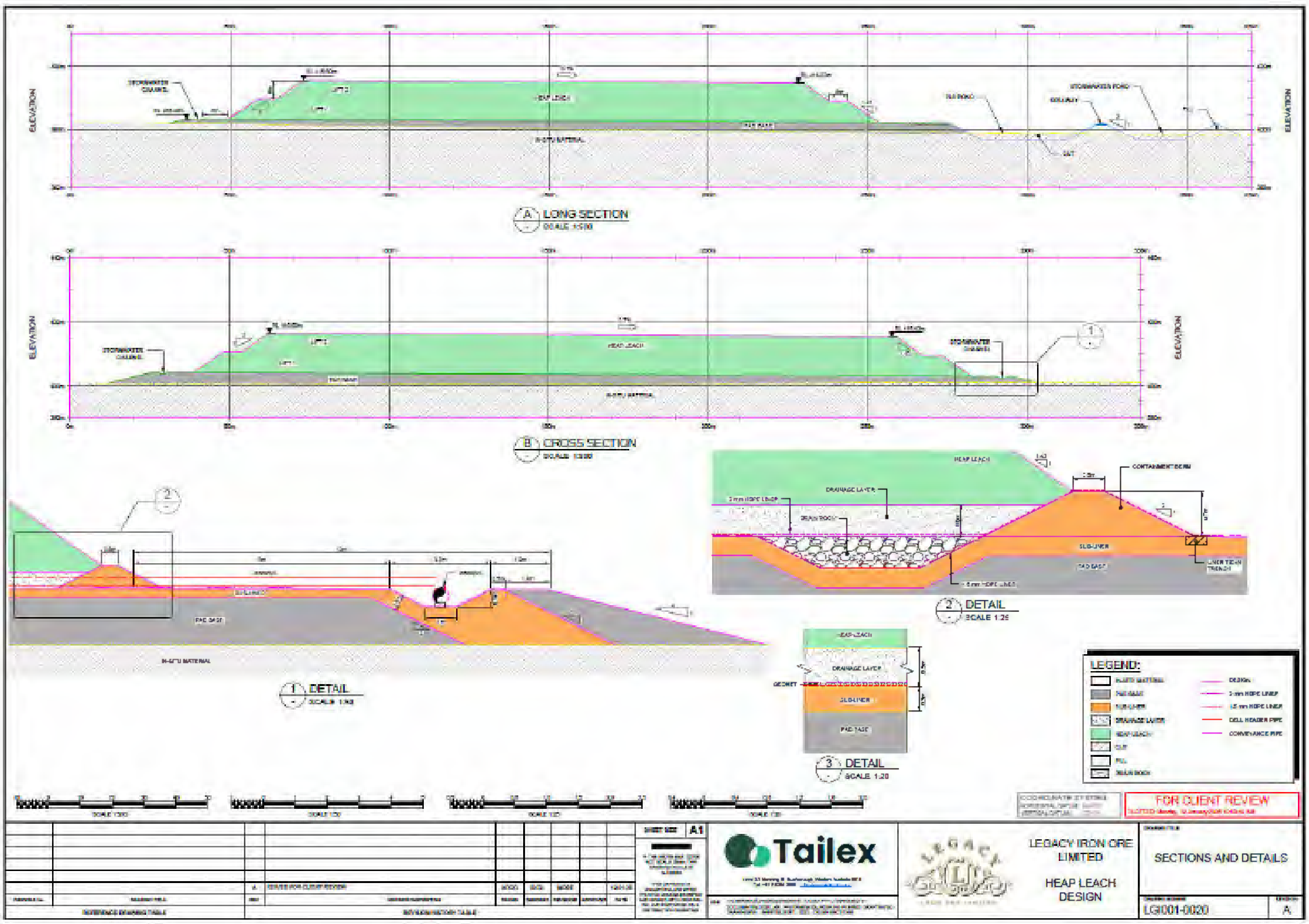


Figure 7 – Sections and details of the Heap Leach Pad (Tailex, 2026a).

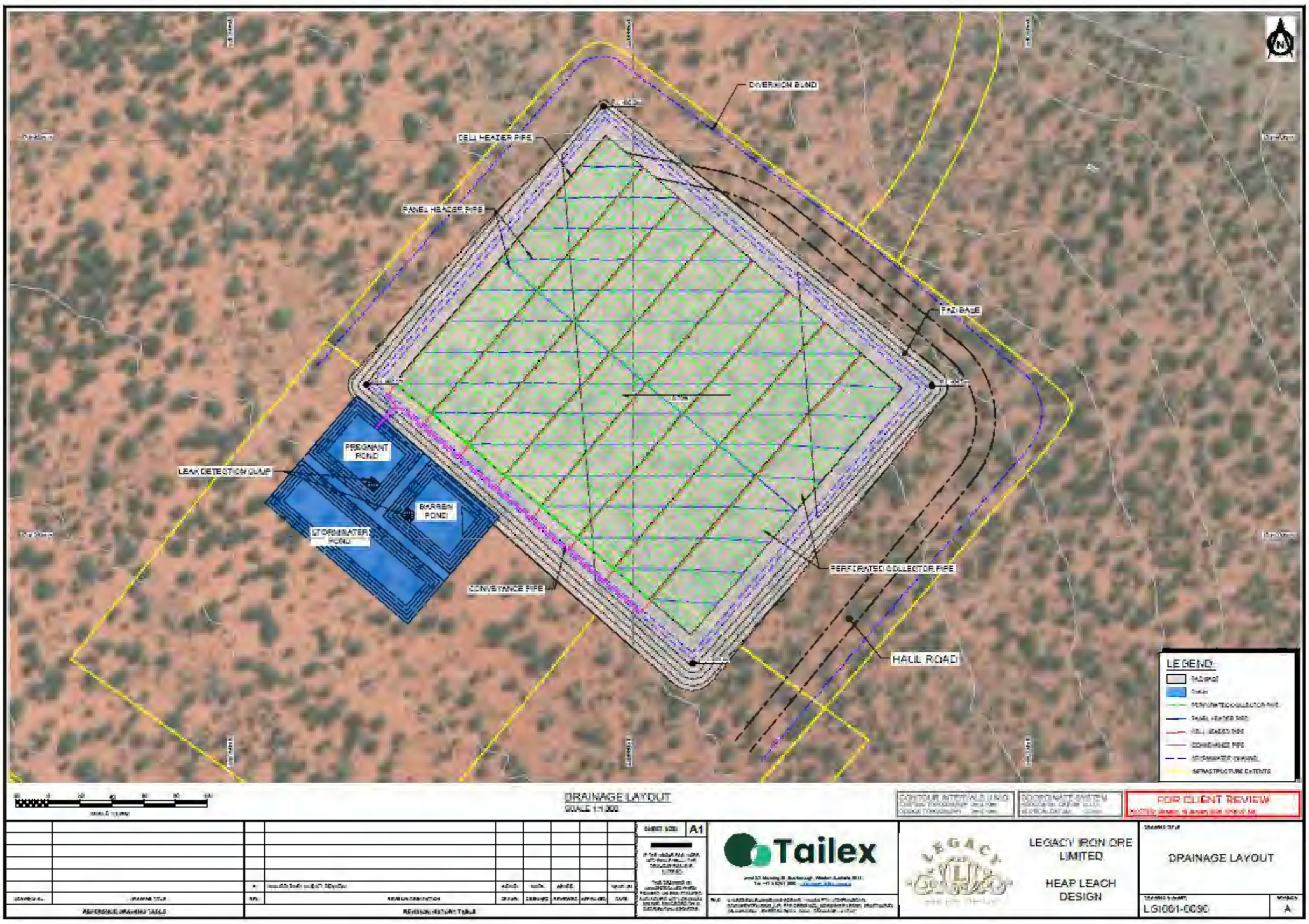


Figure 8 – Heap Leach drainage (Tailex, 2026a).

4.2.3 Ponds

Solution ponds associated with the ore processing system include:

- Pregnant Leach Solution Pond,
- Barren Pond
- Stormwater containment pond.

A minimum free board of 0.5m is applied to all liquid-retaining structures, including the PLS, barren and stormwater ponds and associated channels. Free board does not apply to the heap leach pad.

Recovered process solutions will be managed within a closed-loop circuit to prevent discharge to the environment. Pregnant solution collected from the heap leach will be transferred to the PLS pond prior to the processing within the gold recovery plant, while barren solution will be recirculated for irrigation of the heap leach pad.

4.2.4 Gold Recovery Plant

Recovered pregnant solution will be treated within the on-site gold recovery plant, which comprises the following processing circuits:

- Carbon Adsorption Circuit (CIC): the pregnant solution will be pumped from the PLS pond to a carbon-in-column adsorption circuit comprising multiple columns arranged in series. Each column contains approximately 2.5 tonnes of activated carbon, with a design carbon movement rate of around one tonne per week. Dissolved gold will be adsorbed onto activated carbon as the solution passes through the columns under controlled hydraulic conditions (Mincore, 2026) (Appendix D).
- Elution and Electrowinning Circuit: loaded carbon will be transferred to the elution circuit where gold will be chemically stripped using a heated (approximately 95°C) caustic-cyanide solution (typically containing 2% caustic soda and 0.5% sodium cyanide). Gold-bearing eluate will subsequently be directed to electrowinning cells, where gold will be recovered onto cathodes via electrochemical deposition.
- Carbon Regeneration kiln: stripped carbon will be thermally regenerated within an electrically heated regeneration kiln to restore adsorption capacity prior to reuse within the CIC circuit. The kiln processes approximately 70 kg of carbon per hour and operates at temperatures between 750°C and 800°C, with a typical retention time of 45 minutes (Mincore, 2026).

- Refinery Circuit: gold recovered from electrowinning will be removed from cathodes as sludge, filtered and smelted within a 30kW electric furnace (operating at 1100–1200°C) to produce doré bullion. All equipment is installed within a secure, bunded, fume extraction system and ventilated area to ensure safe and compliant operation (Mincore, 2026).

All processing areas handling cyanide-bearing or process-affected solutions within the gold recovery plant will be constructed within impervious bunded containment areas fitted with sump recovery systems. Liquids captured within bunded areas will be returned to the barren solution pond, maintaining containment of process solutions within the closed-loop processing system.

4.2.5 Surface Water Management

Surface water and process solution management infrastructure associated with the heap leach facility has been designed to maintain separation between contact (process-affected) and non-contact water.

Contact water generated within the heap leach facility will be contained through:

- Above-ground pad construction,
- Perimeter diversion bunds,
- Collection bunds and graded channels, and
- Fully lined process solution ponds.

A diversion bund will divert non-contact surface water around the heap leach facility footprint. The heap leach facility is situated outside significant drainage channels and has a limited local catchment. Compacted perimeter bunds (nominally 1 m high) are proposed to maintain non-contact water separation by diverting external runoff while also containing minor contaminated flow or sediment within the heap leach facility footprint (Tailex, 2026a) (Figure 4). These controls are designed to prevent the uncontrolled release of process-affected water to the surrounding environment. The water management system is designed to accommodate operational solution inventories, in addition to rainfall inputs from the design 1:100 AEP storm event, without overtopping containment structures.

4.2.6 Reagents

The heap leach facility and gold recovery plant use the following reagents: sodium cyanide, caustic soda, hydrochloric acid, scale inhibitor, cement, and activated carbon. All reagents are stored in dedicated bunded areas with appropriate segregation to prevent incompatible interactions:

- Cyanide is delivered as a 30% solution and stored in a 70 m³ tank. Metering pumps supply cyanide to the barren pond and elution circuit.
- Caustic soda is delivered as a 50% solution and stored in a 30 m³ tank.
- Hydrochloric acid is supplied in IBCs and diluted to 3% for acid washing.
- Scale inhibitor is prepared in a mixing vessel and dosed to the barren pond as required.
- Cement is delivered in bulk and stored in a 50-tonne silo for agglomeration.
- Activated carbon is supplied in bulk bags and stored in a dedicated area.

All reagent areas are bunded and equipped with sump pumps that return captured liquids to the barren pond.

4.2.7 Power Supply

An approximately 2MW solar-photovoltaic (PV) facility will be constructed within a previously cleared laydown area, close to the heap leach and gold recovery plant (Figure 9). The facility will supply renewable energy to support the processing infrastructure.

The solar farm will operate in conjunction with a diesel generator set (genset, forming a hybrid power supply system to ensure reliable and continuous power for heap irrigation, solution pumping and gold recovery circuits. The PV installation will comprise solar arrays mounted on steel support structures, inverters and associated electrical infrastructure, all located within the existing cleared footprint to minimise additional land disturbance.

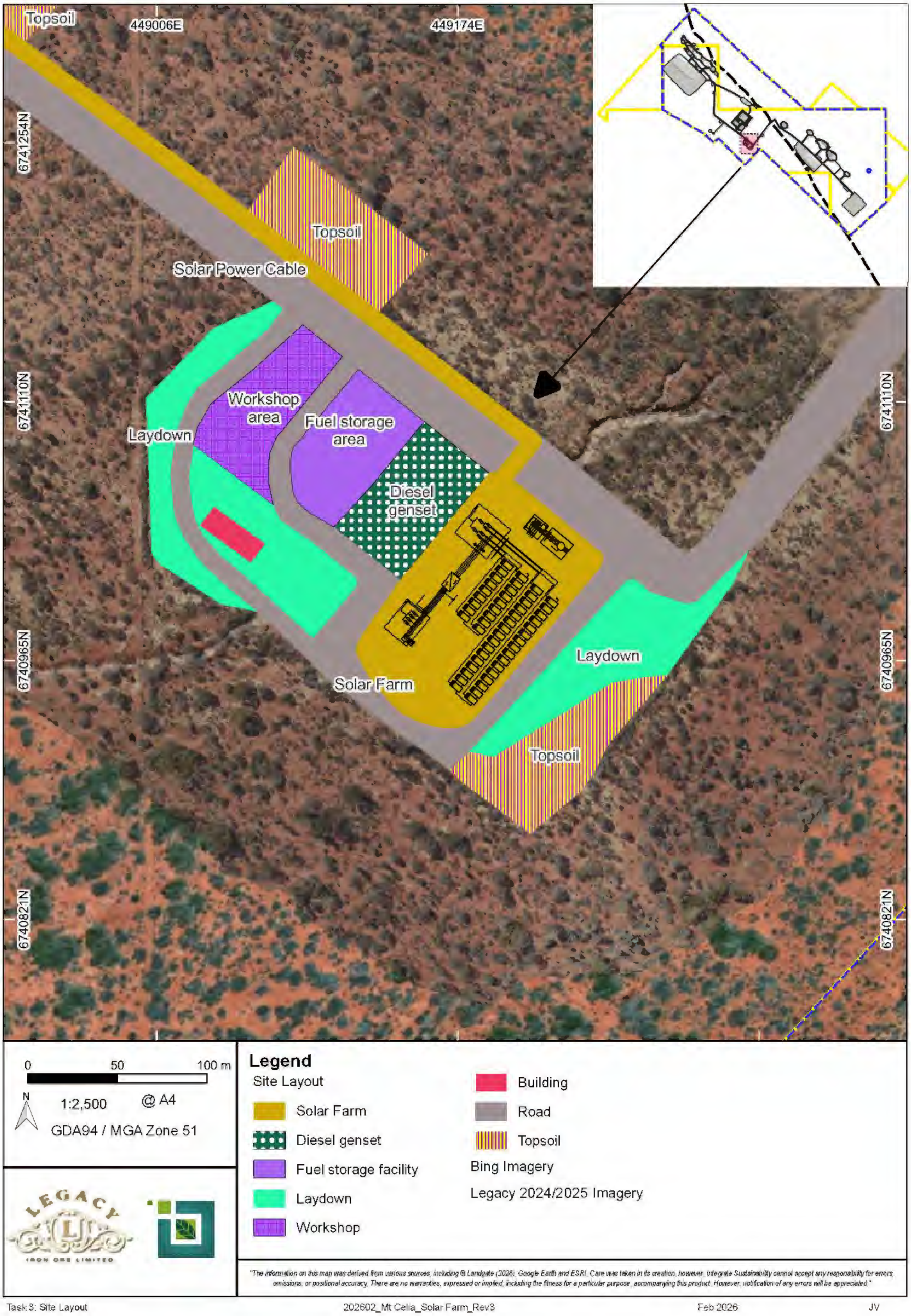


Figure 9 – Solar Farm location.

4.3 Proposed Activities

Design of the heap leach facility and gold recovery plant has been provided in Appendix C and Appendix D.

4.4 Project Duration and Milestones

The Heap Leach Facility and Gold Recovery Plant are required to process the low-grade stockpiles. The construction of the heap leach facility and gold recovery plant will be undertaken by phases, starting with the heap leach facility construction as phase 1 and then the recovery plant. The heap leach pad's post-construction works, and operating phase operations are estimated to begin in the third quarter of the 2026 calendar year (CY) and operate until approximately December 2034 (Table 5).

Table 5 - Indicative timing of works construction and operations

Development stage	Indicative timing (calendar year)
Obtain works approvals	Q3, 2026
Commence construction and commissioning works.	Q3, 2026
Operating period	Q4, 2026 to Q4 2034.

The commencement and conclusion of works for the heap leach facility and Gold Recovery Plant are anticipated to be in Q3 2026 (CY), following the grant of this Works Approval. The operation is expected to commence in Q4 2026 (CY).

Since the site is on care and maintenance, the company wants to start the plant with an aggressive timeline to resume revenue and cash flow.

Following the construction of the Heap Leach Facility and Gold Recovery Plant, an environmental commissioning program will be undertaken in accordance with the Environmental Commissioning Plan to verify the performance of containment, solution management, and water separation systems. The Environmental Commissioning Plan will be submitted to the Department in Q2 2026 (CY).

A detailed Environmental Commissioning Report will be prepared documenting results and any corrective actions, in line with DWER Works Approvals requirements, before commencing full-scale processing operations.

4.5 Category Capacities and Throughput Estimates

The maximum production or design capacity for Category 7 activity is 150,000 tonnes per year. The estimated annual throughput for this activity is 150,000 tonnes.

4.6 Clearing Activities (Attachment 3C)

No clearing is requested; the Heap Leach Facility and Gold Recovery Plant will be located on an already cleared area, where a ROM pad (BP Central ROM), a WRD and the landfill were previously established. The area where the proposed infrastructure is to be established is shown in Figure 3.

5. ENVIRONMENTAL SITING CONTEXT

In 2020, Native Vegetation Solutions conducted a Detailed Flora and Vegetation Survey (Appendix F), and in 2021, Terrestrial Ecosystems undertook a Basic Vertebrate Fauna Survey (Appendix G).

5.1 Flora and Vegetation

Native Vegetation Solutions was commissioned to undertake a detailed vegetation survey of the Mt Celia Operations in 2020. A total of 123 vascular plant species within 12 vegetation types were recorded.

One hundred and twenty-five species were recorded within the survey area within 12 vegetation groups (Figure 10). Twenty-nine families and 58 genera were found. Among native species, Fabaceae had the highest representation, with 26 species across 3 genera, dominated by *Acacia*. Chenopodiaceae and Poaceae were the next best represented families, with 20 species and 16 species, respectively (Native Vegetation Solutions, 2020).

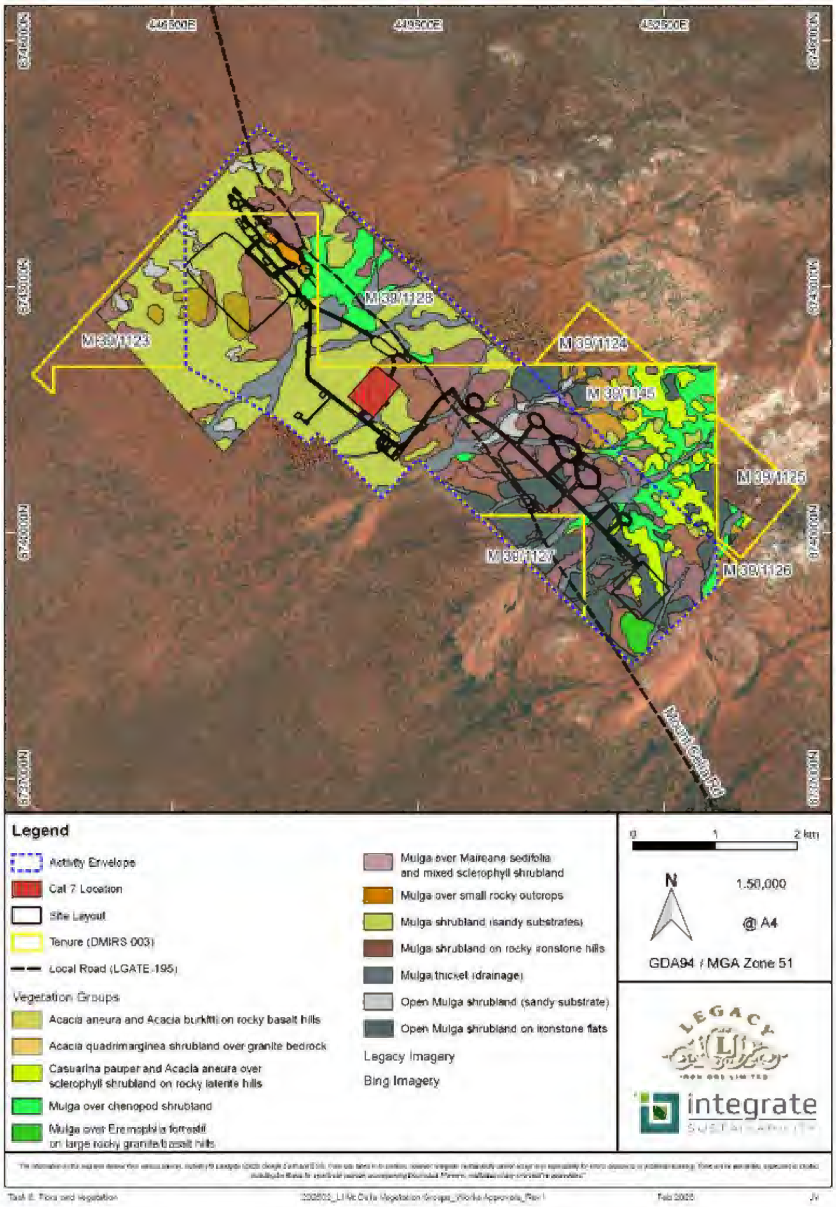


Figure 10 - Vegetation Groups Recorded in the project site.

A preliminary desktop assessment was conducted to identify the presence of EBPC Matters of National Significance, threatened flora species and communities, and Environmentally Sensitive Areas. The desktop study returned no findings applicable to the Mt Celia. No threatened or priority species were recorded during the survey (Native Vegetation Solutions, 2020b).

The survey concluded that the vegetation in the Mt Celia survey area has been subjected to historic exploration activities and grazing. Most of the sites/quadrats inspected were in Good to Very Good condition. Existing vehicle tracks existed in some areas due to mine exploration activities. The adjacent vegetation spanning 0.5m off these tracks was mainly in a Good to Very Good condition (Native Vegetation Solutions, 2020).

The proposed activity is expected to be located within previously disturbed areas.

5.2 Terrestrial Fauna

Terrestrial Ecosystems was commissioned to undertake a desktop and basic vertebrate fauna surveys over the Mt Celia operations in 2020. This survey recorded six typical and widespread board fauna habitats across the region. The fauna habitats consist of:

- Open Mulga shrubland on sandy soil;
- Mulga and chenopod shrubland on rocky soil;
- Mulga shrubland over rocky soil;
- Mulga on rocky slopes and hills;
- Shrubs on granite rocks and bedrock;
- Mulga drainage lines. (Figure 11).

During the survey, it was noted that the area has significant historic mining and exploration disturbance.

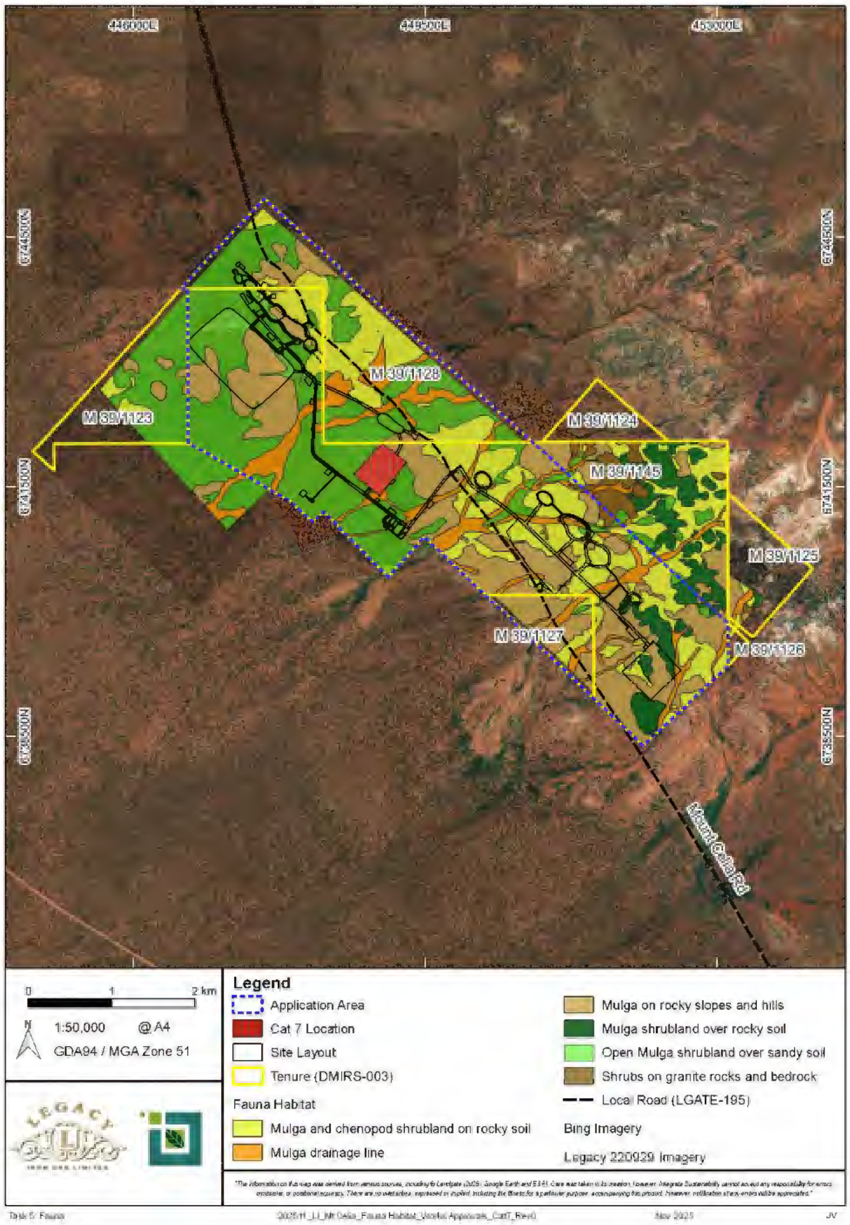


Figure 11 - Fauna Habitat Recorded in Survey

The desktop assessment undertaken by Terrestrial Ecosystems identified 14 conservation-significant fauna species as potentially occurring within the Mt Celia tenure. Of these, only two conservation-significant fauna species were recorded as being likely to have a presence within the Project – Malleefowl and Long-tailed Dunnart.

Malleefowl tracks were observed; however, no Malleefowl mounds were located in the Mt Celia tenure. Large portions of the habitat in the Mt Celia area are very open and therefore unsuitable for Malleefowl breeding or nesting due to the presence of predators (Terrestrial Ecosystems, 2021a).

No Long-Tailed Dunnarts were observed during the survey; however, the Long-tailed Dunnart may be present in the breakaway and rocky areas, as this is their preferred habitat. The impact on these areas should be limited (Terrestrial Ecosystems, 2021b).

Terrestrial Ecosystems completed a target search for the Arid Bronze Azure Butterfly and *Camponotus terebrans* ant. Due to the lack of suitable habitat, *Camponotus terebrans* Terrestrial Ecosystems determined that it is highly improbable that the Arid Bronze Azure Butterfly is present and will be impacted (Terrestrial Ecosystems, 2021a)

5.3 Climate

The climate of the Laverton region (Laverton Aero meteorological station No. 012305) is classified as arid to semi-arid Mediterranean with hot dry summers and cold winters.

Mean annual minimum temperature at Laverton Aero is 14.1°C, and mean annual maximum temperature is 27.3°C (BOM, 2025a). The coldest temperatures occur in July (mean minimum temperature 5.9°C), and the hottest temperatures occur in January (mean maximum temperature 35.7°C) (BOM, 2025a).

The annual average rainfall at Laverton Aero is 275.5mm (BOM, 2025b) Average rainfall varies across the months, with larger rainfall events falling between January to March, and the least rainfall received in September.

The project location receives an average of 30-40 rainfall days per year. Intense rainfall can occur periodically in the summer months of December to April due to tropical cyclones (Table 6). Potential evaporation totals 2400 mm/year and exceeds rainfall in all months (Figure 12) (BOM, 2023).

Table 6 - Average monthly temperatures and rainfall recorded at Laverton Aero Meteorological Station

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Avg
Mean Maximum Temperature (C)	35.7	34.2	30.8	27	22.4	18.6	18.7	21.1	24.9	28.9	31.4	34.1	27.3
Mean Minimum Temperature (C)	21.6	20.9	18.5	15	10.4	7.0	5.9	7.5	10.8	14.5	17.2	19.9	14.1
Mean Rainfall (mm)	47.2	50.6	40.8	18.4	13.2	16.1	14.4	9.7	7.4	13.1	19.5	26.1	23.0

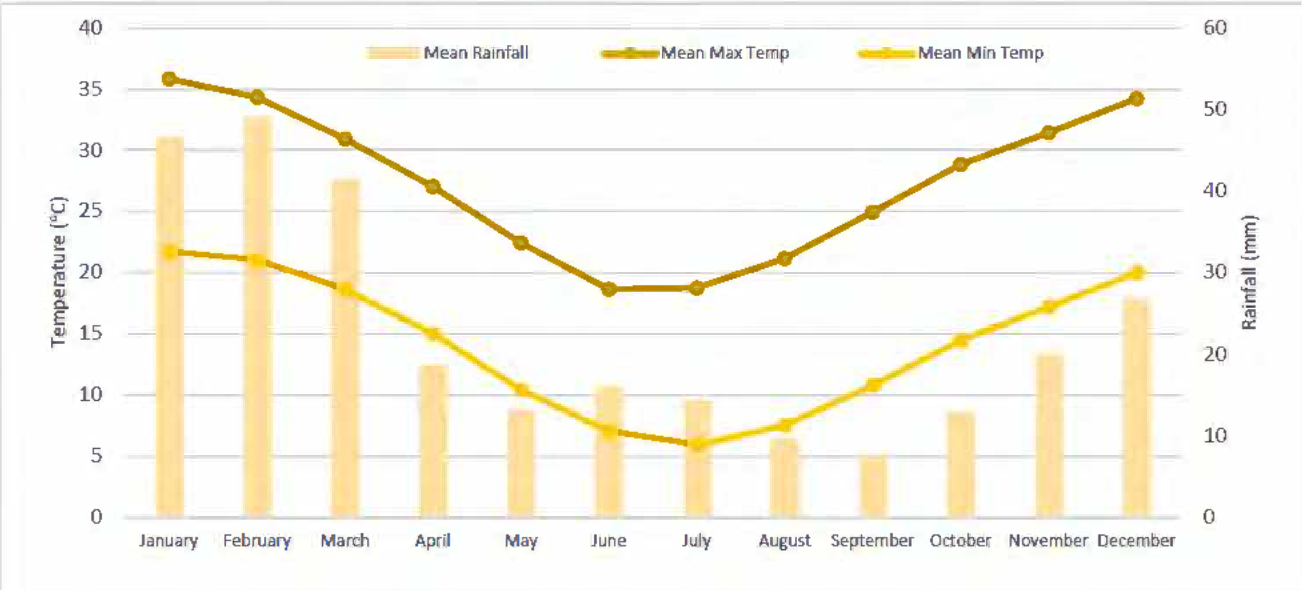


Figure 12 - Mean Temperature and Rainfall Data for Laverton Aero Meteorological Station

The annual average wind speed at Laverton Aero is 21.4 km/hr at 9am and 19km/hr at 3pm (BOM, 2025a) (Figure 13). Wind roses indicate strong easterlies in the mornings during January (summer), then trend towards moderate north-easterlies in the afternoon (3pm). During July (winter), wind direction predominates as a strong south-easterly in the morning (9am) and then trends towards moderate east to north-east in the afternoon (3pm) (Figure 14 and Figure 15).

Table 7 - Average wind speeds recorded at Laverton Aero Meteorological Station

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Avg
Mean 9am Wind Speed km/hr	23.5	23.8	23	20.5	19.7	18.2	17.2	20.3	22.1	23	22.5	22.6	21.4
Mean 3pm Wind Speed km/hr	19.2	19.6	18.3	16.7	16.3	17.9	17.9	19.5	21.0	20.8	20.6	20.5	19.0

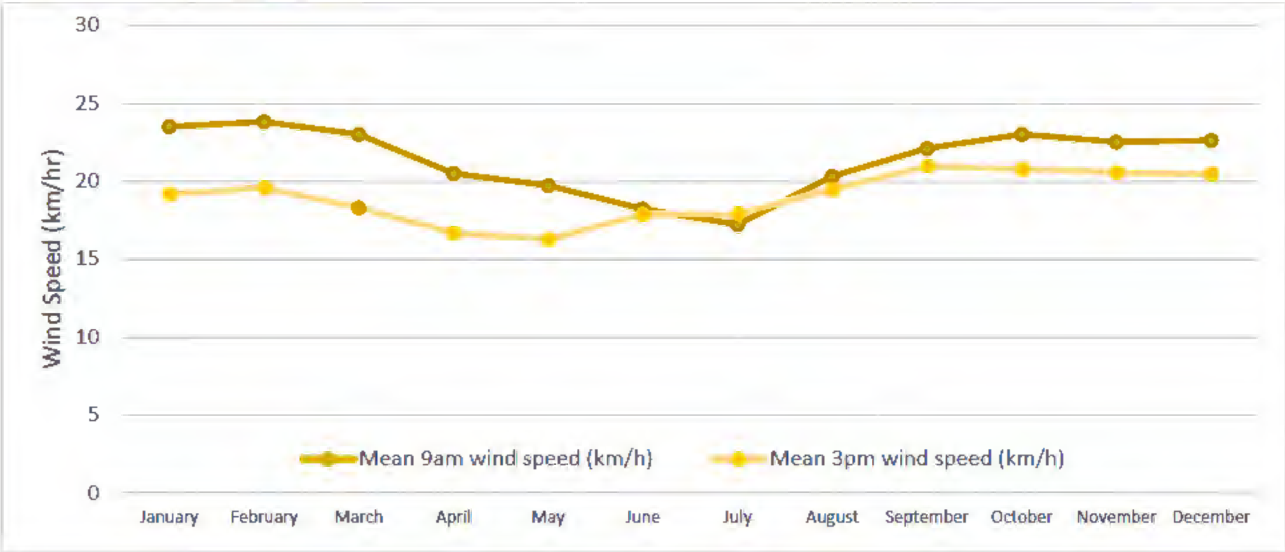


Figure 13 - Mean Wind Speeds for the Laverton Aero Meteorological Station

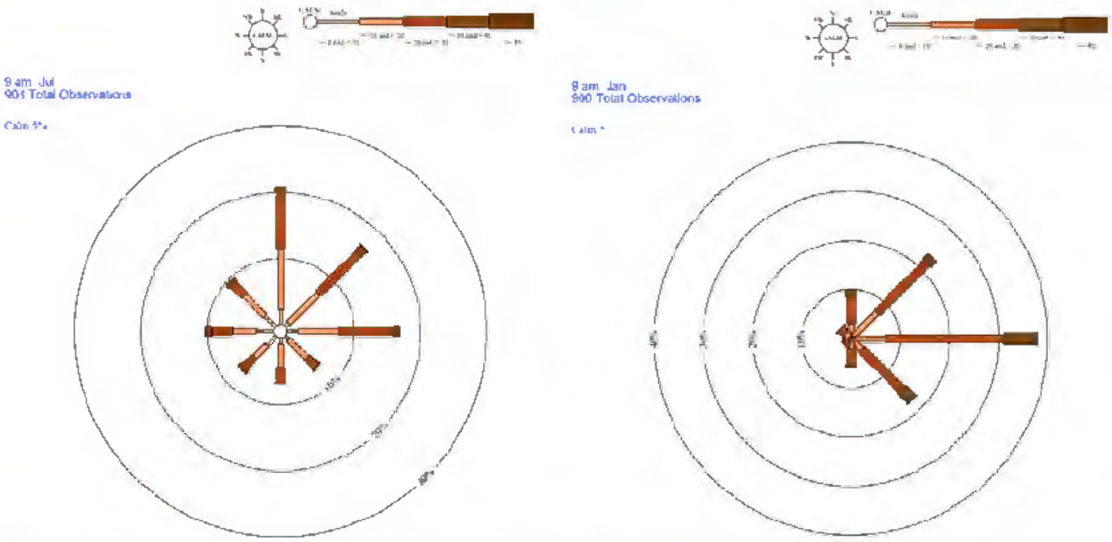


Figure 14 - Mean Wind Speed and Direction for Laverton Aero Meteorological Station – January 9am and 3pm

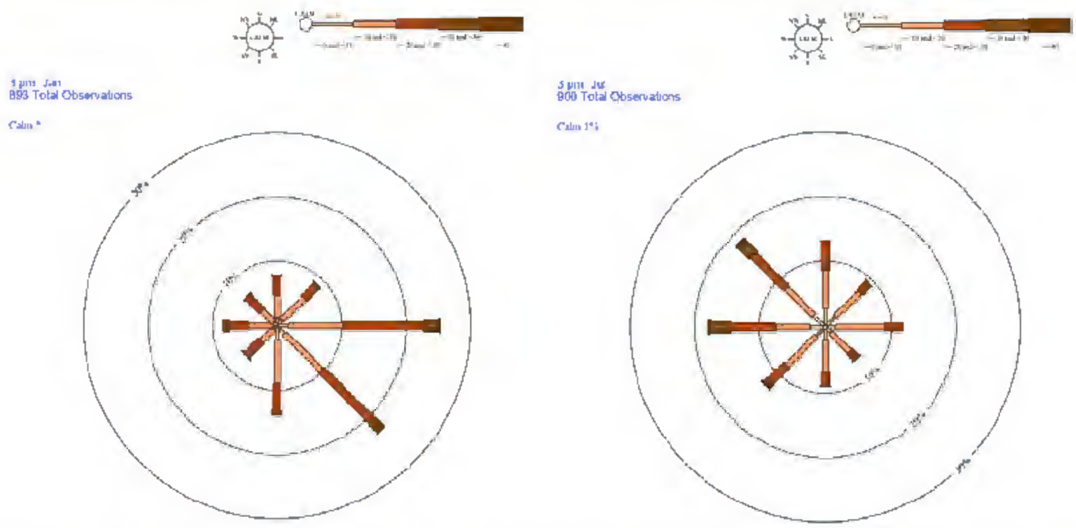


Figure 15 - Mean Wind Speed and Direction for Laverton Aero Meteorological Station – July 9am and 3pm

5.4 Land Systems, Geology and Soil

The premise is located within the Eastern Murchison IBRA subregion (MU01), part of the Murchison Interim Biogeographic Regionalisation of Australia (IBRA) within the southern rangelands of Western Australia. The Murchison Province covers approximately 12.1% of Western Australia and covers the eastern Mid-west and northern Goldfields (Tille, 2006). Ninety-seven per cent (97%) of the Murchison Province lies within the Rangelands and Arid interior, with the western edge extending into the Agricultural Area. The Murchison Province consists of an extensive plateau of low relief. Hardpan wash plains and sandplains characterise the landforms of the Murchison Province, with some stony plains, hills, mesas and salt lakes on granitic rocks and greenstones of the Yilgarn Craton (Tille, 2006). Laterite or silcrete mesas are found at the top of the landscape in areas with a granitic basement. These mesas have lateritic breakaways, kaolinitised footslopes (which are often saline), and are surrounded by gently sloping plains. Some low hills, domes and fields of granite, gneiss, and quartz are found in the upper parts of the landscape. The majority of the terrain consists of gently undulating plains and sandplains sitting below the mesas and hills (Tille, 2006).

The Eastern Murchison IBRA subregion (MUR01) can be described as representing the northern parts of the 'Southern Cross' and 'Eastern Goldfields' Terrains of the Yilgarn Craton (Cowan, 2001). Characterised by its internal drainage, and extensive areas of elevated red desert sandplains with minimal dune development (Cowan, 2001). Salt Lake systems associated with the occluded Paleodrainage system. Broad plains of red-brown soils and breakaway complexes, as well as red sandplains (Cowan, 2001). Vegetation is dominated by Mulga Woodlands, often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands. Arid climate, with mainly winter rainfall (200 mm). The subregional area for MUR01 is 7,847,996 ha (Cowan, 2001). Predominant land use in the subregion is for grazing of native pastures (85.47%) followed by mining (11.34%) and conservation estates (1.4%) (Cowan, 2001).

Broadly, the Murchison Province's soils are red loamy and red sandy earth with shallow red loams, red-brown hardpan shallow loams with some areas of deep red sands (Tille, 2006). Sandplains have red sandy earth and deep sands, while on the mesas, there are shallow red loams and shallow red sandy duplexes with some stony soils and cracking clays also present. Sandy soils tend to be more common on granitic hills, while on stony plains, there are shallow red loams. Red-brown hardpan shallow loams are also present (Tille, 2006).

The premise extends across six soil groups as defined by the WA Soil groups (Schoknecht & Pathan, 2013). These are outlined in Table 8 and in Figure 16.

Table 8 - WA soil group applicable to the premise location

Soil Group	Characteristics
201 – Bare Rock	• Areas generally bare of soil on outcropping rock strata or bare rock surfaces • Includes some areas with minimal soil development • Excludes ferricrete/duricrust outcrop
203 - Stony Soil	• Rocks and stones or coarse gravels are dominant throughout the profile • Usually very shallow • Sandy, loamy, clayey or gravelly soil matrix • Neutral to acid pH
406 - Red Shallow Sandy Duplex	• Red within top 30 cm • Neutral to alkaline pH subsoil • Subsoil may be calcareous (e.g. in Goldfields) • Usually hard setting surface • Clays may be underlain by rock or hardpan • Stony or gravelly surface mantle common • May be saline
522 - Red Shallow Loam	• Red loam over rock, hardpan or other cemented layer by 80 cm, and often <30cm • A surface mantle of stones may be common • Gravel may be present • Usually neutral to acid pH
542 - Calcareous Loamy Earth	• Loam throughout, or may grade to clay • Calcareous throughout, although may be non-calcareous in top 30 cm • Usually red or brown topsoil but may be grey • May have limestone or calcrete at depth • Calcareous gravel often present in profile • Hard setting or fluffy surface • Sometimes saline • Hard or soft carbonate segregations commonly occur in profile

Soil Group	Characteristics
544 - Red Loamy Earth	• Red top 30 cm • Usually massive or poorly structured • Usually porous (sometimes called earthy fabric) • Neutral to acid pH, or sometimes calcareous at depth • Hard setting or crusting • Sometimes with red-brown hardpan at >50 cm • Gravels (usually non-ironstone) may be present

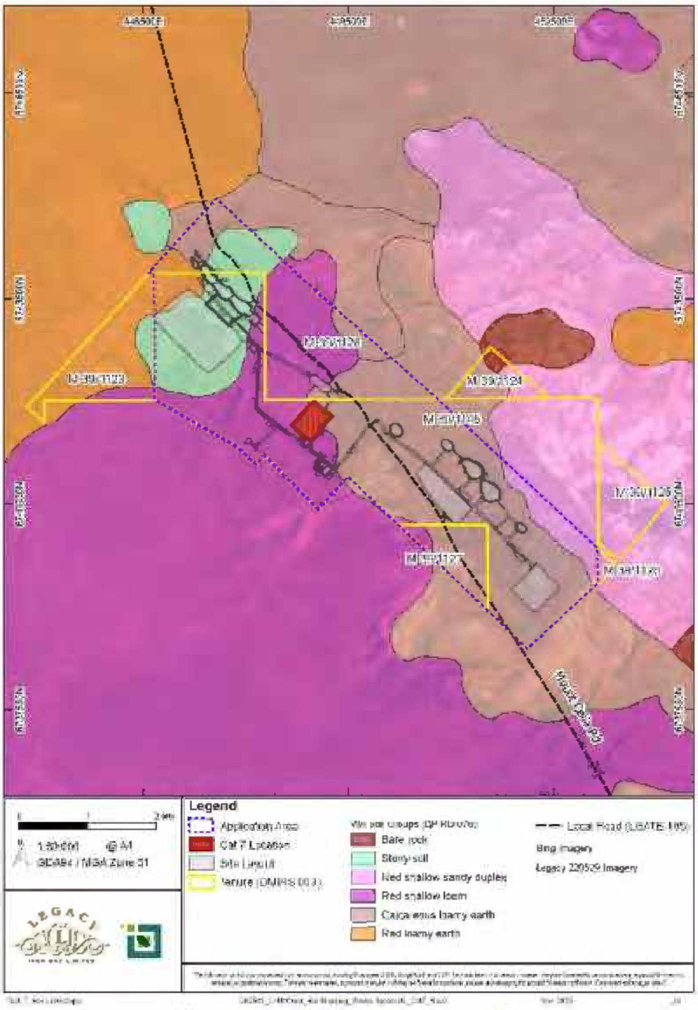


Figure 16 - Soil Landscape setting

5.5 Hydrology

The Mt Celia extends 7 km across an east-west trending catchment, draining to Lake Raeside. Low ridges and hills define the eastern edge of the catchment, 5 km upstream of the site (Hydrologia, 2025).

Lake Raeside lies about 17 km southwest of the Mt Celia. Mount Celia Road traverses through the premise area. Lake Raeside is a long chain of lakes and low-lying areas extending from west to south of the premise. The lake is saline, often dry, filling to various degrees after larger rainfall events. Inflow occurs from direct rainfall and flow from creeks and wash plain on all sides, including the Mt Celia (Hydrologia, 2025). Defined drainage lines, with shallow incised channels, form in the low hills on the eastern edge of the catchment (Hydrologia, 2025).

These drainage lines dissipate into overland flow through the area of Mount Celia Road and the general premise area (Figure 17). Stormwater flow from the premises merges with flow from catchments to the north and south before entering Lake Raeside (Hydrologia, 2025).

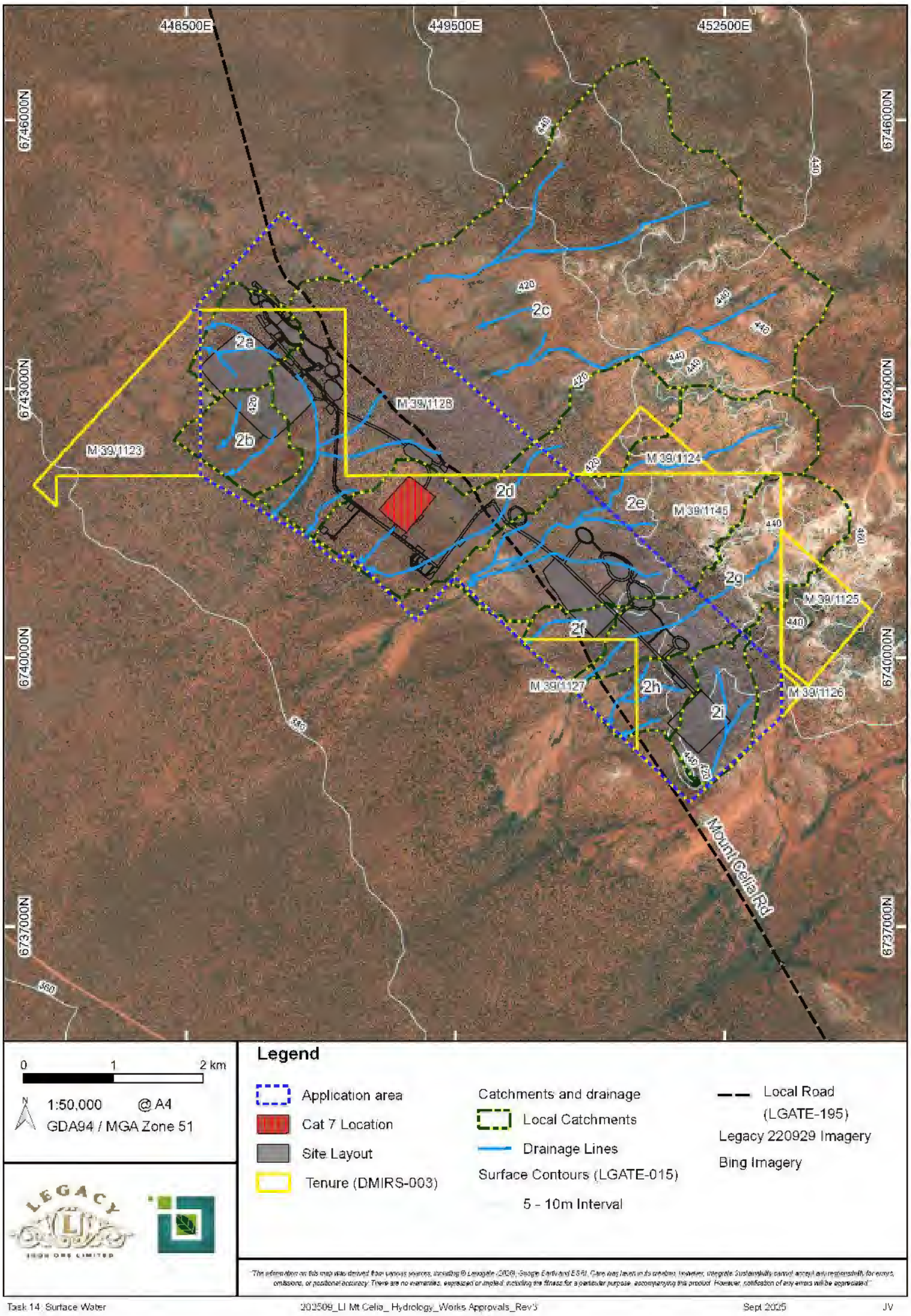


Figure 17 – Surface Water catchments and drainage

5.6 Hydrogeology

The Mt Celia is located within the Raeside groundwater resource sub-area within the weathered and fractured Archaean bedrock, being part of the Yilgarn Goldfields fractured-rock groundwater province (Figure 18). The regional groundwater system is dependent on rainfall recharge.

The operation has three licenced groundwater abstraction bores and six groundwater monitoring bores (Figure 18) as well as in pit sumps, also listed as licenced extraction points (in pit sumps will only exist once a pit is sufficiently developed enough to expose groundwater).

Water Reserve R11185 is located near operational activities and will not be impacted by operational or proposed activities (Figure 18).

Groundwater is currently only being recovered from sumps within the pits, additional water is being obtained from an offsite source

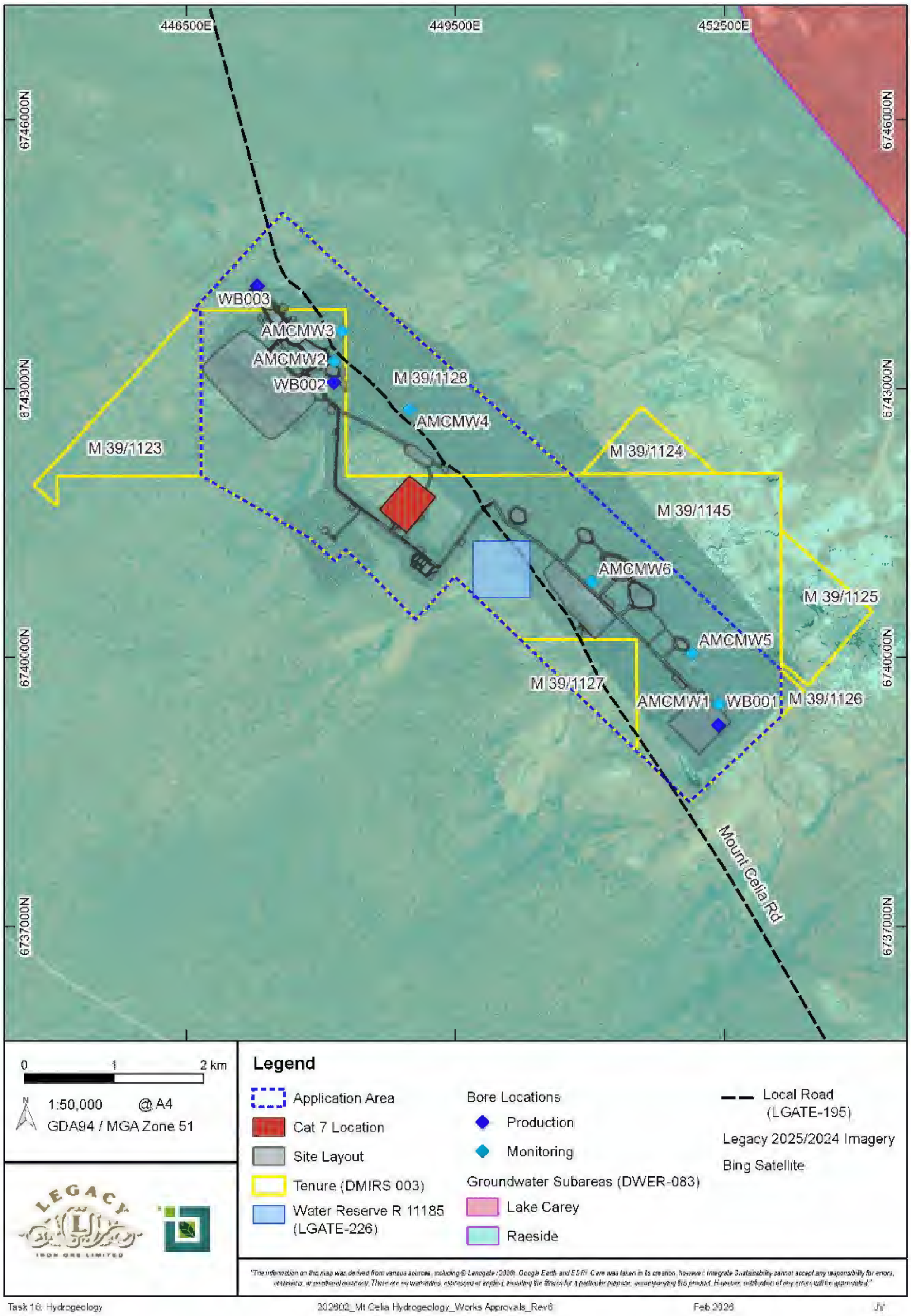


Figure 18 - Groundwater production and monitoring bores

Groundwater quality is generally considered to be brackish with total Dissolved Solids (TDS) recorded between 6,000 mg/L and 8,000 mg/L with a pH of 6.7 and 7.6 during baseline hydrogeological studies (Worley, 2025). Groundwater quality data has also been recorded with an electrical conductivity range of 9,500 to 23,000 uS/cm and a pH range of 7.7 to 7.9 during baseline subterranean fauna studies (Bennelongia, 2025)

Static water levels have been recorded at a range between 21-46 m below ground level (Worley, 2025).

6. OTHER DWER APPROVALS

The Mt Celia currently holds a Native Vegetation Clearing Permit (CPS 10213/1) and a 5C Licence to take Water (GWL209078(1)).

7. OTHER APPROVALS AND CONSULTATION

Legacy has undertaken stakeholder consultation in relation to this Works Approval Application. A meeting was held with representatives of the Wangkatja Tjungula Aboriginal Corporation (WTAC) on 23/02/2026 to inform them of the proposed activities, potential environmental risks, and associated management measures, refer to Appendix H (confidential, not to be released). The Works approval supporting documentation was provided to WTAC prior to submission to DWER, and any feedback received was considered as part of the application process.

8. APPLICANT HISTORY

Legacy, nor its directors or management team, have been charged, convicted, or paid a penalty for an offence, or had licences/ works approvals suspended or revoked.

9. EMISSIONS, DISCHARGES AND WASTE (ATTACHMENT 6A)

9.1 Emissions and Discharges

Potential emissions and discharges to land, groundwater, and air associated with the proposed prescribed activity have been identified based on the operation of the heap leach facility, the process solution containment infrastructure, and the gold recovery plant. The emissions and discharges presented in Table 9 include both routine operational emissions and potential releases from a 1:100 AEP, 24-hour storm event.

Table 9 - Emissions and Discharges

Item No.	Source of emission or discharge	Emission or discharge type	Volume and Frequency	Proposal Controls	Location on Site Layout Plan
1	Agglomerator	Dust	Continuous during operation	The agglomerator inherently reduces dust generation controlling the addition of raw water to increase moisture.	Heap Leach Temp Stockpile (Figure 4)
2	Heap leach Pad	Evaporative loss of cyanide solution (HCN volatilisation)	Continuous during irrigation	Dilute NACN (approximately 0.05%), pH over 10, drip/sprinkler control, solution management	Heap Leach (Figure 4)
3		Seepage to land and groundwater (potential)	Continuous during irrigation	Double composite liner system with leak detection layer and underdrainage recovery system	Heap Leach (Figure 7)
4	PLS Pond	Seepage to land and groundwater (potential)	Continuous	Double HDPE liner system with geonet leak detection layer and recovery sump	PLS Pond (Figure 4)
5	Barren Pond	Seepage to land and groundwater (potential)	Continuous	Double HDPE liner system with leak detection layer and recovery sump	Barren Pond (Figure 4)
6		Evaporative loss of cyanide solution (HCN volatilisation)	Continuous	Addition of caustic soda (NAOH) maintains pH at levels that suppress hydrogen cyanide (HCN) volatilisation, ensuring safe operating conditions for workers and preventing atmospheric release.	Barren Pond (Figure 4)
7	Stormwater Pond	Seepage to land and groundwater (potential)	Continuous	2mm HDPE liner over 0.3m compacted clay layer	Stormwater Pond (Figure 4)
8	Heap Leach Facility	Overtopping and release of process solution (potential)	Extreme rainfall events (1:100 AEP, 24hr)	Pond storage capacity designed to accommodate operational inventory and 139mm rainfall event with 0.5m freeboard.	Heap Leach (Figure 4)
9	Gold recovery Plant (CIC/Elution/ Electrowinning)	Process solution spills to land (potential)	Intermittent (maintenance or upset conditions)	Impervious bunded areas with sump recovery systems	Gold recovery Plant (Figure 4)
10	Carbon regeneration Klin	Air emissions (combustion gases, particulates)	Intermittent during operation	Stack discharge via controlled combustion unit	Gold recovery Plant (Figure 4)
11	Refinery Furnace	Air emissions (fume, particulate matter)	Batch smelting events	Local exhaust ventilation and controlled discharged	Gold recovery Plant (Figure 4)

Item No.	Source of emission or discharge	Emission or discharge type	Volume and Frequency	Proposal Controls	Location on Site Layout Plan
12	HLF slopes and process Areas	Contact stormwater runoff (potential)	Rainfall events	Perimeter bunding and diversion channels directing runoff to lined containment ponds	Stormwater channels (Figure 7)
13	Process Solution transfer pipelines	Loos of containment to land (potential)	Continuous during operation	HDPE lined pipelines with inspection and maintenance procedures	Heap Leach and Gold recovery Plant (Figure 4)
14	Reagent Storage	Loos of containment to land (potential)	Continuous	All process areas handling cyanide-bearing or caustic solutions are located within impervious bunds. Each bunded area is equipped with sump pumps that return captured liquids to the barren pond	Heap Leach and Gold recovery Plant (Figure 4)

9.2 Wastes

Wastes generated during the construction and operation of the prescribed activity will comprise general solid waste, inert construction materials, used process consumables, and regulated wastes associated with maintenance activities. Operational waste streams are expected to include waste oil, grease, hydrocarbon-contaminated materials, spent laboratory consumables, used personal protective equipment and empty reagent containers associated with cyanide and caustic soda use.

All waste will be segregated and temporarily stored in designated on-site areas in a manner that prevents potential release to land or groundwater. Regulated wastes, including waste oil and hydrocarbon-contaminated materials, will be stored within appropriately bunded containment areas prior to removal from the site, by a licensed contractor for transport to appropriately authorised recycling or disposal facilities in accordance with relevant regulatory requirements.

No tailings or process residues requiring disposal will be generated as part of the proposed heap leach operation, and no waste materials will be disposed of within the heap leach facility or process solution containment infrastructure. Wastewater generated from washdown and maintenance activities will be contained and managed within the process water management system for reuse within the closed loop processing circuit, where practicable.

10. SITING AND LOCATION

The siting and location for sensitive land uses and nearby environmentally sensitive receptors and aspects have been reviewed via a desktop assessment, and the results are outlined below.

10.1 Sensitive Land Users

The nearest sensitive site is the abandoned Mt Celia Homestead, located on the Mt Weld pastoral lease (N049826) within the application area. The Second Fortune mining operation is located approximately 8.8km northwest of the proposed Heap Leach Facility and Gold Recovery Plant, while the Deep South mining operation lies about 9.1km to the south, as determined through aerial imagery analysis. The premise is located within 'Rural' zoned land and is predominantly surrounded by land zoned as 'Rural' and 'Public Purpose' (Figure 19).

10.2 Nearby Environmentally Sensitive Receptors and Aspects

Nearby environmentally sensitive receptors and aspects are identified in Table 10 and shown in Figure 20. The closest environmentally sensitive receptors are located within the premise boundary, being registered Aboriginal Cultural Heritage and a Water Reserve. There is no risk of adverse impacts on any nearby environmentally sensitive receptors from the proposed activities.

Table 10: Nearby environmentally sensitive receptors and aspects

Type Classification	Description	Distance + direction to premises boundary	Proposed controls to prevent or mitigate adverse impacts (if applicable)
Environmentally Sensitive Areas	N/A	No ESAs within 85km of premise.	No risk of adverse impact
Threatened Ecological Communities	Priority Ecological Community (PEC)	No PEC's are located approximately 9km northwest of the premises	No risk of adverse impact

Type Classification	Description	Distance + direction to premises boundary	Proposed controls to prevent or mitigate adverse impacts (if applicable)
Threatened and/or priority fauna	Malleefowl *(Leipoa ocellata)* – Vulnerable	Threatened fauna (Malleefowl) have been recorded within 3km of the premises.	No risk of adverse impact
Threatened and/or priority flora	Threatened and Priority 1 Flora	The closest threatened, or priority flora (P1) has been recorded approximately 16km southeast of the premises.	No risk of adverse impact
Aboriginal and other heritage sites	Aboriginal Cultural Heritage: ACH-1562 ACH-17031 ACH-17033 ACH-30613	There are three registered Aboriginal cultural heritage sites located within or immediately northeast of the premises boundary. ACH-1562 (Mt Celia Station) lies within the premises, approximately 1km from the Heap Leach Facility. ACH-17033 (Wongatha Soak) is situated about 1.7km form the facility, while ACH-17031 (Granite Monoliths) is located approximately 3km away. In addition, one lodged Aboriginal heritage site - ACH-30613 (Granite Site Complex) is located roughly 6km from the Heap Leach Facility.	No risk of adverse impact
Public drinking water source areas	Water Reserve	There is no PDWSA within 50km of premise. A water reserve (R11185) is located within the premises boundary.	No risk of adverse impact
Rivers, lakes, oceans, and other bodies of surface water, etc.	Lakes	Lake Carey is located approximately 9km to the northeast of the premise boundary and Lake Rayside is located approximately 15km to the southwest of the premise boundary.	No risk of adverse impact
Acid sulphate soils	No acid sulphate soil risk at the premises.	N/A	No risk of adverse impact
Nature Reserve	N/A	There is no nature reserves located within 50km of the premises boundary.	No risk of adverse impact

Siting and Location (Attachment 7)

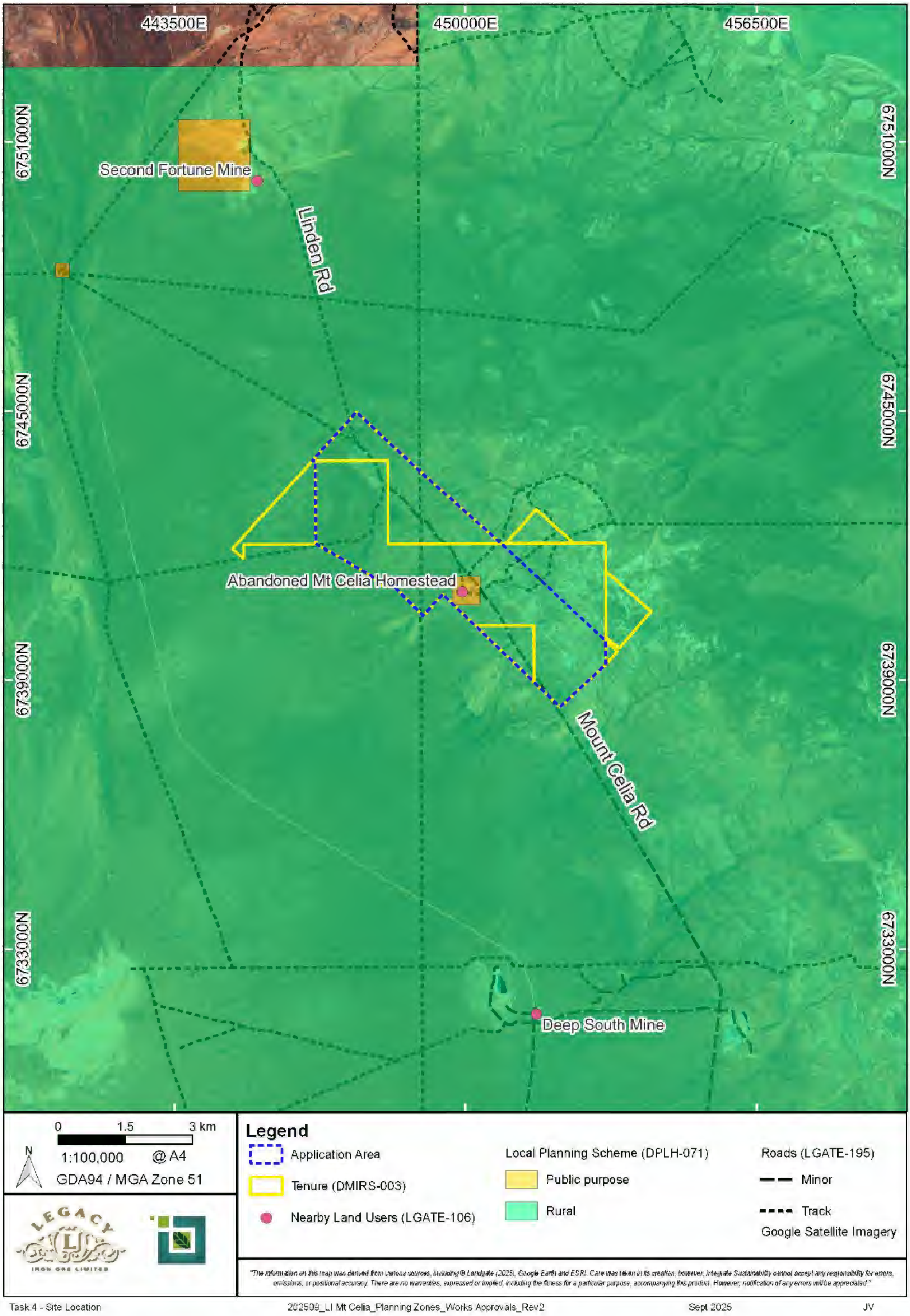


Figure 19 - Planning Zones

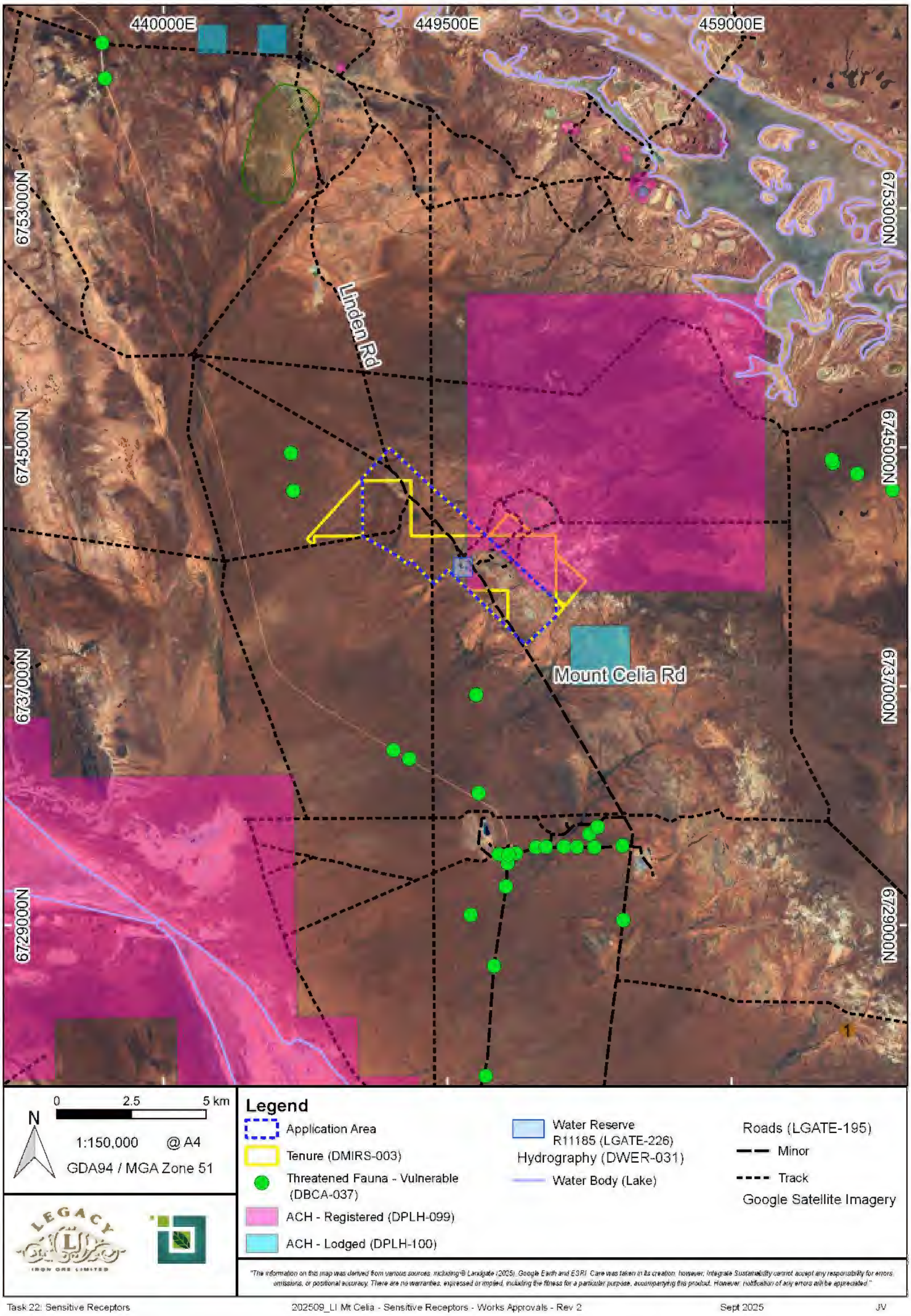


Figure 20 - Environmentally Sensitive Area and Heritage Values

11. CATEGORY CHECKLIST

No category checklists are applicable to this works approval application.

12. PROPOSED FEE CALCULATION (ATTACHMENT 10)

The total fees for this Works Approval Application are calculated to be $13,252.25

Regulation 5BA requires that work approval fees be determined based on the cost of the works as detailed in Schedule 3. The cost of work includes all capital costs (including GST) associated with the construction and establishment of the works proposed under the works approval application. It excludes the cost of buildings to be used for purposes unrelated to the purposes for which the premises are or will become prescribed premises and consultancy fees paid in relation to those works.

Legacy understands that the current Works Approval fee is $43.45 per unit.

Table 11 - EP Act Regulations Schedule 3 Works Approval Fees that apply to Heap Leach Facility and Gold Recovery Plant at Mt Celia

Cost of works	Fee Units
More than $5,000,000 but not more than $25,000,000	305 plus 100 for every $5,000,000 above $5,000,000

The estimated cost to establish the Heap Leach Facility and Gold Recovery Plant is $8,580,000.

Table 12 - Works Approval Fee Calculation

Fee Component	Fee Units	Proposed Fee
Base Unit fee	305	$13,252.25
305 plus 100 for every $500 000 above $500 000	-	$0
	Fee payable	**$13,252.25**

13. Commercially Sensitive or Confidential Information

The information requested for the exemption from publication has been completed in Attachment 11 of the application form.

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APPENDIX A – TENEMENT SUMMARY (M39/1127, M39/1128 AND M39/1145)

Department of **Mines, Petroleum and Exploration**

GOVERNMENT OF WESTERN AUSTRALIA

MINERAL TITLES ONLINE

MINING TENEMENT SUMMARY REPORT

MINING LEASE 39/1127

Status: Live

TENEMENT SUMMARY

Area:	80.75000 HA	**Death Reason :**	
Mark Out :	15/11/2017 06:20:00	**Death Date :**	
Received :	22/11/2017 15:00:21	**Commence :**	07/06/2018
Term Granted :	21 Years	**Expiry :**	06/06/2039

CURRENT HOLDER DETAILS

Name and Address
LEGACY IRON ORE LTD
LEGACY IRON ORE LIMITED, PO BOX 5768, ST. GEORGES TERRACE, PERTH ST GEORGES TCE, WA, 6831, xxxxxxxxxxx@legacyiron.com.au, xxxxx000

DESCRIPTION

Locality: Mt Celia
Datum: Datum: GDA94, Zone 51 Datum situated 6740205.856mN 451520.068mE
Boundary: Then 6738947.301mN 451525.472mE Then 6739455.641mN 450994.058mE Then 6740200.193mN 450222.631mE Back to Datum Identical boundaries to P39/5007

Area :

Type	Dealing No	Start Date	Area
Surveyed		02/11/2018	80.75000 HA
Granted		07/06/2018	81.82220 HA
Applied For		15/11/2017	81.82220 HA

SHIRE DETAILS

Shire	Shire No	Start	End	Area
MENZIES SHIRE	5390	22/11/2017		80.75000 HA

RENT STATUS

Due For Year End 06/06/2026: PAID IN FULL
Due For Year End 06/06/2027: $2,373.30

EXPENDITURE STATUS

Expended Year End 06/06/2025: EXPENDED IN FULL
Current Year Commitment : $10,000.00

Department of **Mines**, **Petroleum and Exploration**

GOVERNMENT OF WESTERN AUSTRALIA

MINERAL TITLES ONLINE

MINING TENEMENT SUMMARY REPORT

MINING LEASE 39/1128

Status: Live

TENEMENT SUMMARY

Area:	391.00000 HA	**Death Reason :**	
Mark Out :	15/11/2017 12:26:00	**Death Date :**	
Received :	22/11/2017 15:00:21	**Commence :**	07/11/2018
Term Granted :	21 Years	**Expiry :**	06/11/2039

CURRENT HOLDER DETAILS

Name and Address
LEGACY IRON ORE LTD
LEGACY IRON ORE LIMITED, PO BOX 5768, ST. GEORGES TERRACE, PERTH ST GEORGES TCE, WA, 6831, xxxxxxxxxxx@legacyiron.com.au, xxxxx000

DESCRIPTION

Locality: Mt Celia

Datum: Datum: GDA94, Zone 51 Datum situated 6743884.898mN 448271.122mE

Boundary: Then 6743877.388mN 446654.569mE Then 6743876.999mN 446573.371mE Then 6744977.339mN 447568.556mE Then 6743576.467mN 449057.694mE Then 6743009.438mN 449702.852mE Then 6742049.415mN 450795.156mE Then 6742045.492mN 449895.856mE Then 6742038.210mN 448279.571mE Then 6743002.996mN 448275.156mE Back to Datum 6743884.898mN 448271.122mE Identical boundaries to P39/5002 and P39/5003

Area :

Type	Dealing No	Start Date	Area
Surveyed		31/01/2019	391.00000 HA
Granted		07/11/2018	390.67260 HA
Applied For		15/11/2017	390.67260 HA

SHIRE DETAILS

Shire	Shire No	Start	End	Area
MENZIES SHIRE	5390	22/11/2017		391.00000 HA

RENT STATUS

Due For Year End 06/11/2025: PAID IN FULL
Due For Year End 06/11/2026: $11,456.30

EXPENDITURE STATUS

Expended Year End 06/11/2024: EXPENDED IN FULL
Current Year Commitment : $39,100.00

MINING TENEMENT SUMMARY REPORT

MINING LEASE 39/1145

Status: Live

TENEMENT SUMMARY

Area:	1,403.05200 HA	**Death Reason :**	
Mark Out :	03/09/2020 13:31:00	**Death Date :**	
Received :	11/09/2020 11:32:00	**Commence :**	23/05/2023
Term Granted :	21 Years	**Expiry :**	22/05/2044

CURRENT HOLDER DETAILS

Name and Address
LEGACY IRON ORE LTD
HETHERINGTON EXPLORATION & MINING TITLE SERVICES PTY LTD, C/- HETHERINGTON EXPLORATION & MINING TITLE SERVICES PTY LTD, SUITE 404, GROUND FLOOR, 50 ST GEORGES TERRACE, PERTH, WA, 6000, xxxxx@hemts.com.au, xxxxxx977

DESCRIPTION

Locality: Mount Celia

Datum: Datum situated at GDA94 Zone 51 6743878.187 metres North and 446656.214 metres East.

Boundary: thence to 6743887.449 metres North and 448274.469 metres East thence to 6742030.222 metres North and 448278.540 metres East thence to 6742059.363 metres North and 453128.423 metres East thence to 6739344.683 metres North and 453141.637 metres East thence to 6738387.451 metres North and 452111.288 metres East thence to 6738947.488 metres North and 451525.471 metres East thence to 6740203.540 metres North and 451516.872 metres East thence to 6740206.118 metres North and 450229.537 metres East thence to 6740904.116 metres North and 449493.359 metres East thence to 6740423.464 metres North and 449056.125 metres East thence to 6741207.588 metres North and 448277.130 metres East thence to 6741078.634 metres North and 448151.642 metres East thence to 6741333.350 metres North and 447873.343 metres East thence to 6742030.698 metres North and 446663.283 metres East Back to Datum 6743878.187 metres North and 446656.214 metres East.

Area :

Type	Dealing No	Start Date	Area
Granted		23/05/2023	1,403.05200 HA
Applied For		03/09/2020	1,401.11000 HA

SHIRE DETAILS

RENT STATUS

Due For Year End 22/05/2026: PAID IN FULL
Due For Year End 22/05/2027: $41,137.20

EXPENDITURE STATUS

Expended Year End 22/05/2025: EXPENDED IN FULL
Current Year Commitment : $140,400.00

APPENDIX B – CURRENT ASIC COMPANY EXTRACT

ASIC

Australian Securities & Investments Commission

Australian Company

LEGACY IRON ORE LTD
ACN 125 010 353

Extracted from ASIC's database at AEST 07:42:07 on 09/09/2025

Company Summary	
Name:	LEGACY IRON ORE LTD
ACN:	125 010 353
ABN:	31 125 010 353
Registration Date:	20/04/2007
Next Review Date:	20/04/2026
Status:	Registered
Type:	Australian Public Company, Limited By Shares
Locality of Registered Office:	PERTH WA 6000
Regulator:	Australian Securities & Investments Commission

Further information relating to this organisation may be purchased from ASIC.

APPENDIX C – HEAP LEACH ENVIRONMENTAL MONITORING PLAN

Heap Leach Facility and Gold Recovery Plant Monitoring Plan

Mt Celia Gold Project

Legacy Iron Ore Ltd

February 2026

Prepared by:
Legacy Iron Ore Ltd
PO BOX 5768
PERTH WA 6831
Phone 08 9421 2000

Document Control

Date	Revision	Reason for Change	Author	Reviewed
08/02/2026	R0	First version of the plan	JV	BB
09/02/2026	R1	Version released for Client Review	ISPL	RD & CBV
26/02/2026	R2	Finalised Version	ISPL	RD & CBV

Approval

Name	Title	Signature	Date
			26/02/2026

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1. INTRODUCTION

1.1 Project Location

The Mt Celia Mine Gold Operations (Mt Celia) is owned by Legacy Iron Ore Ltd (Legacy) and comprises two main gold deposits: Kangaroo Bore and Blue Peter. This mine is located approximately 95 km south of Laverton and approximately 180 kilometres northeast of Kalgoorlie in the South Laverton Region (Figure 1).

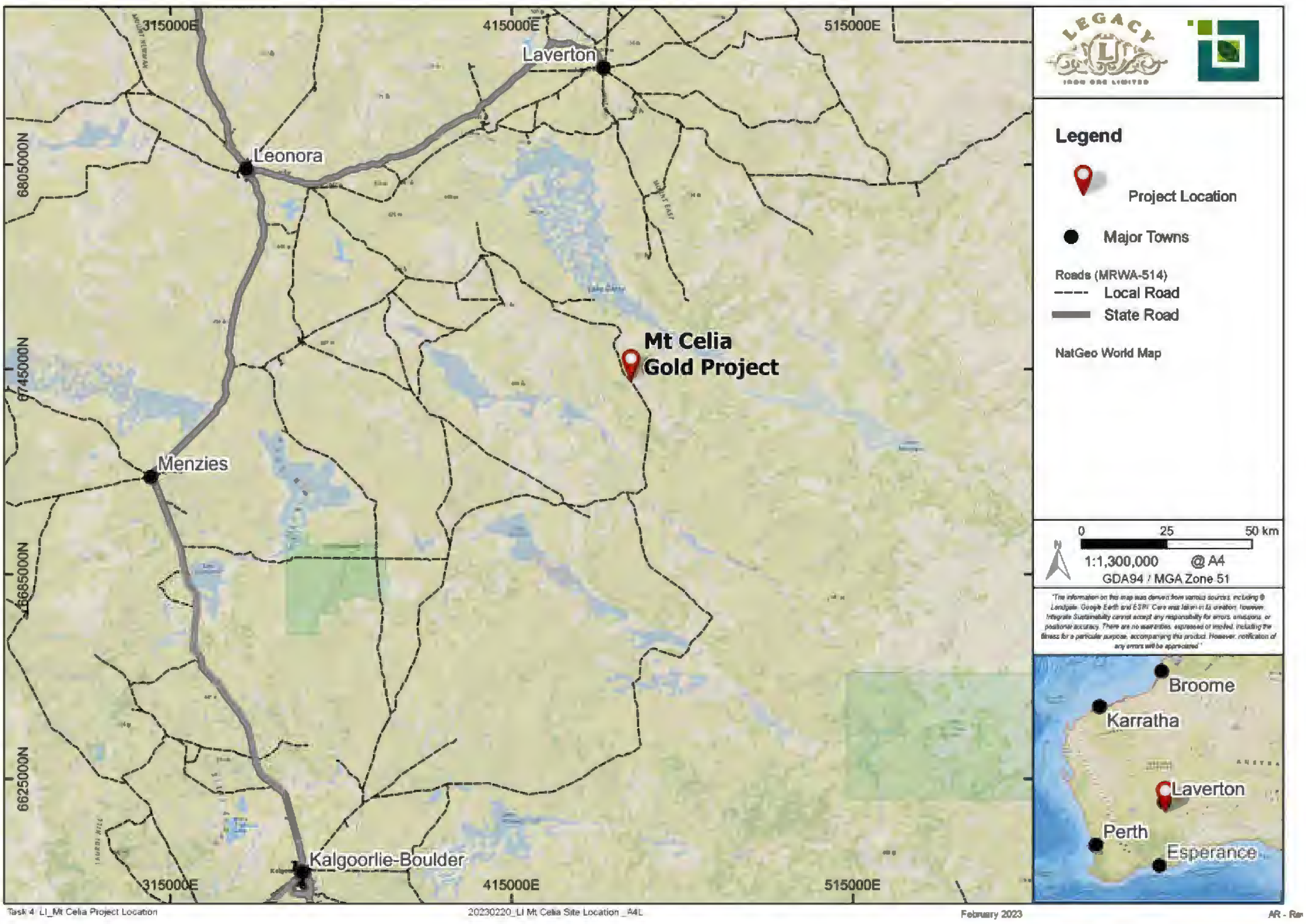

Figure 1. Mt Celia Mine Gold Location.

This monitoring plan has been prepared for the proposed heap leach facility and gold recovery plant that will be established on previously cleared land near the proposed BP 6/7 Mining area (Figure 2).

1.2 Purpose and Scope

The purpose of this Monitoring Plan is to describe the monitoring and inspection measures, actions, and procedures that will be implemented for the Heap Leach Facility. The plan is designed to protect environmental receptors and surrounding ecosystems.

This plan applies to all stages of the heap leach operation, from construction and active leaching to closure and ensures compliance with the *Environmental Protection Act 1986*, the *Mining Act 1978,* and associated approvals (such as Works Approval, Prescribed Premises Licence and MDCP/Activity Statement). It defines monitoring locations, parameters, frequency, sampling and analytical methods, data management, reporting obligations, and trigger levels, and incorporates contingency and adaptive management measures to address any deviations.

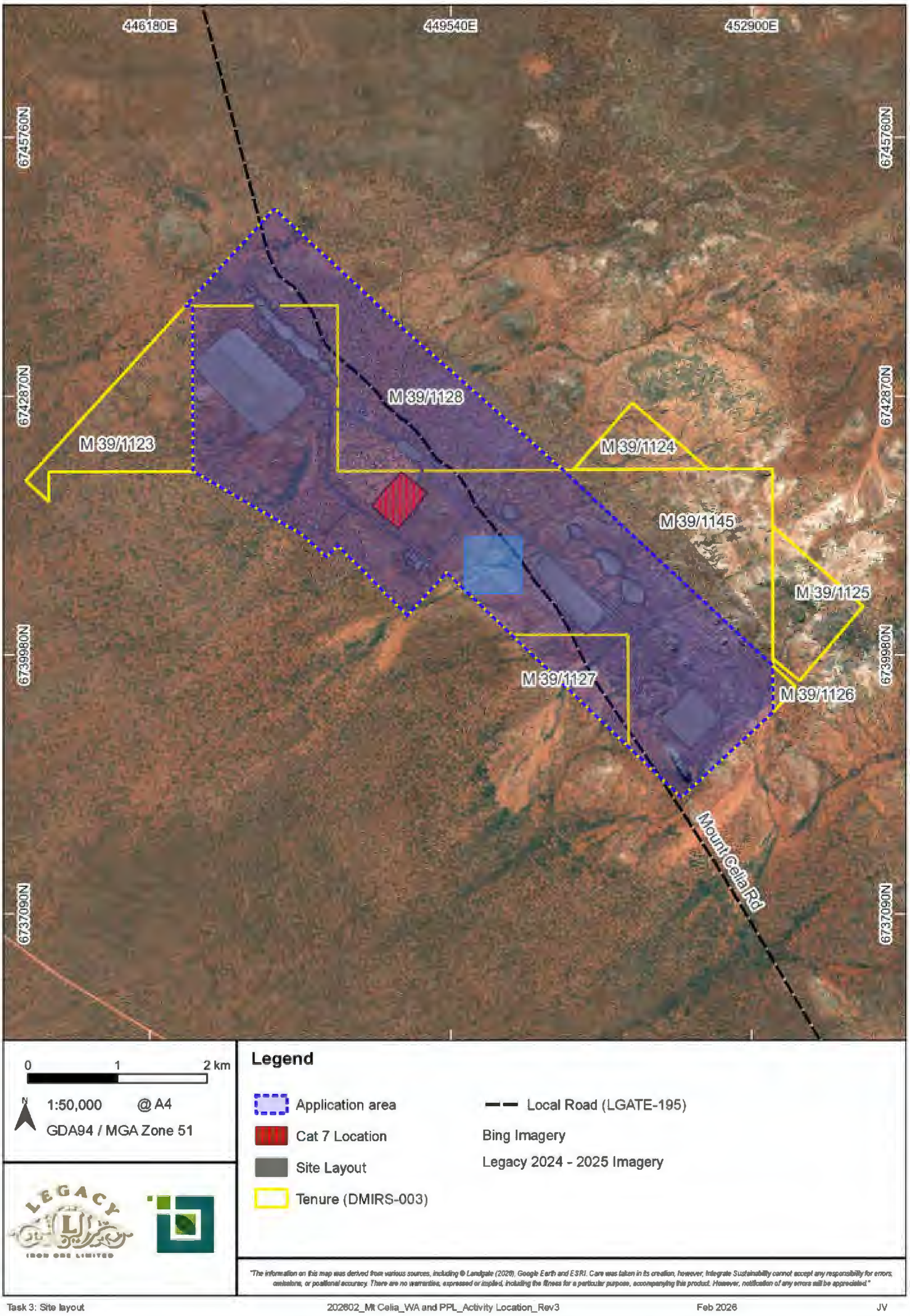

Figure 2. Heap Leach Facility Location in Mt Celia.

2. RELATED MT CELIA MANAGEMENT PLAN PROCEDURE

Legacy Iron is obligated to comply with all relevant legislation, regulations, statutory guidance and standards. This includes:

- Mining Proposal RegID 122281, approved on 14 February 2024 and MDCP Reg ID 204132, approved on 26 September 2025.
- Mt Celia - GWL209078(1) - Licence & Operating strategy
- Mt Celia Dust Management Plan
- Mt Celia Terrestrial Fauna Management Plan
- Mt Celia Heap Leach Facility Operation, Maintenance and Surveillance Manual

3. KEY RISKS AND RECEPTORS

3.1 Sources / Activities

The Heap Leach Facility and Gold Recovery Plant will be located within a cleared area established under the site's Native Vegetation Clearing Permit (10213/1) and Mining Proposals (REGID: 122281). The purpose of selecting an already disturbed area was to minimise the need for clearing, and if required, this will be covered by the NVCP.

The Heap Leach Facility and Gold Recovery Plant will treat low-grade oxide ore through a conventional crushing–agglomerate–heap leach–adsorption–electrowinning (AARL) process flow (Figure 3).

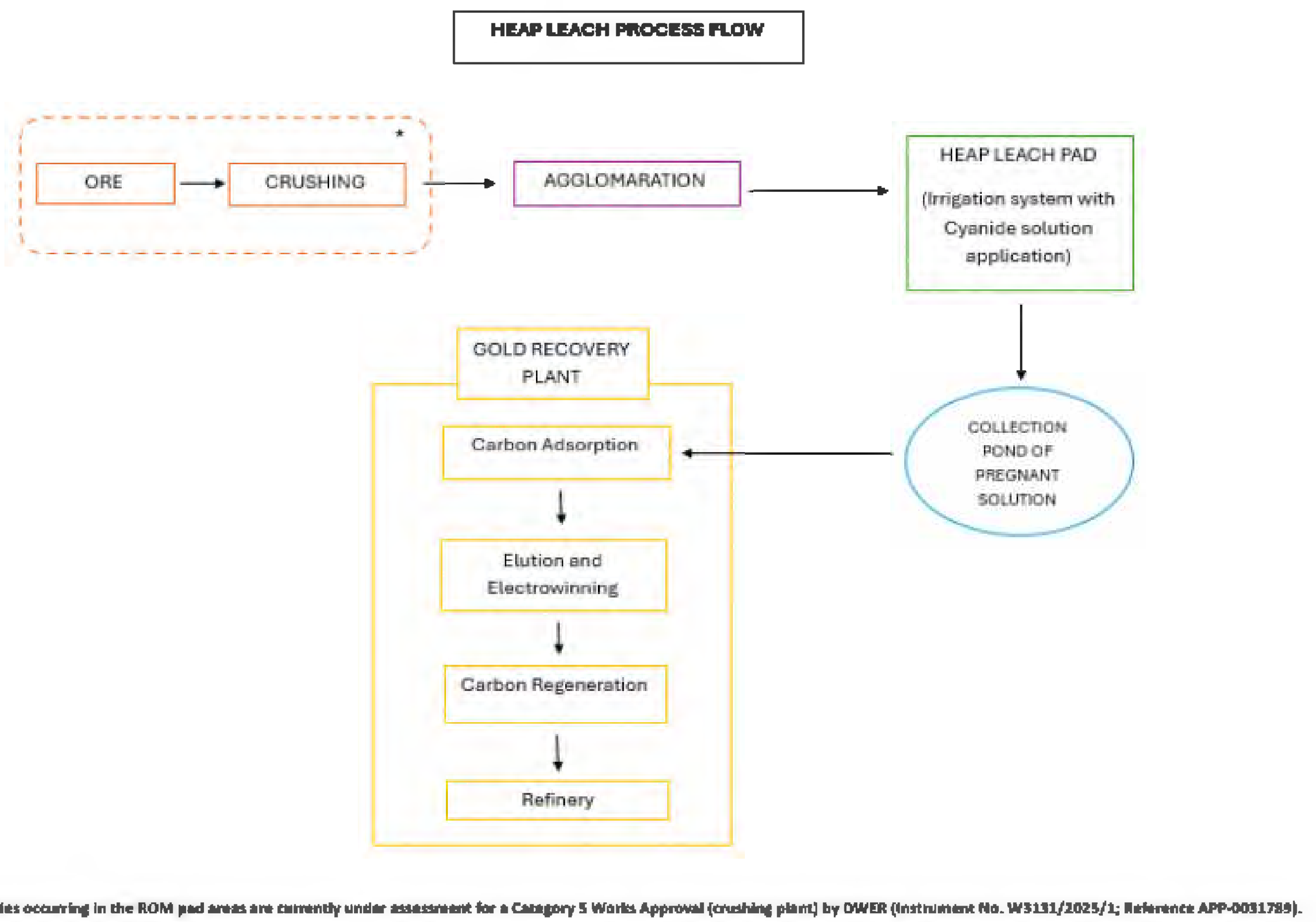

Figure 3. Block Process Flow Diagram

Based on the Heap Leach Facility and Gold Recovery Plant elements and operational context, the principal risks identified are presented in Table 3-1.

Table 3-1 Principal risk sources

Sources/Activities	Description
Dust generation from ore agglomeration and stacking	Generation of dust and fine material during ore agglomeration and stacking activities on the heap leach temporary stockpile area and heap leach pad, respectively, with potential for off-site deposition and occupational exposure.
Heap leach irrigation with cyanide solution	Application of cyanide-bearing solution to the heap leach surface, with potential for over-spraying, ponding or localised runoff outside the lined footprint.
Cyanide-bearing solution management (heaps and ponds).	Leakage, seepage or uncontrolled release of process solution from the heap leach pad, pregnant solution pond (PLS), barren pond or associated solution containment infrastructure, potentially affecting soil and groundwater.
Process solution pipelines and pumping systems	Failure of pipelines, pumps, valves or connections conveying pregnant or barren solutions between the heap leach pad, ponds and the gold recovery plant, resulting in spills or releases.
Carbon adsorption	Release of cyanide-bearing solution due to equipment malfunction, overflow, or operational upset within adsorption columns and associated tanks.
Elution and electrowinning	Generation of process emissions, solution spills or leaks during stripping of loaded carbon and electrowinning operation within the gold recovery plant.
Carbon regeneration kiln	Atmospheric emissions (combustion gases, particulate matter) and potential release of process residues during thermal regeneration of activated carbon.
Smelting and refining	Emission of fumes and particulates during smelting of electrowon sludge and refining of dore, with potential occupational and air quality impacts.
Liner and embankment integrity (heap and ponds)	Structural failure, degradation, or defects in liners and embankments of the heap leach pad and solution ponds, potentially leading to seepage or environmental contamination.
Stormwater management within the heap leach area	Contact stormwater interacting with operational areas and process infrastructure, with potential for contaminated runoff or overtopping of containment systems during extreme rainfall events.
Reagent and cyanide storage areas	Accidental spills or leaks from storage tanks, reagent preparation areas or mixing systems within the heap leach facility or gold recovery plant.
Hydrocarbon storage and use within the heap-leach area.	Leakage of fuels, lubricants or hydraulic fluids from equipment and storage areas located within the heap leach facility or gold recovery plant footprint.

3.2 Receptors

The key environmental receptors that may be affected by the heap leach facility operations, including soils, water, vegetation and wildlife, are described in Table 3-2. Monitoring these receptors helps detect potential impacts and supports timely mitigation.

Table 3-2 Principal receptors

Receptors	Description
Groundwater aquifers	Underlying aquifers that may be impacted by seepage or leakage of process solutions.
Surface water systems	Ephemeral drainage lines or surface water bodies that may receive stormwater runoff during rainfall events.
Soils	Soils within and around the heap-leach and solution management areas that may be affected by spills or seepage.
Adjacent native vegetation	Vegetation surrounding the cleared heap leach footprint may be exposed to dust or contaminated runoff.
Fauna (particularly birds)	Wildlife that may interact with heap leach pads or solution ponds, particularly avifauna.

4. MONITORING PROGRAMS

4.1 Water Monitoring

Water monitoring for the heap leach facility and gold recovery plant will comprise groundwater and surface water monitoring. This monitoring program has been designed to align with the existing Groundwater Operating Strategy and Surface Water Monitoring Program.

4.1.1 Groundwater monitoring

Groundwater monitoring will be undertaken to identify any potential impacts to groundwater levels and quality associated with heap leach operations.

A groundwater monitoring network will be developed, including four bores located around the heap leach area (Figure 4). The monitoring bore locations are provisional and subject to change (Table 4-1).

Table 4-1 Heap Leach monitoring bore locations

Bore Reference	Northing	Easting
HL_MB-001	6742021	448981
HL_MB-002	6741653	448658
HL_MB-003	6741393	448953
HL_MB-004	6741789	449277

Groundwater levels will be monitored monthly using this monitoring network of bores (Figure 4). The proposed quality monitoring program, including parameters, frequencies and methodologies, is shown in Table 4-2.

Table 4-2 Proposed groundwater environmental monitoring program

Bore Reference	Frequency	Methodology	Parameters	
HL_MB-001 HL_MB-002 HL_MB-003 HL_MB-004	Monthly	Field sampling	– Salinity (TDS in mg /L) – pH – Electrical Conductivity (EC in µS/cm)	
	Quarterly	Laboratory testing	**Major Ions:** – Bicarbonate (HCO_3) – Carbonate (CO_3) – Chloride (Cl) – Fluoride (F) – Nitrate (NO_3) – Sulphate (SO_4^{2}) **Metals (dissolved):** – Aluminium (Al) – Antimony (Sb) – Arsenic (As) – Barium (Ba) – Beryllium (Be) – Boron (B) – Cadmium (Cd) – Calcium (Ca) – Chromium (Cr) – Cobalt (Co) – Copper (Cu) – Iron (Fe) – Lead (Pb)	– Magnesium (Mg) – Manganese (Mn) – Mercury (Hg) – Molybdenum (Mo) – Nickel (Ni) – Potassium (K) – Sodium (Na) – Tin (Sn) – Uranium (U) – Vanadium (V) – Zinc (Zn) **Nutrients & Others:** – Total alkalinity – Total acidity – Total Cyanide (CN) – Weak Acid Dissociable Cyanide (WAD CN) – Total Kjeldahl Nitrogen (TKN) – Total Nitrogen (N) – Reactive Phosphorus (P) – Total Phosphorus (P)

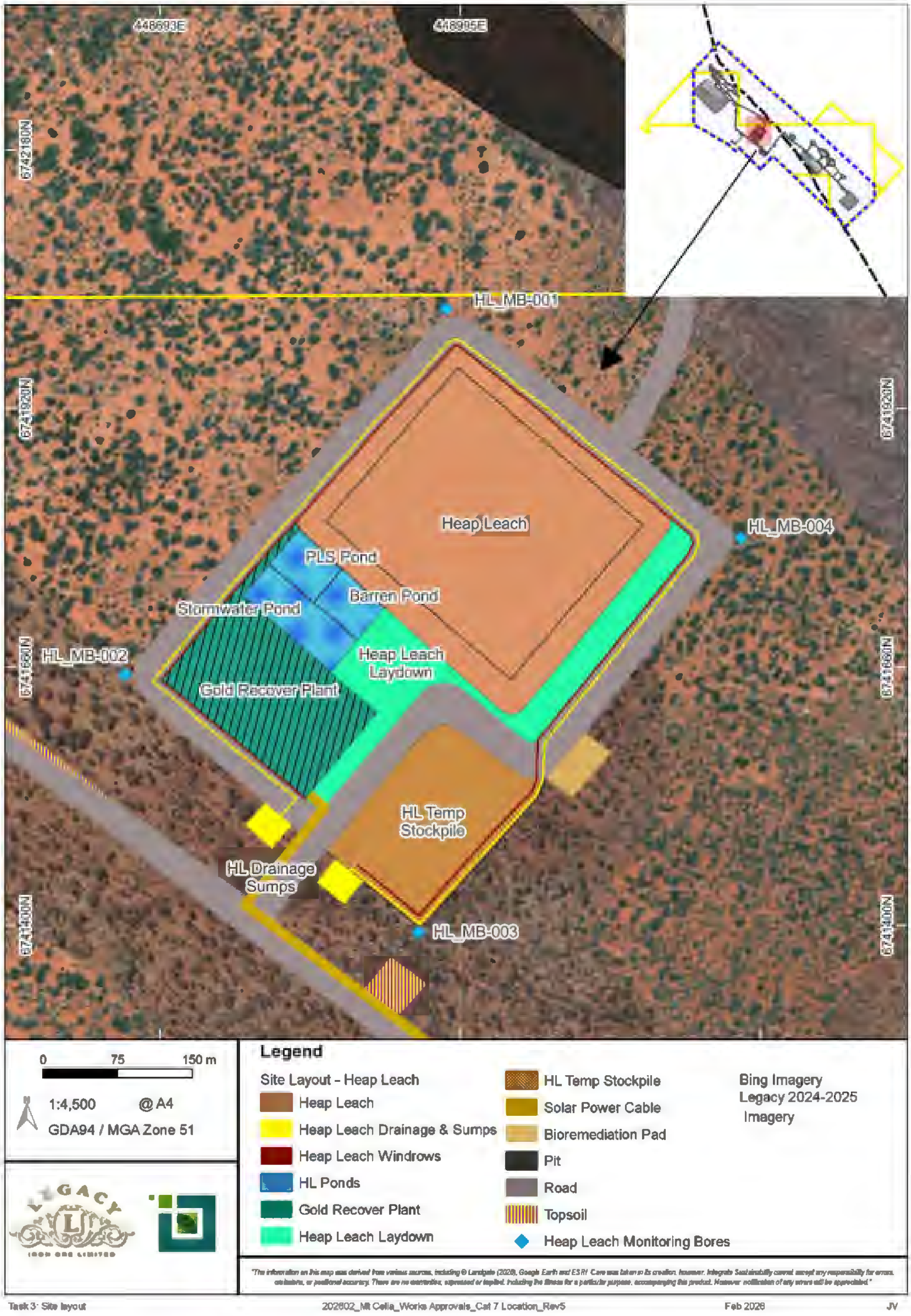

Figure 4. Location of groundwater monitoring network bores surrounding the heap leach facility.

4.1.2 Surface water monitoring

The heap leach facility and gold recovery plant have been designed to maintain separation between contact (process-affected) and non-contact water. Surface water monitoring will be undertaken ad hoc for non-contact water. This non-contact water will be diverted to the drainage channels and collected into the HL Drainage Sumps (Figure 4).

Surface water monitoring will involve inspections of drainage system integrity and visual inspections of drainage systems and surface water following significant rainfall events. In addition, visual monitoring for wet or damp ground adjacent to the heap leach pad and solution ponds will be conducted twice daily as part of routine operational inspections. Any evidence of wet or damp ground will be investigated and managed in accordance with site procedures and trigger action response plans.

4.2 Dust Monitoring

Dust monitoring will be undertaken in accordance with the site's existing dust monitoring program and the dust monitoring procedure. The dust management plan will be extended to include the heap leach area.

4.3 Wildlife Monitoring

Daily inspections of heap leach pads and solution ponds, including barren/pregnant solution (PLS) ponds, will be conducted to identify any evidence of fauna interaction. Cyanide concentration and pH will be maintained within design limits to minimise the risk of wildlife exposure. Any incidents will be reported and managed in accordance with the site Cyanide Management Plan and the Mt Celia Terrestrial Fauna Management Plan.

4.4 Facility Monitoring

Routine monitoring will be undertaken to verify the integrity and performance of the heap leach facility and gold recovery plant. This will include daily inspections of heap leach pads and embankments, monitoring of the leak detection system, and changes in pond levels or liner integrity. All inspections, findings and maintenance actions will be documented in accordance with site procedures.

5. DATA MANAGEMENT AND REPORTING

All monitoring data generated under the groundwater dust, wildlife and facility monitoring programs will be recorded, stored and managed in accordance with site procedures. Field datasheets used during monitoring activities will be scanned and filed electronically with clear naming conventions and dates to allow future retrieval. Recorded data will be entered into the site monitoring database or approved data storage system.

Laboratory results will be reviewed upon receipt and entered into relevant monitoring registers, ensuring all data are appropriately labelled and dated. Monitoring results will be assessed against internally defined trigger levels and relevant approval conditions.

Where monitoring results indicate an exceedance of trigger values or abnormal conditions, an incident will be raised, and an investigation will be undertaken to determine the cause and the required management response. Applicable management commitments outlined in the site operating strategies will be implemented as required.

Any incident that has caused, or has the potential to cause, significant environmental harm will be reported to the relevant regulator in accordance with statutory requirements and specified timeframes. Routine monitoring results will be compiled and reported as required under relevant licence, approval and reporting obligations.

6. REVIEW AND CONTINUOUS IMPROVEMENT

This monitoring plan will be reviewed on a two-yearly basis, or earlier where required. An earlier review may be triggered when an increased environmental risk is identified, a significant incident occurs, or changes to relevant legislation, approvals, or site operations are introduced.

Document control will be maintained to ensure the current version of the monitoring plan is clearly identified and implemented. All revisions will be recorded, including details of changes made, issue dates, and approval authority, to ensure traceability and continuous improvement.

APPENDIX D – PRELIMINARY HEAP LEACH AND GOLD RECOVERY DESIGN

LEGACY IRON ORE LIMITED

1670 MT CELIA GOLD MINE

PRELIMINARY HEAP LEACH AND GOLD RECOVERY PLANT DESIGN REPORT

Document No. 1670-PR-RP-001

Rev	Date	Description	Originator	Checked	Approved	Client
A	10/02/26	Issued for Internal Review	DF	MS	MS	
B	12/02/26	Issued for Client Review	DF	MS	MS	
C	24/02/26	Issued for Environmental Approval (Draft)	MS	KP/DF	MS	

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EXECUTIVE SUMMARY

The Mt Celia Gold Project has been designed as a low-complexity, environmentally contained heap-leach operation capable of safely processing gold-bearing ore from the Kangaroo Bore and Blue Peter deposits. The project integrates proven metallurgical processes with robust environmental safeguards to ensure compliance with Western Australian regulatory requirements, including those administered by DMIRS, DWER, and the Department of Health.

The processing facility is designed to treat approximately 150,000 tonnes per annum during the initial operation of two (2) years, thereafter reduced to 119,500 tonnes per annum from the 3rd year to the 9th year and finally 51,514 tonnes per annum in the 10th year of operation. The flowsheet comprises crushing, agglomeration, heap leaching, carbon adsorption, elution, electrowinning, carbon regeneration, and gold refining. Each circuit has been engineered to minimise environmental risk through full containment of process solutions, controlled reagent handling, and segregation of clean and contaminated water.

Environmental protection is embedded throughout the design. The heap leach pad incorporates a composite liner system and engineered drainage network to ensure complete capture of pregnant solution. All process areas handling cyanide-bearing or caustic solutions are fully bunded and equipped with sump pumps that return captured liquids to the barren pond. Stormwater is diverted away from process areas through dedicated drainage structures, while process water is managed within a closed-loop system to prevent discharge to the environment.

Cyanide management aligns with the principles of the International Cyanide Management Code. Cyanide is stored in a dedicated bunded tank, dosed through controlled metering systems, and maintained at concentrations appropriate for safe and effective leaching. pH control is maintained through the addition of caustic soda to suppress hydrogen cyanide volatilisation.

The project incorporates comprehensive monitoring and reporting systems to ensure ongoing compliance with regulatory conditions. These include routine inspections of liners and bunds, monitoring of pond freeboard, cyanide concentration checks, groundwater protection measures, and air quality controls.

Overall, the Mt Celia Gold Project has been designed to operate safely and efficiently, in full compliance with environmental and regulatory requirements. The integrated engineering and environmental controls provide a strong foundation for responsible gold extraction and long-term environmental protection.

1. PROJECT OVERVIEW

The Mt Celia Gold Project is a small-scale, fully contained heap-leach operation located within the Laverton Tectonic Zone of Western Australia, approximately 40 kilometres south of the Sunrise Dam Gold Mine. The project draws ore from the Kangaroo Bore and Blue Peter deposits, which collectively host a JORC-compliant resource of 4.03 million tonnes at an average grade of 1.84 g/t Au. These deposits have been progressively refined through drilling campaigns completed up to November 2024, improving geological confidence and supporting the development of a low-impact, modular processing facility.

The processing plant has been designed to operate at approximately 150,000 tonnes per annum during the initial years, with throughput reducing as ore availability declines. The flowsheet is intentionally simple, relying on proven technologies and conservative design parameters to ensure operational reliability and environmental compliance. The core process steps include crushing, agglomeration, heap leaching, carbon adsorption, elution, electrowinning, carbon regeneration, and gold refining.

Environmental protection is embedded throughout the project design. The heap leach pad incorporates engineered liners and a drainage network to ensure complete capture of pregnant solution. All process areas handling cyanide-bearing or caustic solutions are fully bunded and equipped with sump pumps that return captured liquids to the barren pond. Stormwater is segregated from process water through diversion bunds and controlled drainage pathways, ensuring that clean water remains uncontaminated and that process water remains within the closed-loop system.

The project footprint has been minimised to reduce land disturbance and facilitate progressive rehabilitation. Infrastructure is concentrated within a compact processing precinct adjacent to the heap leach pad, including reagent storage, carbon handling facilities, the gold room, and utilities. The layout has been designed to optimise traffic flow, minimise double-handling of materials, and ensure safe separation between operational areas.

The Mt Celia Project is designed to operate with a high level of environmental stewardship, incorporating robust containment, monitoring, and compliance systems. The combination of a simple flowsheet, conservative design criteria, and comprehensive environmental safeguards provides a strong foundation for responsible gold extraction and long-term environmental protection.

2. SITE DESCRIPTION & REGIONAL CONTEXT

Mt Celia Gold Project is situated within the Laverton Tectonic Zone of the Eastern Goldfields Province, a region characterised by Archaean greenstone belts that host numerous structurally controlled gold deposits. The project area lies approximately 40 kilometres south of the Sunrise Dam Gold Mine and is accessible via established haul roads linking the Kangaroo Bore and Blue Peter deposits to the central processing precinct.

The surrounding landscape consists of gently undulating terrain with low-relief ridgelines, shallow drainage depressions, and scattered lateritic breakaways. Vegetation is typical of the Eastern Goldfields, comprising mixed eucalypt woodlands, acacia shrublands, and spinifex grasslands. Land use in the region is dominated by mining, pastoral activities, and exploration tenure.

Climatic conditions are semi-arid, with hot summers, cool winters, and low, variable annual rainfall. Rainfall events are typically episodic and associated with convective storms or tropical systems moving inland. These conditions influence the design of stormwater controls, pond freeboard requirements, and water balance assumptions for the heap leach operation.

The project footprint has been deliberately minimised to reduce disturbance and facilitate progressive rehabilitation. The processing plant, reagent storage areas, carbon handling facilities, and gold room are co-located adjacent to the heap leach pad to consolidate infrastructure and reduce the extent of cleared land. The site layout also ensures safe separation between operational areas, efficient traffic flow, and clear delineation between clean and process-affected water systems.

The regional hydrogeology consists of weathered Archaean bedrock overlain by variable thicknesses of saprolite and colluvial material. Groundwater occurs within fractured bedrock and saprolitic zones, typically at moderate depths. The heap leach pad and associated ponds have been designed with composite liners and engineered drainage systems to ensure full containment of cyanide-bearing solutions and to protect underlying groundwater resources.

The project is located within an established mining district with existing infrastructure, workforce availability, and regulatory familiarity. This context supports the development of a low-impact, environmentally contained heap-leach operation that aligns with regional land use and environmental expectations.

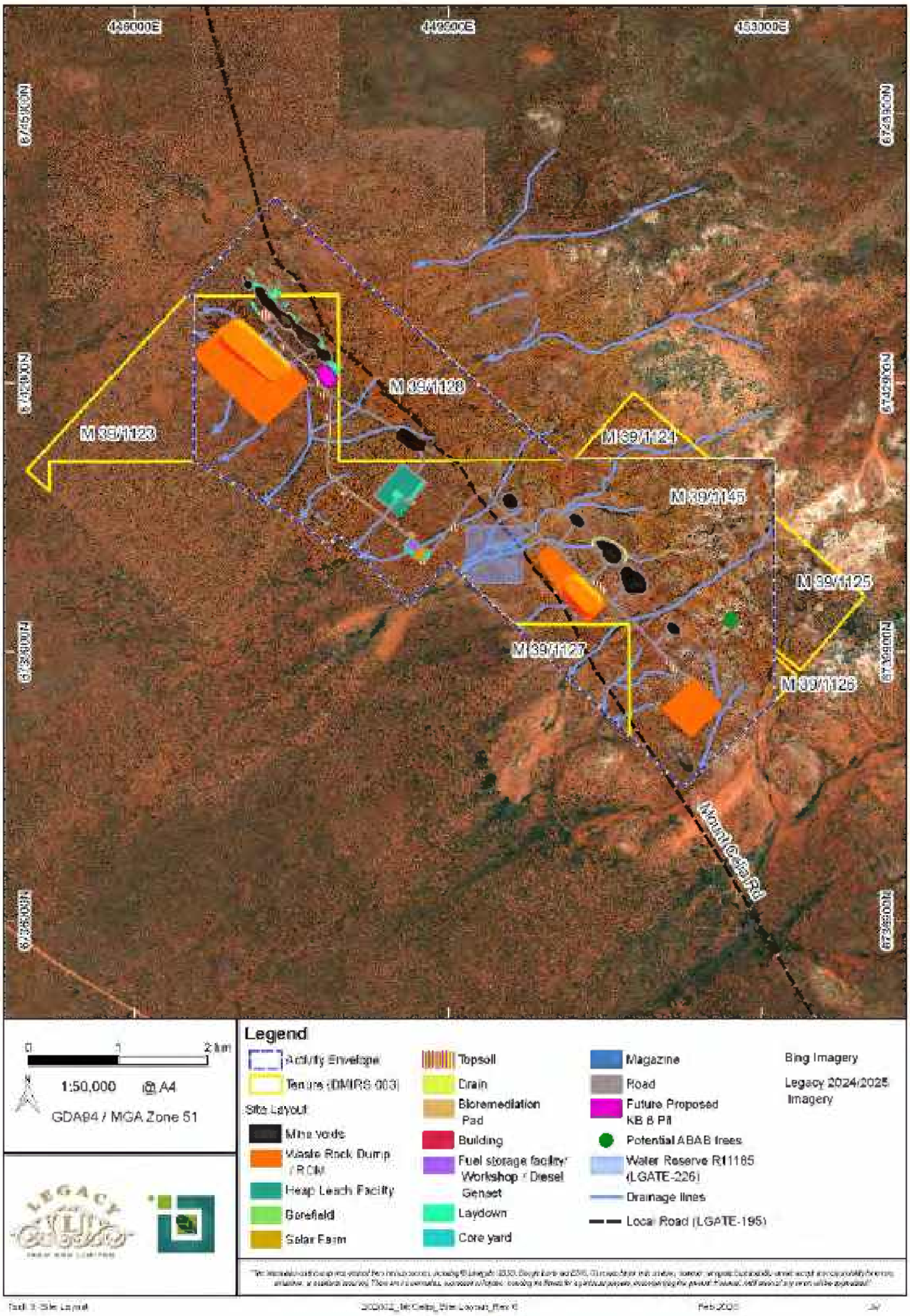
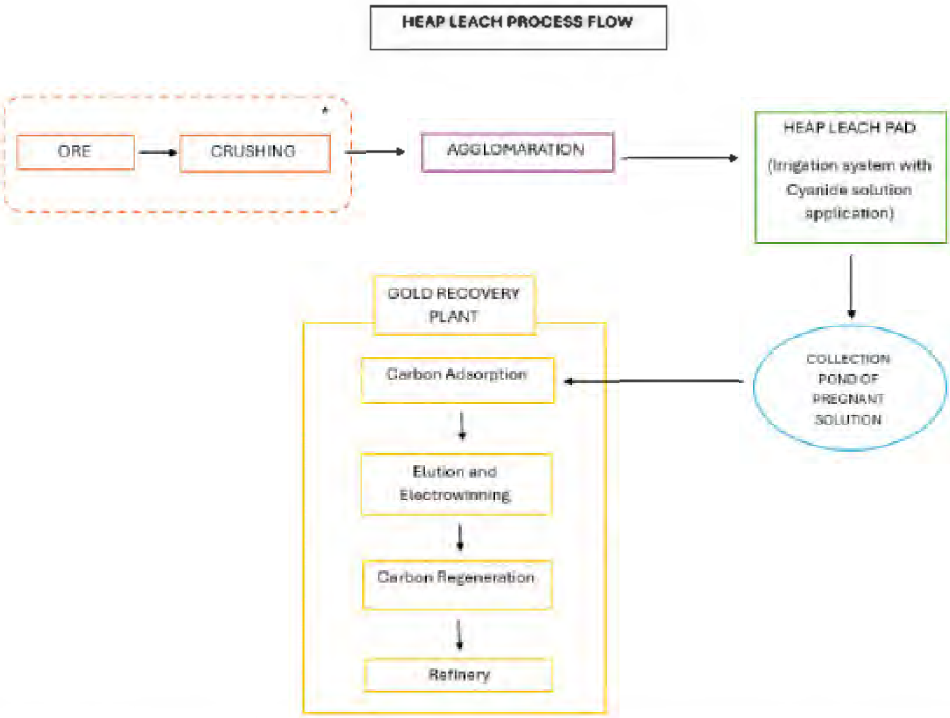


Figure 1: Site Plan

3. PROCESS DESCRIPTION

The Mt Celia Heap Leach and Gold Recovery Facility has been designed as a compact, low-complexity heap-leach operation that integrates proven metallurgical processes with robust environmental safeguards (Figure 2). The flowsheet is intentionally simple, minimising water use, reagent consumption, and infrastructure footprint while ensuring full containment of cyanide-bearing solutions. This section provides a detailed description of each process area, including engineering design parameters and the environmental controls embedded within each circuit.



*Activities occurring in the ROM pad areas are currently under assessment for a Category 5 Works Approval (crushing plant) by DWER (Instrument No. W3131/2025/1; Reference APP-0031789).

Figure 2: Block Process Flow Diagram

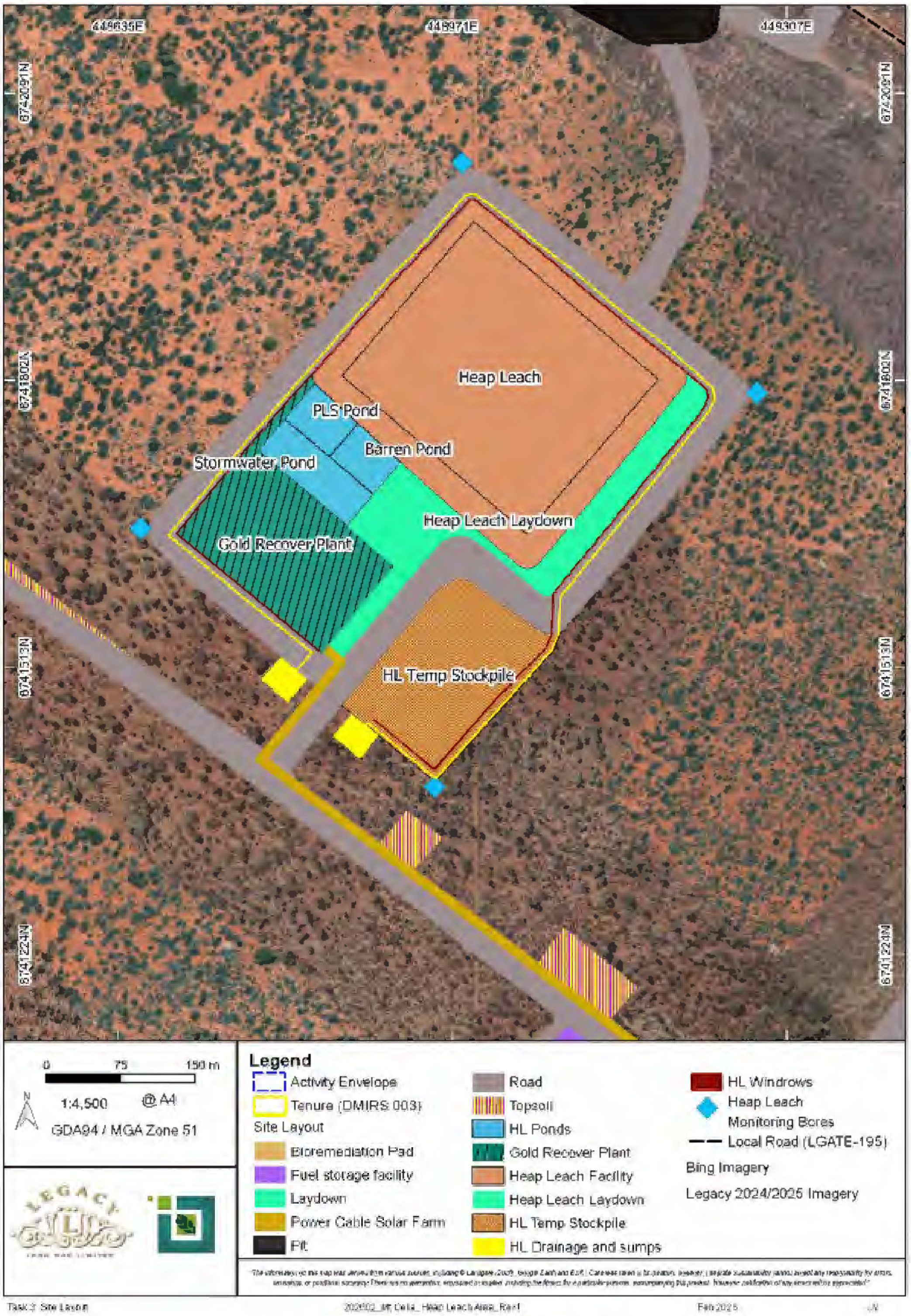


Figure 3: Process Plant Layout

3.1 Crushing Circuit

Ore from the Kangaroo Bore and Blue Peter deposits is delivered to the processing precinct and directed to the crushing area. During the initial operating period, mobile contract crushing is utilised to reduce capital expenditure and accelerate project start-up. A permanent crushing plant is installed once throughput stabilises.

The crushing circuit is designed for a nominal throughput of approximately 40 tonnes per hour, operating 12 hours per day to maximize utilization of the renewable energy produced by solar panels. The circuit comprises a ROM bin fitted with a static grizzly to prevent oversize entry, a vibrating feeder for controlled feed, a primary jaw crusher operating in open circuit, and a secondary cone crusher operating in closed circuit with a double-deck vibrating screen. The screen undersize forms the final crushed product, targeting a nominal P80 of 12.5 mm.

Environmental controls are integrated throughout the crushing area. Water sprays are installed at key transfer points to suppress dust emissions, and the entire area is contained within a bunded footprint equipped with a sump pump to capture and return any water or slurry to the process water system. These measures ensure that dust, runoff, and process water remain fully controlled.

The Process Flow Diagram for the crushing circuit is shown in Figure 4.

Reference Drawing:

- MIN-1670-2100-PFD-001

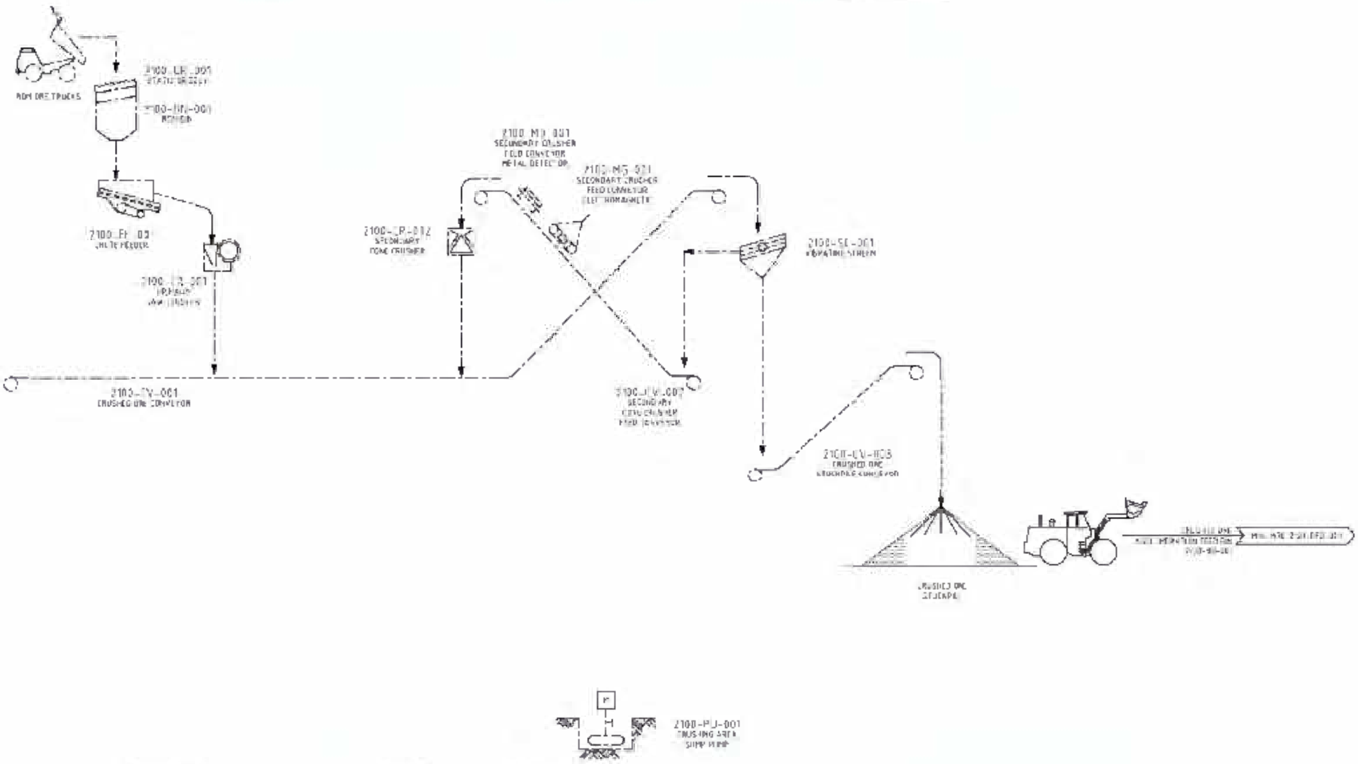


Figure 4: Crushing Plant PFD

3.2 Agglomeration Circuit

Crushed ore is reclaimed from the stockpile and fed into the agglomeration circuit, where cement and raw water are added to improve heap permeability and structural stability. The agglomerator operates at a nominal throughput of 100-150 tonnes per hour, matching the crushing circuit.

Cement is metered into the feed at a controlled rate of approximately 0.6 kg per tonne of ore, while water is added to achieve a target moisture content of around 10%. The rotating drum provides thorough mixing, producing uniform agglomerates suitable for stacking on the heap.

The agglomeration area is fitted with sump pumps to capture any spillage or washdown water. All captured liquids are returned to the barren pond.

The Process Flow Diagram of the agglomeration circuit is shown in Figure 5.

Reference Drawing:

- MIN-1670-2120-PFD-001

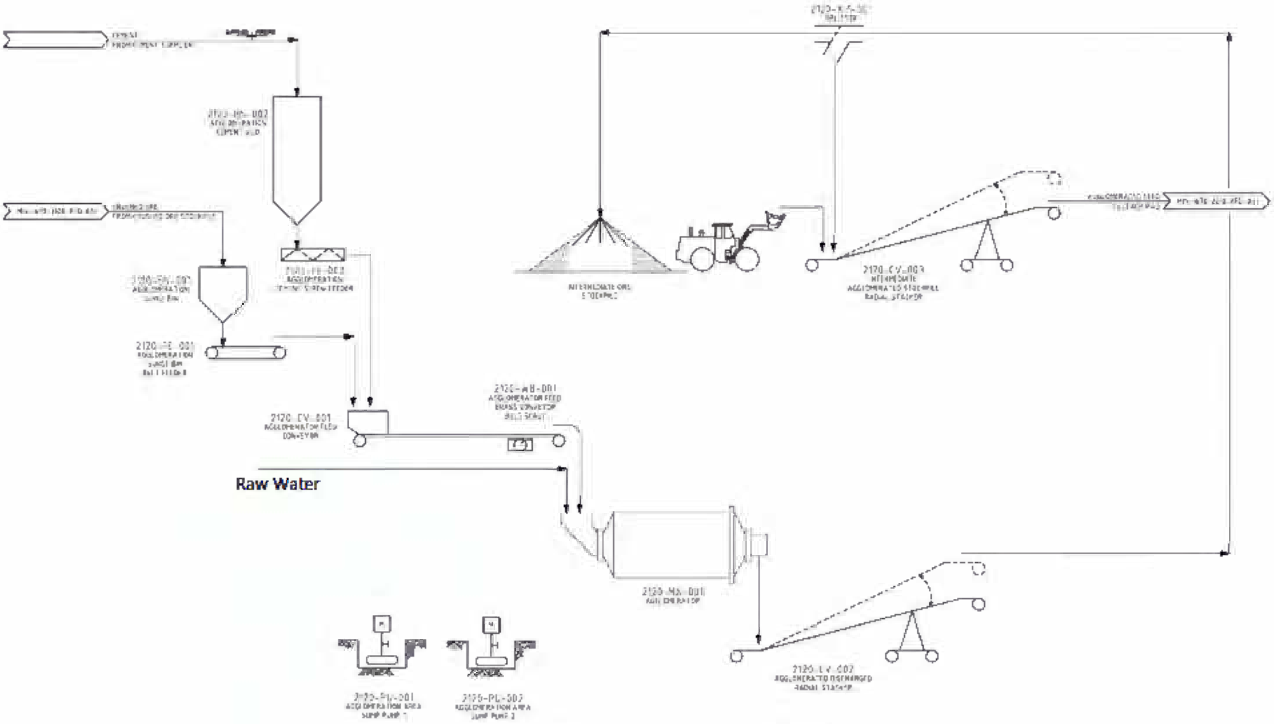


Figure 5: Agglomeration PFD

3.3 Heap Leach Facility

The heap leach pad is the central component of the processing operation. It has been designed with a composite liner system and engineered drainage network to ensure complete containment of process solutions. The pad is constructed with a gentle slope to promote drainage and prevent ponding.

Agglomerated ore is stacked in 6-metre-high lifts, forming leach panels approximately 100 metres long and 30 metres wide. The heap is irrigated using a network of 125 mm and 25 mm header pipes feeding flexible soaker hoses spaced at 5-metre intervals. The design irrigation rate is 10 $L/h/m^2$, supplied from the barren pond at a pumping rate of approximately 37.5 m^3/h.

As the solution percolates through the heap, gold is dissolved and carried to the base of the pad, where it is collected by 100 mm perforated pipes installed at 6-metre spacing. The pregnant solution is conveyed to the lined pregnant pond for subsequent processing.

The heap design incorporates substantial environmental protection. The composite liner prevents infiltration to groundwater, while the drainage network ensures rapid collection of solutions, reducing hydraulic head on the liner. Stormwater diversion structures prevent clean water from entering the heap area, maintaining separation between clean and process-affected water.

The heap leach facility has been designed by Tailex, and reference should be made to their report titled "Mt Celia Project – Heap Leach Facility Design" for detailed design information.

The Tailex report addresses the design of the heap leach pad, solution collection and recovery systems, surface water management, and pond infrastructure, including pregnant and barren solution ponds and stormwater ponds, as well as closure design considerations.

The Process Flow Diagram of the heap leach circuit is shown in Figure 6.

Reference Drawing:

- MIN-1670-2210-PFD-001

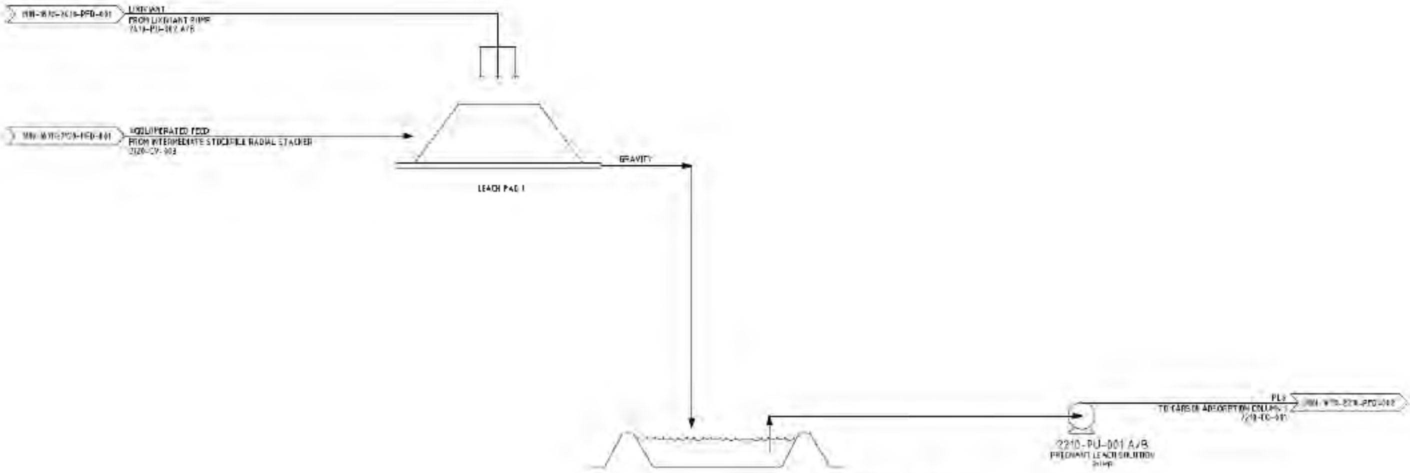


Figure 6: Heap Leach PFD

Figure 7: Heap Leach Pad and Pond Design (Courtesy – Tailex)

Figure 8: Heap Leach Pad Drainage Design (Courtesy – Tailex)

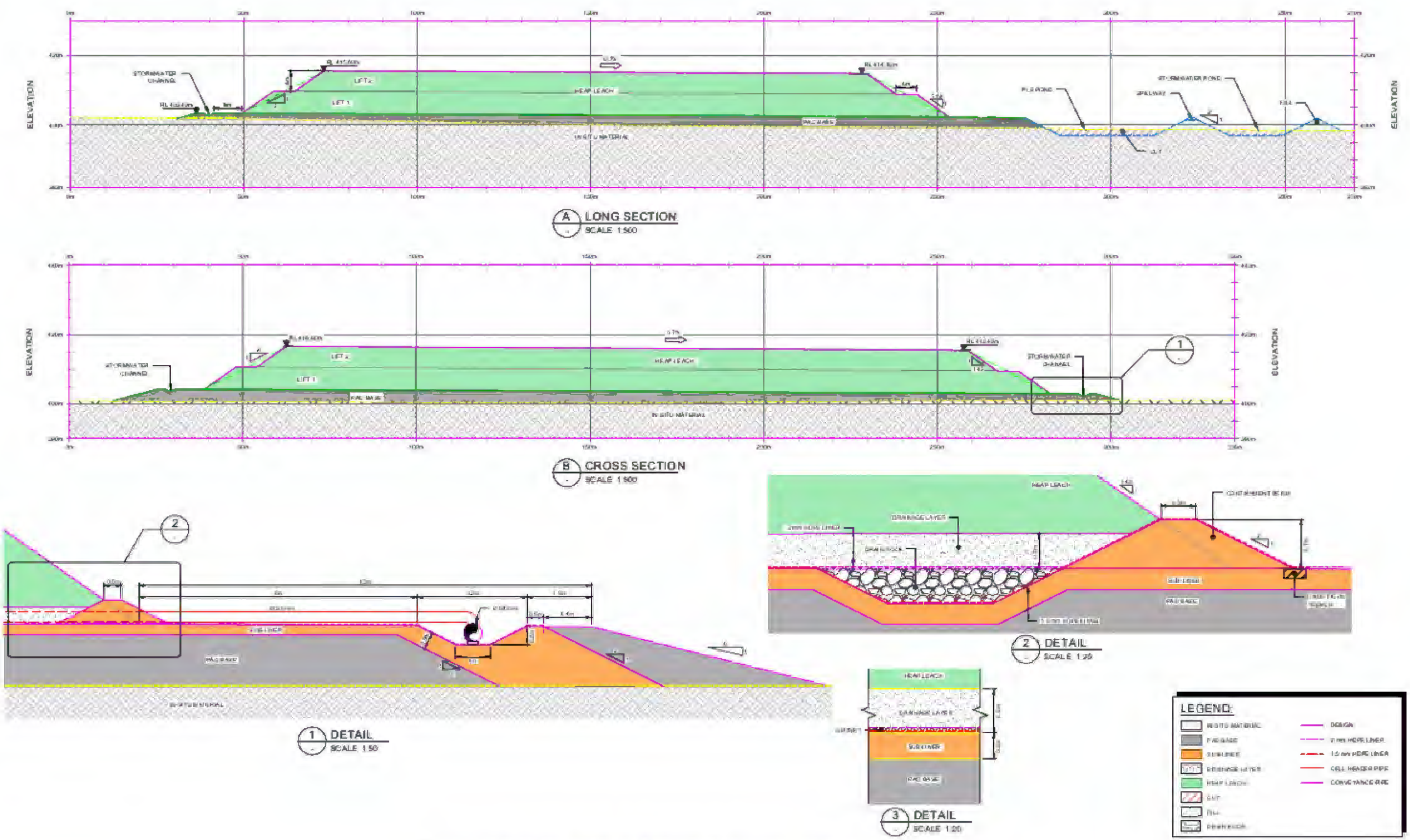


Figure 9: Heap Leach Pad Design (Courtesy – Tailex)

3.4 Carbon Adsorption Circuit

Pregnant solution is pumped from the pregnant pond to the carbon adsorption circuit, which consists of five carbon columns arranged in series. The solution flows upward through each column, maintaining an expanded carbon bed with approximately one metre of freeboard. Activated carbon adsorbs dissolved gold as the solution progresses through the circuit.

Each column contains approximately 2.5 tonnes of carbon. Carbon movement is controlled using eductors: loaded carbon is withdrawn from the first column, and regenerated or fresh carbon is added to the final column. The design carbon movement rate is approximately one tonne per week, adjustable based on metallurgical performance.

The carbon adsorption area is fully bunded, and sump pumps return any captured solution to the barren pond. This ensures that the cyanide-bearing solution remains contained and that no process liquor escapes to the environment.

The Process Flow Diagram of the carbon adsorption circuit is shown in Figure 10.

Reference Drawing:

- MIN-1670-2210-PFD-002

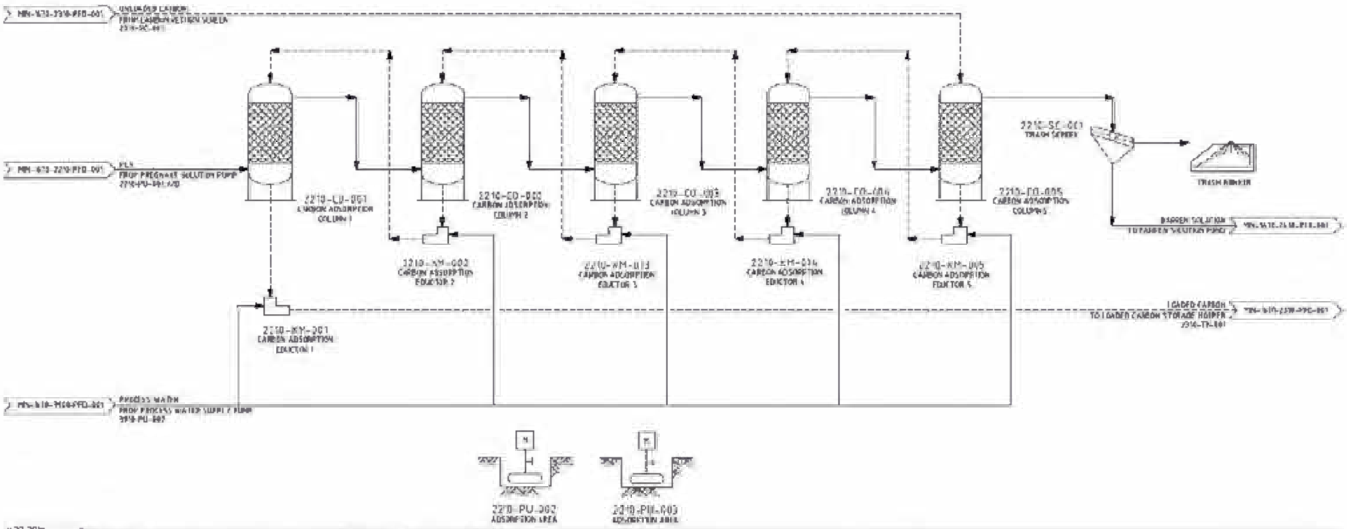


Figure 10: Carbon Adsorption Circuit

3.5 Elution and Electrowinning Circuit

Loaded carbon is transferred to the elution circuit, where gold is stripped using a heated caustic-cyanide solution. The elution column holds approximately one tonne of carbon, and each strip cycle takes around 30 hours to complete.

Strip solution is prepared in the eluate tank, typically containing 2% caustic soda and 0.5% sodium cyanide. The solution is heated to approximately 95°C using an electric heater before passing through the elution column. Gold-bearing eluate is then filtered and directed to electrowinning cells, where gold is plated onto stainless steel cathodes.

After electrowinning, the barren eluate is returned to the eluate tank for reuse, maintaining a closed-loop system. At the end of each strip cycle, a portion of the eluate may be discharged to the barren pond and replaced with fresh solution to maintain chemical balance.

The elution area is fully bunded, with sump pumps returning all captured liquids to the barren pond.

Depending upon carbon activity tests and the rate of carbonate build-up on the activated carbon, an acid wash stage can be carried out where the carbon is gently agitated in a weak hydrochloric acid solution. After acid contact, the solution is drained and neutralised with caustic solution. The activated carbon is screened and returned to the absorption circuit. Acid wash and neutralisation steps are also contained within bunded areas, ensuring safe handling of acidic and caustic solutions.

The Process Flow Diagram of the elution and electrowinning circuit is shown in Figure 11.

Reference Drawing:

- MIN-1670-2310-PFD-001

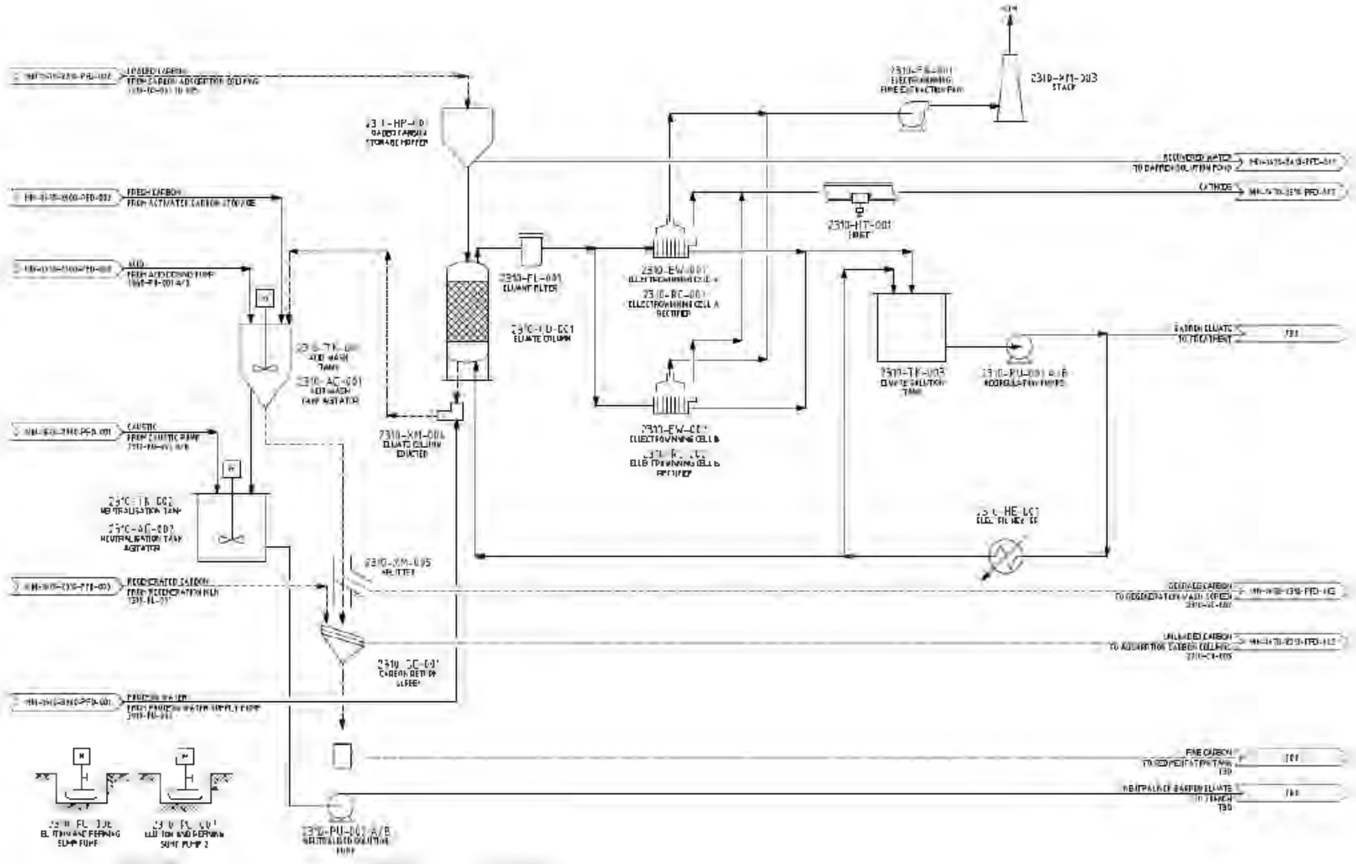


Figure 11: Elution and Electrowinning Circuit

3.6 Carbon Regeneration Kiln

Activated carbon is periodically regenerated to restore adsorption capacity. Carbon from the acid wash circuit is screened, with oversize material fed to the regeneration kiln at a design rate of approximately 70 kg per hour. The kiln operates at temperatures between 750°C and 800°C, with a typical retention time of 45 minutes.

Regenerated carbon is quenched and returned to the carbon adsorption circuit. The regeneration area is bunded and equipped with a sump pump to capture any spillage or washdown water.

The Process Flow Diagram of the carbon adsorption circuit is shown in Figure 12.

Reference Drawing:

- MIN-1670-2310-PFD-003

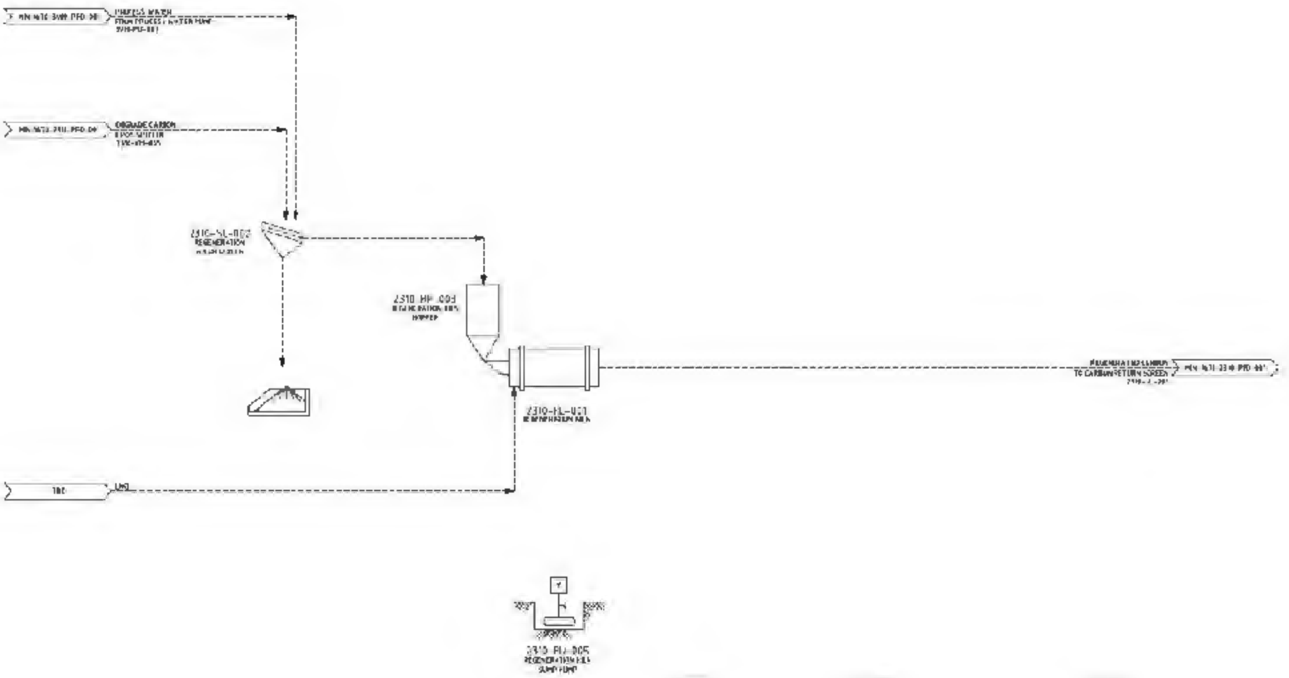


Figure 12 PFD for Carbon Regeneration Kiln

3.7 Refinery Circuit

Gold-laden cathodes from the electrowinning cells are transferred to the gold room, where gold is removed using high-pressure water sprays. The resulting sludge is filtered, mixed with fluxes, and smelted in a 30 kW electric furnace operating at 1100–1200°C. The molten gold is poured into moulds to produce bullion bars.

The gold room is a secure, bunded area equipped with fume extraction systems to manage emissions from smelting and electrowinning. Any captured liquids are returned to the barren pond.

Between the Gold Filter and the Gold Furnace, there needs to be a Drying Oven to remove moisture before smelting in the furnace.

The Process Flow Diagram of the refinery circuit is shown in Figure 13.

Reference Drawing:

- MIN-1670-2310-PFD-002

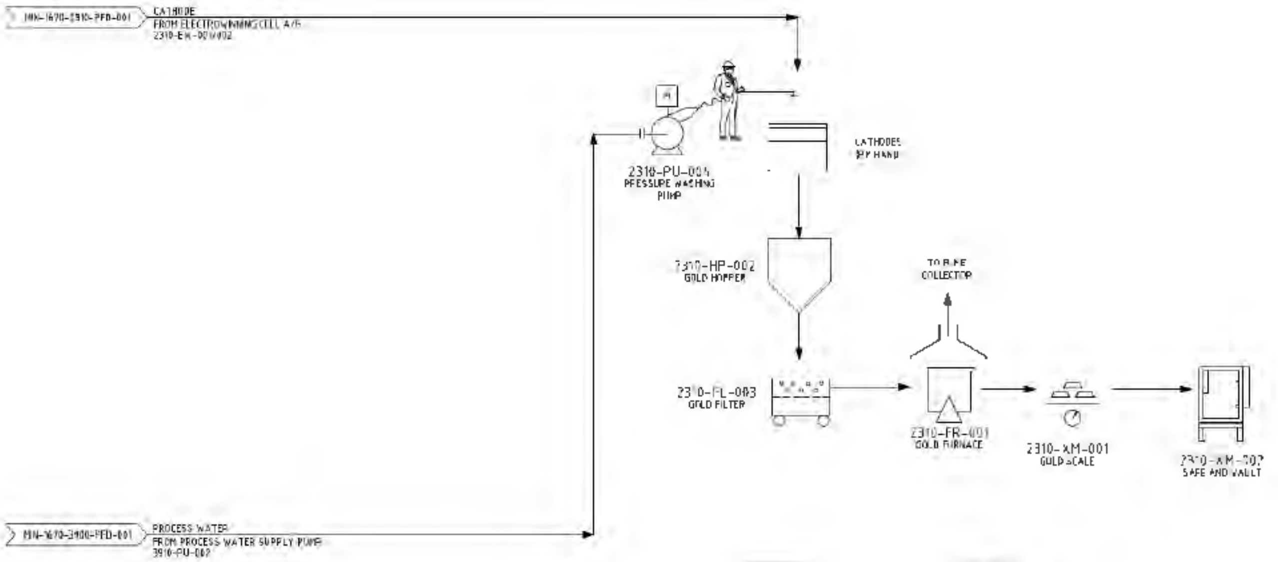


Figure 13: Refinery PFD

3.8 Reagents

Reagents used in the process include sodium cyanide, caustic soda, hydrochloric acid, scale inhibitor, cement, and activated carbon. All reagents are stored in dedicated bunded areas with appropriate segregation to prevent incompatible interactions:

- Cyanide is delivered as a 30% solution and stored in a 70 m³ tank. Metering pumps supply cyanide to the barren pond and elution circuit.
- Caustic soda is delivered as a 50% solution and stored in a 30 m³ tank.
- Hydrochloric acid is supplied in IBCs and diluted to 3% for acid washing.
- Scale inhibitor is prepared in a mixing vessel and dosed to the barren pond as required.
- Cement is delivered in bulk and stored in a 50-tonne silo for agglomeration.
- Activated carbon is supplied in bulk bags and stored in a dedicated area.

All reagent areas are bunded and equipped with sump pumps that return captured liquids to the barren pond.

The Process Flow Diagram of the reagents circuit is shown in Figure 14 and Figure 15.

Reference Drawing:

- MIN-1670-2900-PFD-001
- MIN-1670-2900-PFD-002

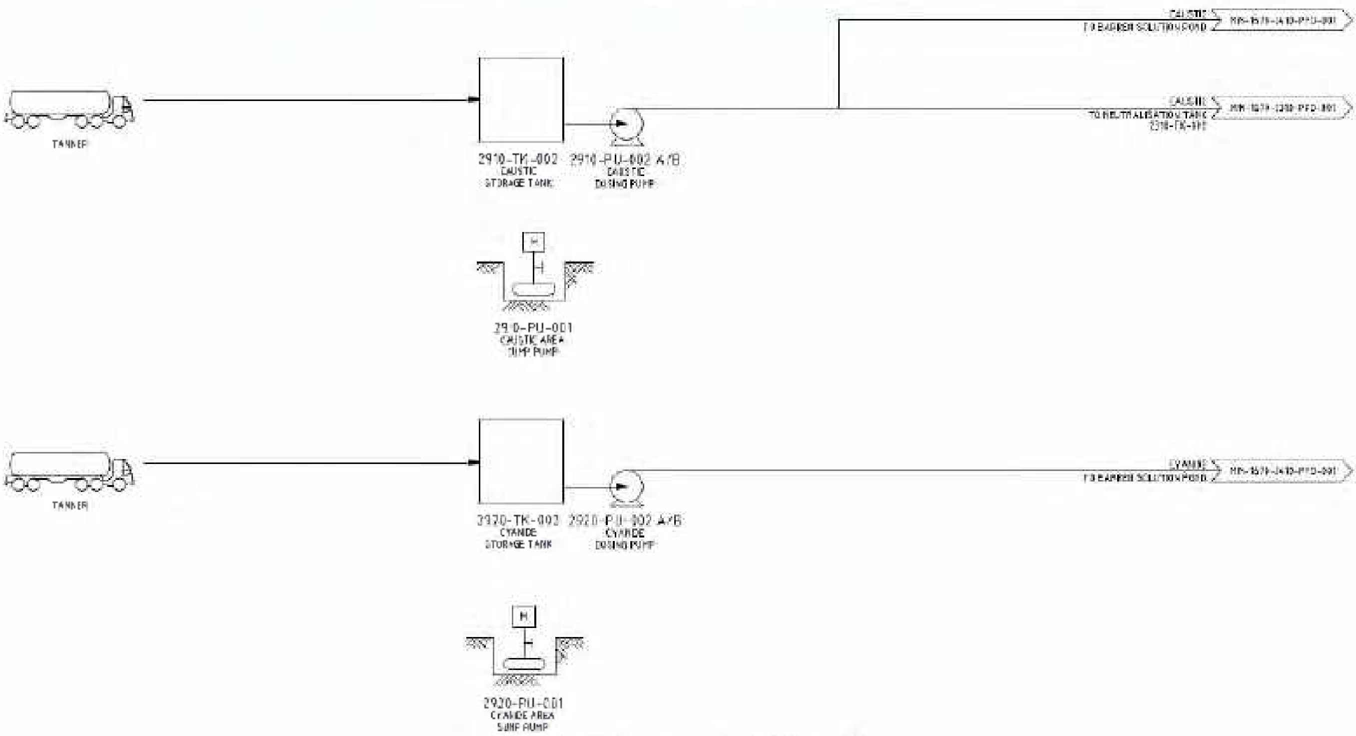


Figure 14: Reagents PFD (Sheet 1)

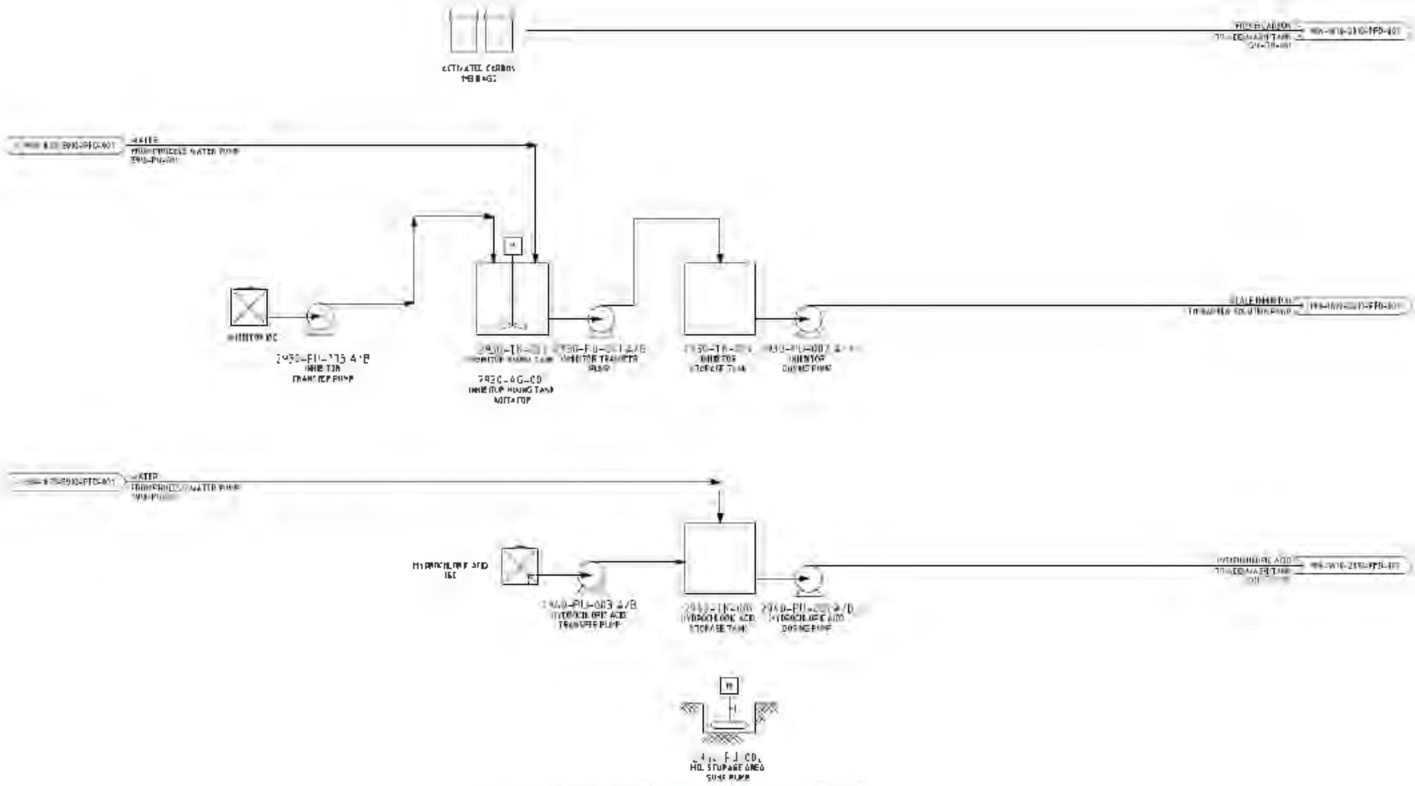


Figure 15: Reagents PFD (Sheet 2)

3.9 Utilities and Services

The processing facility includes dedicated systems for process water, potable water, compressed air, and electrical supply. Process water is stored in a dedicated tank and used for dust suppression, equipment washdown, and solution make-up. Potable water is supplied to the gold room and other areas requiring clean water.

The plant will be equipped with fire water tank, pump, ring main, hydrants, complying with AS 2304, as 2941, as 3500, as 2419.1.

All utility areas are designed to prevent contamination of clean water systems and to ensure that process-affected water remains within the closed-loop circuit.

The Process Flow Diagram of the utility circuit is shown in Figure 16.

Reference Drawing:

- MIN-1670-3900-PFD-001

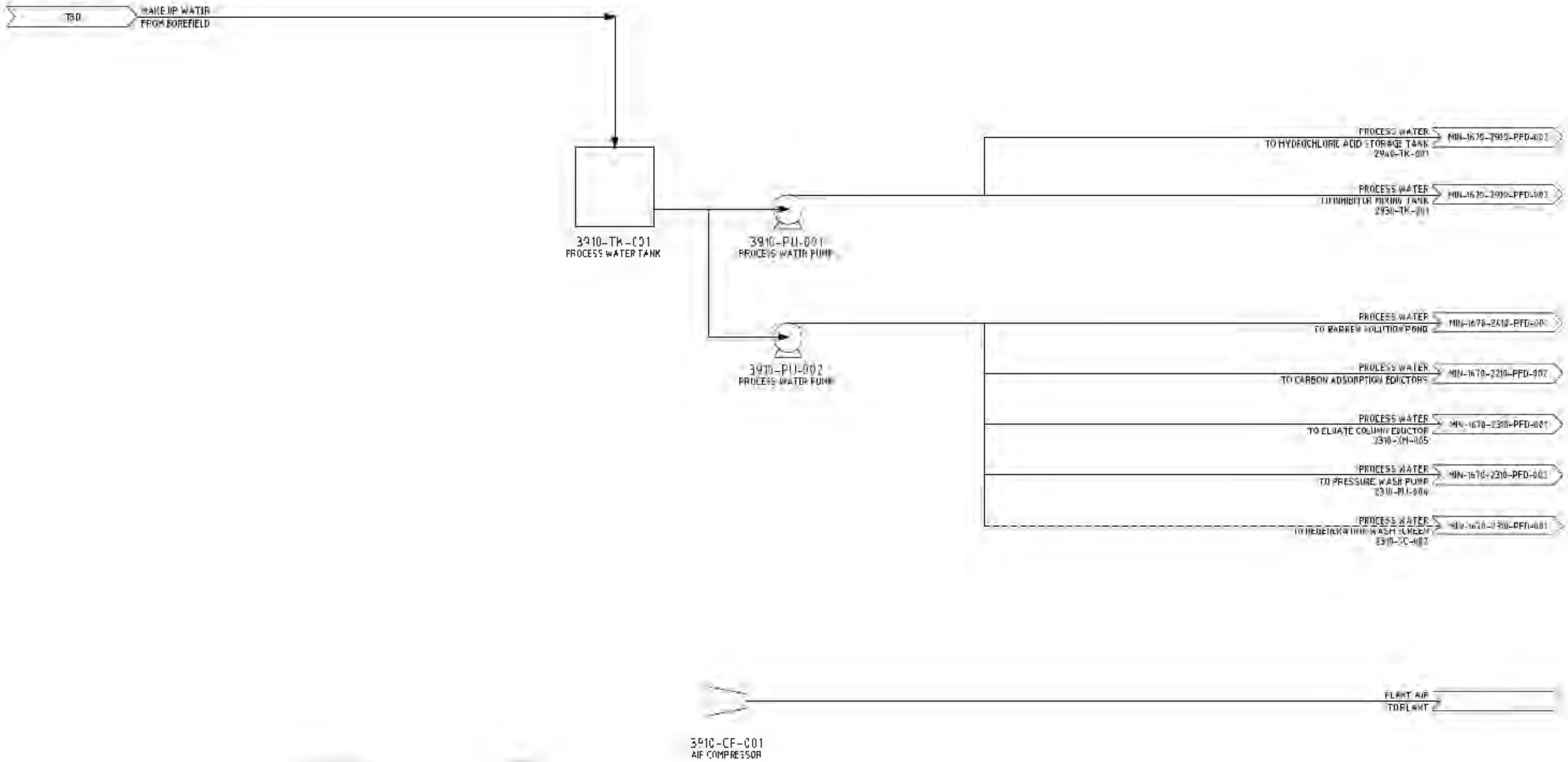


Figure 16: Utility PFD

4. MAJOR EQUIPMENT SUMMARY

The Mt Celia Gold Project utilises a suite of proven, low-complexity, and easily maintainable equipment selected to support reliable heap-leach gold extraction while minimising environmental risk and operational downtime. The equipment list reflects the project's modular design philosophy, enabling efficient construction, straightforward operation, and simplified maintenance throughout the life of the operation.

All major equipment has been selected based on performance, durability, availability of spare parts, and compatibility with the project's environmental containment systems. Equipment is installed within bunded areas where required, ensuring full containment of process solutions and compliance with environmental protection requirements.

4.1 Crushing and Screening Equipment

The crushing circuit includes:

- Primary jaw crusher (open-circuit operation)
- Secondary cone crusher (closed-circuit operation)
- Double-deck vibrating screen
- ROM bin with static grizzly
- Vibrating feeder
- Conveyor systems and transfer points

This equipment is sized to deliver a nominal throughput of approximately 40 tonnes per hour, producing a crushed product with a target P80 of 12.5 mm. Dust suppression sprays and bunded containment ensure environmental compliance.

4.2 Agglomeration Equipment

The agglomeration circuit comprises:

- Rotary agglomeration drum
- Cement metering system
- Raw water spray system
- Feed conveyors and transfer points

The agglomerator is designed to process approximately 40.3 tonnes per hour, producing uniform agglomerates with controlled moisture content to support efficient heap permeability.

4.3 Heap Leach Irrigation and Drainage Systems

Major equipment associated with the heap leach facility includes:

- 125 mm and 25 mm irrigation header pipes
- Flexible soaker hoses at 5-metre spacing
- 37.5 m^3/h barren solution pump
- 100 mm perforated drainage pipes at 6-metre spacing
- HDPE pipelines for pregnant and barren solution transfer

These systems ensure uniform irrigation, rapid solution recovery, and full containment of cyanide-bearing solutions.

4.4 Carbon Adsorption (CIC) Equipment

The CIC circuit includes:

- Five carbon adsorption columns (expanded bed design)

- Eductors for carbon transfer
- Carbon screens
- Solution distribution and collection piping

Each column contains approximately 2.5 tonnes of activated carbon, with a design carbon movement rate of around one tonne per week.

4.5 Elution and Electrowinning Equipment

The elution and electrowinning circuits comprise:

- One-tonne elution column
- Eluate tank with heating system
- Electric heater capable of maintaining ~95°C
- Electrowinning cells with stainless steel cathodes
- Solution filtration system

These systems operate as a closed loop, ensuring full containment of cyanide-bearing and caustic solutions.

4.6 Carbon Regeneration Equipment

The carbon regeneration circuit includes:

- Electric carbon regeneration kiln (750–800°C operating temperature)
- Carbon quench tank
- Carbon screening equipment

The kiln processes approximately 70 kg of carbon per hour, restoring adsorption capacity and supporting efficient gold recovery.

4.7 Gold Room and Refining Equipment

The gold room is equipped with:

- High-pressure cathode washing system
- Filter press or filter unit for sludge dewatering
- 30 kW electric gold furnace (operating at 1100–1200°C)
- Fume extraction system
- Secure bullion moulds and handling tools

All equipment is installed within a secure, bunded, and ventilated area to ensure safe and compliant operation.

4.8 Reagent Storage and Handling Equipment

Reagent systems include:

- 70 m³ cyanide storage tank
- 30 m³ caustic soda storage tank
- Bulk cement silo (50 tonnes)
- IBC storage racks for hydrochloric acid and scale inhibitor
- Metering pumps for cyanide, caustic, and scale inhibitor
- Dedicated bunds and sump pumps

These systems ensure safe, controlled, and fully contained reagent handling.

4.9 Utilities and Support Equipment

Supporting infrastructure includes:

- Process water tank and pumps
- Potable water system
- Compressed air system
- Electrical distribution boards and transformers
- Lighting, communications, and security systems

All utilities are designed to support safe and efficient operation while maintaining environmental containment.

4.10 Mobile and Ancillary Equipment

Mobile equipment required for operations includes:

- Front-end loaders for ore handling
- Water carts for dust suppression
- Light vehicles for supervision and maintenance
- Small generators (where required)

Mobile equipment is maintained in accordance with site procedures to minimise hydrocarbon risks.

4.11 Equipment Selection Rationale

Equipment has been selected based on:

- Proven performance in similar heap-leach operations
- Low maintenance requirements
- Availability of local service support
- Compatibility with environmental containment systems
- Energy efficiency and operational simplicity

This ensures reliable operation, reduced downtime, and strong environmental performance.

5. ENVIRONMENTAL SAFEGUARDS & CONTAINMENT SYSTEMS

The Mt Celia processing facility has been designed with environmental protection as a core engineering requirement rather than an add-on. Every circuit handling cyanide-bearing, caustic, or process-affected solutions is fully contained within engineered barriers, bunded structures, and controlled drainage systems. These safeguards ensure that all process solutions remain within the closed-loop system and that groundwater, surface water, and surrounding landforms are protected throughout the life of the project.

5.1 Engineered Containment Across All Process Areas

All process areas that handle liquids—including crushing, agglomeration, heap leaching, carbon adsorption, elution, regeneration, and the gold room—are constructed within impervious bunds. Each bunded area is equipped with dedicated sump pumps that return captured liquids to the barren pond. This ensures that any spillage, washdown water, or rainfall within process areas is fully contained and recycled.

The bunds are designed with sufficient capacity to manage rainfall events and operational washdowns and are constructed using chemically resistant materials suitable for cyanide, caustic, and acidic solutions. This approach ensures that containment integrity is maintained under all operating conditions.

5.2 Heap Leach Pad Liner System

The heap leach pad incorporates a composite liner system designed to prevent infiltration of cyanide-bearing solution into underlying soils or groundwater. The liner system includes:

- A low-permeability basal layer
- A geomembrane liner
- A protective overliner
- A network of 100 mm perforated drainage pipes installed at 6-metre spacing

The pad is constructed with a gentle slope to promote drainage and prevent ponding. All pregnant solution is rapidly collected and directed to the lined pregnant pond, minimising hydraulic head on the liner and reducing the risk of seepage.

5.3 Pregnant and Barren Solution Ponds

The pregnant and barren ponds are fully lined containment structures designed to safely store cyanide-bearing solutions. Each pond includes:

- A composite liner system
- Leak detection and collection layers
- Engineered freeboard capacity
- Controlled pumping systems

The barren pond serves as the central reservoir for heap irrigation, supplying solution at approximately 37.5 m^3/h to achieve the design application rate of 10 $L/h/m^2$. The pond chemistry is maintained within operational limits through controlled addition of cyanide and caustic soda.

5.4 Stormwater Diversion and Clean Water Separation

Stormwater management is based on strict segregation between clean and process-affected water. Diversion bunds and controlled drainage pathways direct clean stormwater away from process areas and into a dedicated stormwater pond. This prevents stormwater from contacting cyanide-bearing solutions and ensures that clean water remains uncontaminated.

Within process areas, rainfall is captured by bunds and directed to sump pumps, which return the water to the barren pond. This maintains the integrity of the closed-loop water system and prevents uncontrolled discharge.

5.5 Reagent Storage and Handling Controls

Reagent storage areas are designed to prevent cross-contamination and ensure safe handling of hazardous materials. Key controls include:

- Dedicated bunds for cyanide, caustic soda, hydrochloric acid, scale inhibitor, and cement
- Segregation of incompatible reagents
- Controlled delivery bays for bulk liquid reagents
- Chemically compatible transfer lines with isolation valves
- Sump pumps return captured liquids to the barren pond

These measures ensure that reagent handling remains safe, controlled, and fully contained.

5.6 Air Quality and Dust Controls

Dust suppression systems are installed at key points in the crushing circuit, using process water sprays to minimise airborne particulates. The agglomeration circuit inherently reduces dust generation due to controlled moisture addition. Fume extraction systems are installed in the gold room and electrowinning areas to manage emissions associated with smelting and electrowinning.

These controls ensure compliance with air quality expectations and minimise off-site impacts.

5.7 Waste and Residue Containment

All process residues—including fine carbon, filter cake, and neutralised eluate—are managed within bunded areas. Fine carbon is bagged for sale or disposal, while neutralised eluate and wash solutions are returned to the barren pond. No process residues are discharged to the environment.

5.8 Integration with Environmental Monitoring

The engineered safeguards described above are supported by a comprehensive monitoring program that includes:

- Routine inspection of liners and bunds
- Monitoring of pond freeboard
- Cyanide concentration and pH checks
- Verification of sump pump performance
- Inspection of stormwater diversion structures

These measures ensure early detection of deviations and support ongoing compliance with regulatory conditions.

6. WATER MANAGEMENT & WATER QUALITY PROTECTION

Water management at the Mt Celia Gold Project is based on strict segregation of clean and process-affected water, full containment of cyanide-bearing solutions, and a closed-loop process water system designed to prevent any discharge to the environment. The water management strategy integrates engineered controls, operational procedures, and monitoring systems to ensure protection of surface water, groundwater, and surrounding landforms throughout the life of the project.

6.1 Water Supply and Process Water System

Process water is sourced from the site's dedicated process water tank and is used for dust suppression, agglomeration moisture control, equipment washdown, and solution make-up. The process water system operates as a closed loop, with all process-affected water captured, recycled, and reused within the circuit.

Make-up water is added to the barren pond as required to maintain irrigation rates and compensate for evaporation and ore retention. The design water balance incorporates a conservative 15% loss allowance, ensuring that pond levels remain within safe operating limits under all climatic conditions.

Potable water is supplied separately and is used only in areas requiring clean water, such as the gold room and laboratory. Potable water systems are physically isolated from process water systems to prevent cross-contamination.

6.2 Closed-Loop Cyanide Solution Circuit

The heap leach operation uses a fully contained cyanide solution circuit comprising the barren pond, heap irrigation system, pregnant pond, carbon adsorption circuit, and return lines. Cyanide concentrations in the barren pond are maintained at approximately 300–400 ppm NaCN, with pH controlled through the addition of caustic soda to suppress hydrogen cyanide volatilisation.

Solution is pumped from the barren pond to the heap at approximately 37.5 m^3/h, achieving the design irrigation rate of 10 $L/h/m^2$. Pregnant solution is collected by the heap drainage network and directed to the pregnant pond before being pumped to the carbon adsorption circuit.

All cyanide-bearing solutions remain within lined or bunded containment structures, preventing process liquor from entering the environment.

6.3 Clean Water and Stormwater Management

Stormwater management is based on strict separation of clean and contaminated water. Clean stormwater is diverted away from process areas using diversion bunds, graded surfaces, and controlled drainage pathways. This water is directed to a dedicated stormwater pond or allowed to infiltrate naturally where appropriate.

Within process areas, rainfall is captured by bunds and directed to sump pumps, which return the water to the barren pond. This ensures that all water-contacting process surfaces are treated as process-affected and remain within the closed-loop system.

The heap leach pad is designed with a gentle slope to prevent ponding and ensure rapid drainage to the collection system. This reduces hydraulic loading on the liner and prevents uncontrolled runoff.

6.4 Groundwater Protection Measures

Groundwater protection is achieved through a combination of engineered barriers, operational controls, and monitoring systems. Key measures include:

- Composite liner systems beneath the heap leach pad and solution ponds
- Leak detection layers beneath ponds
- Rapid drainage networks to minimise hydraulic head on liners
- Bunded containment for all process areas
- Closed-loop water recycling
- Routine inspections of liners, bunds, and pumps

The regional hydrogeology comprises weathered bedrock and saprolitic zones, with groundwater typically at moderate depths. The engineered containment systems ensure that cyanide-bearing solutions do not infiltrate into these aquifers.

6.5 Water Quality Monitoring

A comprehensive monitoring program supports ongoing compliance with regulatory requirements. Key monitoring activities include:

- Cyanide concentration and pH in barren and pregnant ponds
- Freeboard levels in all ponds
- Inspection of bunds, liners, and sump pumps
- Groundwater monitoring (where required by approvals)
- Stormwater diversion structure inspections
- Process water quality checks

Monitoring results are recorded, reviewed, and reported in accordance with regulatory conditions, ensuring transparency and early detection of deviations.

6.6 Prevention of Off-Site Water Impacts

The combination of engineered containment, closed-loop water recycling, stormwater diversion, and groundwater protection measures ensures that no process-affected water is discharged to the environment. The design eliminates pathways for off-site transport of cyanide, metals, or suspended solids, providing a high level of environmental protection.

7. CYANIDE MANAGEMENT

The Mt Celia Gold Mine will adopt a comprehensive cyanide management framework designed to ensure safe handling, full containment, and environmentally responsible use of sodium cyanide throughout the processing circuit.

The cyanide management system is built around three core pillars:

- Secure storage and controlled dosing
- Full containment of cyanide-bearing solutions
- Protection of workers, the environment, and surrounding receptors

These pillars are embedded into every stage of the process, from reagent delivery to final detoxification pathways.

7.1 Cyanide Storage and Delivery Controls

Sodium cyanide is delivered to the site as a 30% liquid solution in bulk tankers. Deliveries occur within a dedicated, fully bunded unloading bay designed to contain the full volume of a tanker in the unlikely event of a spill. The unloading area is fitted with:

- Impervious concrete flooring;
- Chemically resistant coatings;
- Sump pumps return captured liquids to the barren pond;
- Physical barriers to prevent vehicle movement during transfer.

Cyanide is stored in a dedicated 70 m^3 tank located within a segregated bunded compound. The bund is sized to contain at least 110% of the tank volume, in accordance with the *Dangerous Goods Storage Act 2007*.

Transfer lines from the storage tank to the dosing points are constructed from chemically compatible materials and fitted with isolation valves, non-return valves, and secondary containment.

7.2 Controlled Cyanide Dosing and Process Use

Cyanide is dosed into the barren pond and elution circuit using metering pumps that provide precise control over addition rates. This ensures that cyanide concentrations remain within operational limits while minimising reagent consumption and environmental risk.

The barren pond is maintained at approximately:

- 300–400 ppm NaCN, and
- 200–400 ppm NaOH.

The addition of caustic soda maintains pH at levels that suppress hydrogen cyanide (HCN) volatilisation, ensuring safe operating conditions for workers and preventing atmospheric release.

Cyanide is also used in the elution circuit as part of the strip solution, typically at 0.5% concentration. The elution system operates as a closed loop, with barren eluate returned to the eluate tank for reuse.

7.3 Full Containment of Cyanide-Bearing Solutions

All cyanide-bearing solutions are fully contained within engineered structures, including:

- The heap leach pad, constructed with a composite liner and under-drain network;
- The pregnant and barren ponds, each lined with composite systems and leak detection layers;
- The carbon adsorption circuit, located within a bunded area;
- The elution and electrowinning circuits, is fully bunded with sump pumps;
- The gold room bunded and equipped with fume extraction.

No cyanide-bearing solution is discharged to the environment. All process-affected water is recycled within the closed-loop system.

7.4 Protection Against Hydrogen Cyanide (HCN) Release

The project incorporates multiple layers of protection to prevent HCN generation:

- pH control through caustic dosing
- Continuous mixing in ponds to prevent localised low-pH zones
- Temperature management through operational controls
- Restricted access to cyanide handling areas
- Worker training in cyanide awareness and emergency response

These measures ensure that cyanide remains in its stable ionic form and that atmospheric emissions remain negligible.

7.5 Emergency Response and Safety Systems

The cyanide management system includes comprehensive emergency response measures, including:

- Cyanide antidote kits stored in strategic locations;
- Emergency showers and eyewash stations;
- Spill response equipment;
- Trained first responders;
- Clear signage and restricted access zones;
- Standard operating procedures for spill containment and cleanup.

Regular drills ensure that personnel remain familiar with emergency protocols.

7.6 Prevention of Off-Site Cyanide Migration

The combination of engineered containment, closed-loop recycling, stormwater diversion, and groundwater protection measures ensures that cyanide remains confined to the processing system. There are no pathways for off-site migration of cyanide via surface water, groundwater, or air.

8. STORMWATER & SURFACE WATER MANAGEMENT

Stormwater and surface water management at the Mt Celia Gold Project is built around a clear and non-negotiable principle: clean water must remain clean, and process-affected water must remain fully contained. The design integrates engineered drainage structures, bunded containment, and operational controls to ensure that stormwater does not contact cyanide-bearing solutions and that no process water is released to the environment under any circumstances.

The site layout, pad geometry, pond design, and bunding arrangements have all been developed to maintain strict separation between clean and contaminated water pathways, consistent with Western Australian regulatory expectations for heap-leach operations.

8.1 Clean Water Diversion and Runoff Control

Clean stormwater is diverted away from process areas using a combination of:

- Perimeter diversion bunds;
- Graded surfaces directing runoff away from the processing precinct;
- Dedicated clean-water channels;
- A stormwater pond located outside the process water containment system.

These structures ensure that rainfall runoff from undisturbed or rehabilitated areas does not enter the heap leach pad, ponds, or bunded process areas.

The diversion system is designed to manage runoff from significant rainfall events typical of the Eastern Goldfields, including short-duration, high-intensity storms. This reduces the hydraulic load on process ponds and prevents dilution of process solutions.

8.2 Contaminated Water Capture and Containment

All areas where cyanide-bearing or process-affected water may be present are fully bunded and drained to sump pumps. These include:

- Crushing and screening areas;
- Agglomeration circuit;
- Heap leach pad;
- Carbon adsorption circuit;
- Elution and electrowinning areas;
- Carbon regeneration kiln;
- Gold room;
- Reagent storage compounds.

Rainfall within these areas is treated as contaminated water and is returned to the barren pond via sump pumps. This ensures that all process-affected water remains within the closed-loop system.

8.3 Heap Leach Pad Surface Water Management

The heap leach pad is constructed with a gentle engineered slope to:

- Prevent ponding on the heap surface;
- Promote uniform drainage of irrigation solution;
- Direct all percolated solution to the under-drain network;
- Reduce hydraulic head on the liner system.

The pad's drainage system consists of 100 mm perforated pipes installed at 6-metre spacing, ensuring rapid collection of pregnant solution and minimising the potential for solution migration.

Stormwater is prevented from entering the heap pad through perimeter bunds and diversion drains, maintaining strict separation between clean and process-affected water.

8.4 Solution Pond Freeboard and Extreme Rainfall Capacity

The pregnant, barren, and stormwater ponds are designed with engineered freeboard to safely accommodate:

- Operational solution volumes;
- Rainfall from design storm events;
- Wave run-up and wind effects;
- Contingency storage for abnormal operating conditions.

Freeboard levels are routinely monitored, maintained at least 300mm above the top, and operational controls ensure pond levels remain within safe limits. Make-up water additions and irrigation rates are adjusted as required to maintain compliance.

8.5 Surface Water Quality Protection

The stormwater management system ensures that:

- Clean water remains uncontaminated;
- No cyanide-bearing solution enters natural drainage lines;
- No process water is discharged off-site;

- Sediment-laden runoff from disturbed areas is controlled.

Where necessary, sediment traps or temporary erosion controls may be installed during construction or rehabilitation phases.

8.6 Monitoring and Inspection Requirements

Routine inspections are conducted to verify the performance of stormwater and surface water controls, including:

- Diversion bund integrity;
- Clean-water channel condition;
- Stormwater pond capacity;
- Heap pad drainage performance;
- Bunded area sump pump operation;
- Evidence of erosion or overtopping.

Inspection results are recorded and used to guide maintenance activities and ensure ongoing compliance with regulatory conditions.

8.7 Prevention of Off-Site Surface Water Impacts

The combination of diversion structures, bunded containment, engineered pond capacity, and closed-loop water recycling ensures that:

- No process water leaves the facility area;
- No cyanide-bearing solution enters clean water drainage systems;
- Clean water pathways remain uncontaminated;
- Impacts on surface water should be unlikely to occur.

This approach aligns with best-practice environmental management for heap-leach operations in Western Australia.

9. GROUNDWATER PROTECTION STRATEGY

Groundwater protection is a critical design and operational priority for the Mt Celia Gold Project. The processing facility has been engineered to ensure that cyanide-bearing and process-affected solutions remain fully contained within lined structures and bunded areas, eliminating pathways for infiltration into underlying aquifers. The groundwater protection strategy integrates engineered barriers, operational controls, and monitoring systems to ensure long-term environmental security.

9.1 Hydrogeological Context

The Mt Celia Gold Mine is located within the Eastern Goldfields Province, where groundwater typically occurs within:

- Weathered saprolitic profiles;
- Fractured Archaean bedrock;
- Localised colluvial deposits.

Groundwater depths in the region are generally moderate, with limited hydraulic connectivity to surface drainage features. These conditions support the effectiveness of engineered containment systems, provided that infiltration is prevented.

The groundwater protection strategy is therefore built around complete isolation of process solutions from the subsurface environment.

9.2 Composite Liner Systems for Heap and Ponds

The heap leach pad and all solution ponds (pregnant, barren, and stormwater) are constructed with composite liner systems designed to prevent infiltration of cyanide-bearing solutions. These systems typically include:

- A compacted low-permeability subgrade;
- A geomembrane liner;
- A protective overliner;
- A leak detection layer (for ponds);
- Engineered drainage layers.

The liner systems are designed to meet or exceed Western Australian regulatory expectations for containment of hazardous liquids.

The heap pad's under-drain network rapidly collects percolated solution, minimising hydraulic head on the liner and reducing the potential for seepage.

9.3 Heap Drainage and Rapid Solution Recovery

The heap leach pad incorporates a network of 100 mm perforated drainage pipes installed at 6-metre spacing. These pipes:

- Rapidly collect pregnant solution;
- Minimise residence time of solution within the heap;
- Reduce hydraulic loading on the liner;
- Direct all solutions to the pregnant pond.

The pad is constructed with a gentle slope to promote efficient drainage and prevent ponding, further reducing infiltration risk.

9.4 Bunded Containment for All Process Areas

All process areas handling cyanide-bearing or caustic solutions are located within impervious bunds. These include:

- Crushing and screening;
- Agglomeration;
- Carbon adsorption;
- Elution and electrowinning;
- Carbon regeneration kiln;
- Gold room;
- Reagent storage compounds.

Each bunded area is equipped with sump pumps that return captured liquids to the barren pond, preventing process water from entering the subsurface environment.

9.5 Closed-Loop Water System

The processing facility operates as a closed-loop water system, meaning:

- No process-affected water is discharged to the environment;
- All cyanide-bearing solutions remain within lined or bunded structures;
- All rainfall within process areas is captured and recycled;
- All solution losses are accounted for through evaporation and ore retention.

This eliminates pathways for groundwater contamination via surface infiltration or uncontrolled discharge.

9.6 Stormwater Diversion to Protect Groundwater

Clean stormwater is diverted away from process areas using:

- Perimeter diversion bunds;
- Graded surfaces;
- Clean-water channels.

This prevents stormwater from contacting cyanide-bearing solutions and eliminates the risk of contaminated runoff infiltrating into the subsurface.

9.7 Groundwater Monitoring Program

Where required by regulatory approvals, groundwater monitoring bores will be installed around the processing precinct and heap leach facility. Monitoring will include:

- Standing water level measurements;
- pH and electrical conductivity;
- Total and Weak acid dissociable (WAD) cyanide;
- Major ions and metals (as outlined in the facility monitoring plan).

Monitoring frequency will align with the Heap Leach Monitoring plan and will be used to verify the ongoing performance of containment systems.

9.8 Inspection and Maintenance of Containment Systems

Routine inspections ensure the integrity of groundwater protection measures. These include:

- Liner condition checks;
- Bund wall inspections;
- Sump pump functionality;
- Pond freeboard verification;
- Drainage system performance;
- Evidence of erosion or settlement.

Any defects are repaired promptly to maintain containment integrity.

9.9 Prevention of Groundwater Impact

The combination of engineered containment, rapid solution recovery, bunded process areas, stormwater diversion, and closed-loop water recycling ensures that:

- No cyanide-bearing solution infiltrates the subsurface;
- No process-affected water enters groundwater systems;
- No hydraulic connection exists between process areas and aquifers;
- Groundwater quality remains protected throughout operations.

This strategy aligns with best-practice environmental management for heap-leach operations in Western Australia.

10. AIR QUALITY & DUST MANAGEMENT

Air quality management at the Mt Celia Gold Mine focuses on minimising dust generation, controlling emissions from processing activities, and preventing off-site impacts. The processing facility has been designed to operate with low inherent dust potential, supported by targeted suppression systems, engineered controls, and operational procedures that collectively ensure compliance with Western Australian air quality expectations.

Mt Celia Gold Mine will crush and screen ore through a mobile plant, significantly reducing dust and particulate emissions. Nonetheless, the design incorporates robust controls to ensure that dust and fumes remain contained within the processing precinct.

10.1 Dust Sources and Control Philosophy

Potential dust sources at Mt Celia include:

- ROM ore handling and dumping;
- Crushing and screening activities;
- Agglomeration feed transfer;
- Haul road traffic;
- Stockpile management;
- Dry carbon handling in the regeneration circuit.

The site dust control philosophy is based on:

- Minimising dust generation at the source;
- Applying targeted suppression where dust may occur;
- Ensuring dust does not migrate beyond the operational footprint.

This approach ensures that dust emissions remain low and that air quality impacts are effectively managed.

10.2 Crushing Circuit Dust Suppression

The crushing circuit incorporates multiple dust suppression measures, including:

- Water sprays at crusher discharge points
- Sprays at conveyor transfer points
- A bunded, contained crushing area to prevent dust-laden runoff
- A sump pump system to capture and recycle water used for suppression

These controls significantly reduce airborne particulates generated during crushing and screening.

10.3 Agglomeration Circuit Dust Controls

The agglomeration circuit inherently reduces dust generation by controlling the addition of raw water, thereby increasing ore moisture to approximately 10%. Additional controls include:

- Enclosed or partially enclosed transfer points;
- Bunded containment to capture any spillage;
- Sump pumps return captured liquids to the barren pond.

The combination of moisture addition and containment ensures that dust emissions from the agglomeration area remain minimal.

10.4 Haul Roads and Traffic Management

Dust from vehicle movements is managed through the existing site dust management measures such as:

- Routine watering of haul roads;
- Use of compacted road surfaces;
- Minimised haul distances due to the compact site layout.

These measures ensure that dust from traffic remains controlled and does not impact surrounding areas.

10.5 Air Emissions from Processing Circuits

Air emissions from processing activities are limited to:

- Fume extraction from the electrowinning cells;
- Off-gas from the gold furnace;
- Heat and minor vapour release from the carbon regeneration kiln.

Each of these sources is controlled through engineered systems:

Electrowinning and Gold Room,

- Fume extraction fans remove hydrogen and oxygen generated during electrowinning.
- The gold furnace is fitted with a dedicated fume extraction hood and ducting.
- All fumes are directed to safe discharge points away from workers and sensitive receptors.

Carbon Regeneration Kiln

- The kiln is electrically heated, eliminating combustion emissions.
- Off-gas volumes are low and are vented through controlled outlets.
- The kiln area is bunded to prevent contamination from carbon fines or washdown water.

10.6 Prevention of Off-Site Air Quality Impacts

The combination of dust suppression, fume extraction, controlled traffic movements, and moisture management ensures that:

- Dust does not migrate beyond the processing precinct;
- Fumes from electrowinning and smelting remain controlled;
- No significant air emissions occur during normal operations;
- Air quality impacts on surrounding land users are negligible.

The remote location of the site further reduces the potential for off-site impacts.

10.7 Monitoring and Inspection Requirements

Air quality controls are supported by routine inspections, including:

- Verification of dust suppression system performance;
- Inspection of fume extraction equipment;
- Monitoring of haul road conditions;
- Observation of dust levels during high-wind events;
- Maintenance of water spray systems.

Operational adjustments—such as increasing water application or temporarily halting dust-generating activities—are implemented as required.

10.8 Compliance with Regulatory Expectations

The air quality management framework aligns with Western Australian regulatory requirements by:

- Minimising dust generation at the source;
- Ensuring all emissions remain within acceptable limits;
- Preventing off-site impacts;
- Maintaining safe working conditions for personnel.

The Mt Celia Gold Mine low-intensity processing flowsheet and strong environmental controls ensure that air quality risks remain inherently low.

11. WASTE & RESIDUE MANAGEMENT

Waste and residue management at the Mt Celia Gold Mine is based on the principles of containment, minimisation, segregation, and controlled disposal. The processing facility generates relatively small volumes of solid and liquid residues due to its simple heap-leach flowsheet and closed-loop water system. All waste is managed within engineered containment structures to prevent release to the environment and ensure all residues are handled in accordance with regulatory requirements.

The Heap Leach and Gold Recovery facility does not produce tailings in the conventional sense, as no milling or flotation occurs. Instead, the primary residues include carbon fines, filter cake from gold refining, neutralised eluate, reagent packaging, and general operational waste. Each waste stream is managed through dedicated systems designed to prevent environmental impact.

11.1 Carbon Fines Management

Fine carbon is generated during carbon screening and handling activities, particularly in the carbon return and regeneration circuits. These fines may contain trace quantities of gold and adsorbed metals.

Management measures include:

- Screening carbon through dedicated wash screens;
- Collecting undersized carbon fines in sealed containers;
- Bagging fines for sale, recovery, or approved disposal;
- Storing fines within bunded areas to prevent loss to the environment.

All carbon fines remain within the processing precinct until removed by licensed contractors.

11.2 Filter Cake from Gold Refining

During gold refining, sludge from cathode washing is filtered to produce a solid filter cake containing gold and flux residues. This material is:

- Collected in a dedicated filter unit;
- Transferred to the gold furnace for smelting;
- Converted into bullion bars;
- Leaving only minimal residual waste.

Any remaining filter media or non-recoverable residues are stored in sealed containers and disposed of through licensed waste management providers.

11.3 Neutralised Eluate and Acid Wash Residues

The elution circuit generates acidic and alkaline solutions during stripping and acid washing. These solutions are fully contained and managed through a controlled neutralisation process.

Key controls include:

- Acid wash solution (3% HCl) drained to a neutralisation tank;
- pH adjusted using caustic soda;
- Neutralised solution pumped to the barren pond for reuse;
- No discharge of acidic or alkaline liquids to the environment.

This ensures that all eluate and wash solutions remain within the closed-loop system.

11.4 Reagent Packaging and Consumables

Reagent packaging includes:

- IBCs for hydrochloric acid and scale inhibitor
- Bulk bags for activated carbon

- Bulk tanker deliveries for cyanide, caustic, and cement

Management measures include:

- Storing empty IBCs in bunded areas;
- Triple-rinsing acid containers where required;
- Returning cyanide and caustic containers to suppliers (where possible);
- Disposing of non-returnable packaging through licensed waste contractors.

All reagent packaging is handled to prevent contamination of soil or water.

11.5 General Operational Waste

General waste streams include:

- Scrap metal;
- Timber pallets;
- Plastics and packaging;
- Office and workshop waste.

These materials are segregated at source and stored in designated waste collection areas. Recycling is undertaken where possible, and non-recyclable waste is removed from the site by licensed contractors for disposal at approved facilities.

No general waste is buried, burned, or disposed of on site.

11.6 Hydrocarbon Waste Management

Although hydrocarbon use is limited at Mt Celia, small volumes of waste oil, oily rags, and filters may be generated from mobile equipment and generators.

Controls include:

- Storing waste oil in sealed, bunded containers;
- Using drip trays during servicing;
- Segregating oily waste from general waste;
- Removing hydrocarbons from site via licensed waste contractors.

These measures ensure compliance with Mt Celian hydrocarbon management strategy.

11.7 Wastewater and Washdown Water

All washdown water from process areas is captured within bunds and directed to sump pumps. This water is returned to the barren pond and reused within the process water circuit.

No wastewater is discharged to the environment.

11.8 Prevention of Off-Site Waste Impacts

The waste management system ensures that:

- All residues remain within heap leach facility areas;
- No waste from the heap leach and gold recovery area will enter natural drainage lines;
- No waste infiltrates soil or groundwater;
- All hazardous materials are handled in accordance with regulatory requirements;
- Waste is removed from site by licensed contractors only.

This approach aligns with best-practice waste management for gold processing operations in Western Australia.

12. ENVIRONMENTAL RISK ASSESSMENT

The Mt Celia Gold Mine incorporates a comprehensive environmental risk assessment framework that identifies potential environmental hazards, evaluates their likelihood and consequence, and implements engineered and procedural controls to reduce residual risks to acceptable levels. The assessment reflects the project's simple, low-intensity processing flowsheet and the extensive containment systems embedded throughout the design.

The risk assessment focuses on key environmental receptors, including groundwater, surface water, air quality, soil, flora and fauna, and human health. For each potential impact pathway, the project incorporates multiple layers of protection to ensure that risks remain low and manageable throughout operations.

12.1 Risk Assessment Methodology

The environmental risk assessment follows a structured approach consistent with Western Australian regulatory expectations. The methodology includes:

- Identification of potential hazards associated with processing activities;
- Evaluation of credible impact pathways;
- Assessment of inherent (uncontrolled) risk;
- Identification of engineered and operational controls;
- Assessment of residual risk after controls;
- Ongoing monitoring and review.

This approach ensures that all material risks are identified, mitigated, and monitored throughout the life of the mine.

12.2 Key Environmental Hazards and Impact Pathways

The primary environmental hazards associated with the Mt Celia processing facility include (Table 1):

- Cyanide-bearing solution loss from ponds, pipelines, or the heap;
- Groundwater contamination from infiltration or seepage;
- Surface water contamination from uncontrolled runoff;
- Dust emissions from crushing, haul roads, and stockpiles;
- Air emissions from electrowinning and smelting;
- Acid or caustic spills from reagent handling;
- Hydrocarbon spills from mobile equipment;
- Improper waste handling leading to soil contamination.

Each hazard is addressed through engineered containment, operational controls, and monitoring systems.

12.3 Overall Risk Profile

The Mt Celia Heap Leach and Gold Recovery plan has a low overall environmental risk due to:

- A simple, low-intensity processing flowsheet;
- Extensive engineered containment systems;
- Closed-loop water recycling;
- Strong reagent handling controls;
- Effective dust and air emission management;
- Comprehensive monitoring and inspection programs.

Residual risks are low across all environmental receptors, and the project is well-positioned to operate in full compliance with Western Australian environmental regulations.

Table 1: Risk Register

Hazard	Impact Pathway	Controls	Residual Risk
Cyanide-Bearing Solution Loss			
Loss of cyanide-bearing solution from the heap, ponds, or process circuits.	Potential infiltration to soil or groundwater, or uncontrolled surface flow.	Composite liners beneath heap and ponds Leak detection layers under ponds Bunded containment for all process areas Closed-loop water system Sump pumps returning all captured liquids to the barren pond pH control to suppress HCN volatilisation Routine inspections of liners, bunds, and pumps	Low, due to multiple engineered barriers and closed-loop containment.
Groundwater Contamination			
Infiltration of process solution into subsurface aquifers.	Seepage through liners or uncontained areas.	Composite liner systems Rapid drainage network beneath heap Bunded containment for all process areas Stormwater diversion to prevent infiltration Groundwater monitoring bores (if required) Routine inspection and maintenance	Low, due to robust containment and monitoring.
Surface Water Contamination			
Contaminated runoff entering natural drainage lines.	Overtopping of ponds or failure of diversion structures.	Clean-water diversion bunds Dedicated stormwater pond Engineered pond freeboard Bunded process areas Closed-loop water recycling Routine inspection of diversion structures	Low, due to strict separation of clean and contaminated water.
Dust Emissions			
Dust generation from crushing, haul roads, and stockpiles.	Airborne particulates affecting workers or nearby receptors.	Water sprays at crushing circuit Moisture addition during agglomeration Haul road watering and speed limits Compact site layout reducing haul distances Routine inspections during high-wind events	Low, due to effective suppression and low-intensity operations.
Air Emissions from Processing			
Fumes from electrowinning, smelting, and carbon regeneration.	Worker exposure or off-site impacts.	Fume extraction systems in gold room Controlled venting from regeneration kiln Restricted access to fume-generating areas PPE and ventilation protocols	Low, due to engineered extraction and remote location.

Hazard	Impact Pathway	Controls	Residual Risk
Acid and Caustic Spills			
Spills of hydrochloric acid, caustic soda, or scale inhibitor.	Soil contamination or worker exposure.	Dedicated bunds for each reagent Segregation of incompatible chemicals Controlled unloading areas Spill kits and emergency response equipment Neutralisation procedures for acid spills	Low, due to bunding and strict handling protocols.
Hydrocarbon Spills			
Loss of hydrocarbons from mobile equipment or generators.	Soil contamination or infiltration.	Bunded hydrocarbon storage Drip trays during servicing Spill kits and trained personnel Removal of waste hydrocarbons by licensed contractors	Low, due to limited hydrocarbon use and strong controls.
Waste Mismanagement			
Improper disposal of carbon fines, filter cake, or general waste.	Soil contamination or windblown litter.	Segregated waste streams Bunded storage of carbon fines Licensed contractors for waste removal No on-site disposal or burial	Low, due to controlled handling and off-site disposal.

13. MONITORING, REPORTING & COMPLIANCE

The Mt Celia Gold Project incorporates a comprehensive monitoring and compliance framework designed to verify the performance of engineered controls, ensure ongoing environmental protection, and demonstrate compliance with regulatory conditions throughout the life of the operation. Monitoring activities are integrated into daily operations and supported by structured reporting systems that provide transparency and accountability to regulators and stakeholders.

The monitoring program covers water quality, solution chemistry, air quality, containment integrity, reagent management, and waste handling. Results are used to guide operational decisions, identify emerging risks, and maintain compliance with statutory obligations.

13.1 Monitoring Objectives

The monitoring program is designed to:

- Verify the effectiveness of environmental safeguards;
- Detect deviations from expected performance;
- Ensure early identification of potential environmental risks;
- Demonstrate compliance with regulatory conditions;
- Support continuous improvement in environmental management.

Monitoring will be undertaken as outlined in the site monitoring plans.

13.2 Process Solution Monitoring

Cyanide-bearing solutions are monitored regularly to ensure safe and effective operation of the heap leach circuit. Key parameters include:

- Weak Acid Dissociable (WAD) cyanide in barren and pregnant ponds;
- pH to ensure suppression of hydrogen cyanide volatilisation;
- Freeboard levels in pregnant and barren ponds;
- Irrigation flow rates and distribution uniformity;
- Elution solution chemistry during strip cycles.

Monitoring results are recorded in operational logs and reviewed by supervisors to ensure compliance with design criteria and safe operating limits.

13.3 Water Quality and Groundwater Monitoring

Where required by regulatory approvals, groundwater monitoring bores will be installed around the processing precinct and heap leach facility. Monitoring parameters may include:

- Standing water levels;
- pH and electrical conductivity;
- Total and WAD cyanide;
- Major ions and metals (as required).

Sampling is conducted as outlined in the Heap Leach Monitoring Plan, and results are compared against baseline conditions and regulatory thresholds. Any deviations trigger investigation and corrective action.

Surface water monitoring is limited due to the absence of natural surface water bodies within the project footprint, but stormwater structures are inspected routinely to ensure proper function.

13.4 Containment and Infrastructure Inspections

Routine inspections are conducted to verify the integrity and performance of containment systems, including:

- Heap leach pad liner and drainage performance;
- Pregnant and barren pond liners and freeboard;
- Bund walls and sump pump operation;
- Reagent storage compounds;
- Stormwater diversion bunds and channels;
- Crushing and agglomeration area containment;
- Carbon adsorption and elution bunds.

Inspection frequencies range from daily to monthly, depending on the criticality of the infrastructure. All inspections are documented, and corrective actions are tracked to completion.

13.5 Air Quality and Dust Monitoring

Air quality controls are supported by routine inspections and operational monitoring, including:

- Visual dust assessments during crushing and haulage;
- Verification of water spray system performance;
- Inspection of fume extraction systems in the gold room;
- Monitoring during high-wind events.

If dust levels increase, additional suppression measures are implemented immediately.

13.6 Reagent Management Monitoring

Reagent storage and handling areas are inspected regularly to ensure:

- Bund integrity and capacity;
- Absence of leaks or spills;
- Proper labelling and segregation of chemicals;
- Functionality of transfer pumps and valves;
- Availability of spill kits and emergency equipment.

Cyanide storage and dosing systems are subject to heightened monitoring due to their critical role in environmental protection.

13.7 Waste Management Monitoring

Waste streams—including carbon fines, filter cake, reagent packaging, and general waste—are monitored to ensure:

- Proper segregation;
- Secure storage within bunded areas;
- Timely removal by licensed contractors;
- No accumulation of waste outside designated areas.

Hydrocarbon waste is tracked to ensure compliance with disposal requirements.

13.8 Reporting Requirements

The project maintains a structured reporting framework that includes:

- Internal daily and weekly operational reports;

- Monthly environmental performance summaries;
- Annual compliance reports (as required by approvals);
- Incident and non-compliance reports submitted to regulators within required timeframes;
- Annual Environmental Reports (AERs) were mandated.

Reports document monitoring results, inspection findings, corrective actions, and compliance status.

13.9 Incident Management and Corrective Actions

Any environmental incident—such as a spill, containment breach, or exceedance of monitoring thresholds—is managed through a formal incident response procedure that includes:

- Immediate containment and mitigation;
- Notification of supervisors and, where required, regulators;
- Investigation of root causes;
- Implementation of corrective and preventative actions;
- Documentation and follow-up monitoring.

This ensures transparency, accountability, and continuous improvement.

13.10 Compliance with Regulatory Conditions

The Mt Celia Gold Mine is committed to full compliance with all regulatory conditions imposed by:

- Department of Mines, Petroleum and Exploration (DMPE);
- Department of Water and Environmental Regulation (DWER);
- Department of Health (where applicable);
- WorkSafe WA;
- Local government authorities (where applicable).

Compliance is achieved through:

- Adherence to approved designs;
- Implementation of monitoring programs;
- Maintenance of containment systems;
- Timely reporting;
- Ongoing staff training.

The Mt Celia will have a simple flowsheet, robust containment systems, and a strong monitoring framework ensure that compliance is maintained throughout operations.

REFERENCE DOCUMENTS

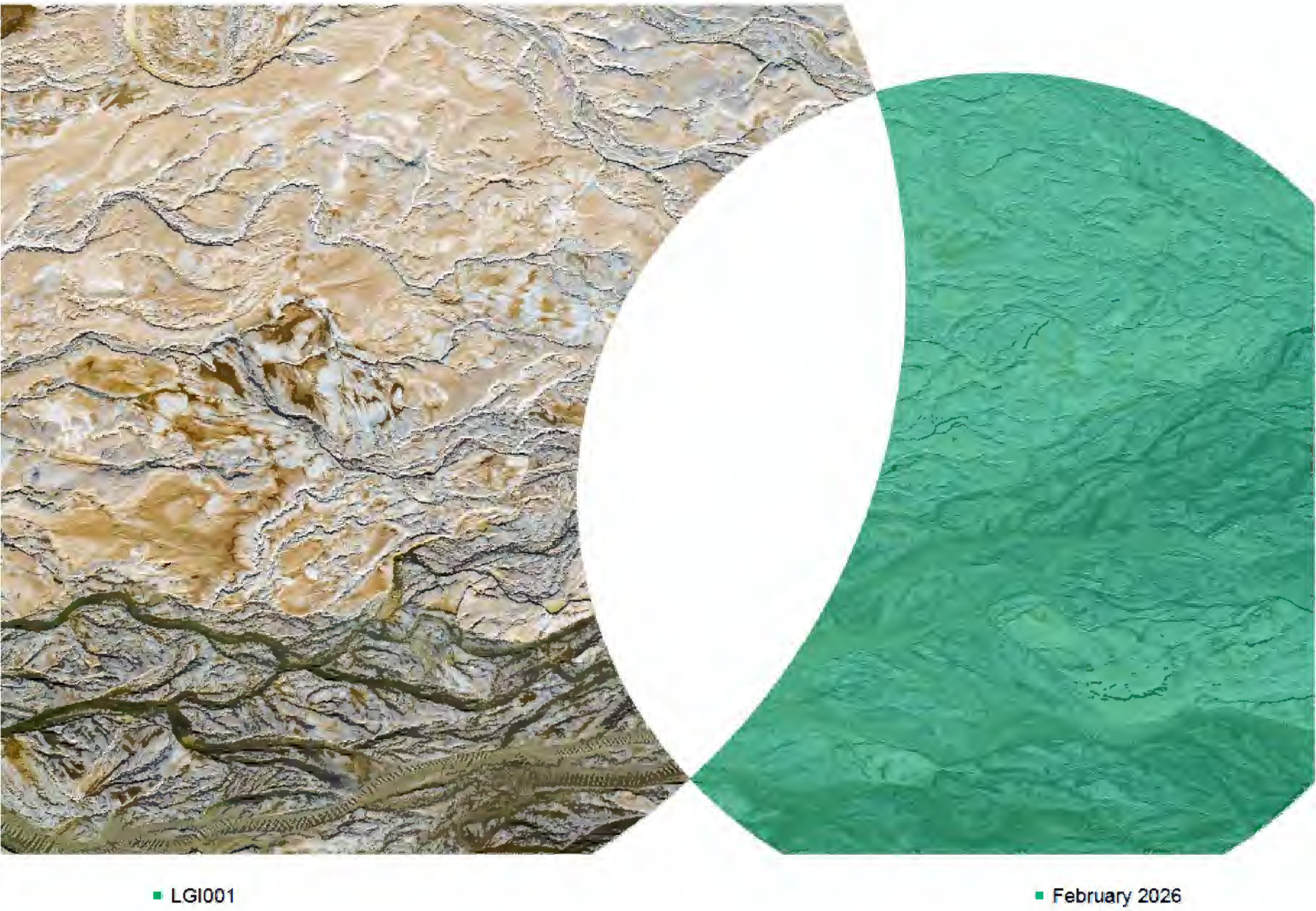
DOCUMENT NUMBER	REVISION	DESCRIPTION
Process Flow Diagrams		
MIN-1670-2100-PFD-001	A	Crushing Plant – PFD
MIN-1670-2120-PFD-001	A	Agglomeration – PFD
MIN-1670-2210-PFD-001	A	Heap Leaching – PFD
MIN-1670-2210-PFD-002	A	Loaded Carbon Desorption – PFD
MIN-1670-2310-PFD-001	A	Elution and Refining Sheet 1 – PFD
MIN-1670-2310-PFD-002	A	Elution and Refining Sheet 2 – PFD
MIN-1670-2310-PFD-003	A	Regeneration Kiln – PFD
MIN-1670-2410-PFD-001	A	Barren Solution – PFD
MIN-1670-2900-PFD-001	A	Reagents Sheet 1 – PFD
MIN-1670-2900-PFD-002	A	Reagents Sheet 2 – PFD
MIN-1670-3900-PFD-001	A	Utilities and Services – PFD
Layout Drawing		
MIN-1670-0000-GE-001	C	Overall Site Plan
Engineering Document		
1670-PR-DC-001	C	Process Design Criteria
1670-ME-LS-001	B	Mechanical Equipment List
Leach Pad and Pond Design		
Tailex	1	Mt Celia Project - Heap Leach Facility Design

APPENDIX E – HEAP LEACH FACILITY DESIGN

APPENDIX E1 – Heap Leach Facility Design

Mt Celia Project - Heap Leach Facility Design

Legacy Iron Ore Limited



- LGI001

- February 2026

Minimise Risk
Maximise Value

Final

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1 Introduction

Tailex Pty Ltd (Tailex) was appointed by Legacy Iron Ore Limited (Legacy) to prepare a heap leach facility (HLF) design concept for its Mt Celia Project. The design concept accommodates Legacy's design case of an 8-year life-of-mine (LoM), processing 850 kt of ore.

1.1 Project background

The Mt Celia deposit lies in Legacy's South Laverton project located in the Eastern Goldfields of Western Australia, approximately 180 km northeast of Kalgoorlie. Access to the site is by road via the Yarri Road. The project location is shown in Figure 1-1.

Figure 1-1: Project location
Source: Legacy

1.2 Objectives

The study objectives include:

- develop a concept-level HLF design
- develop a forward works plan to advance the design to construction level.

1.3 Limitations

Tailex developed the design using information, timelines, and resources set by Legacy. Submission of the design for regulatory approvals reflects Legacy's preferred permitting strategy.

Scope gaps identified by Tailex, which Legacy has committed to addressing prior to construction, are outlined in Section 1.5.

1.4 Exclusions

The study excludes the following:

- mechanical, pumping and electrical design
- irrigation system design
- operational hauling, conveying and stacking design
- miscellaneous infrastructure design (roadways, LV access, etc.)
- geotechnical assessment of ore materials
- detailed design (i.e. to a level suitable for construction)
- seepage modelling
- risk assessments.

1.5 Commitments

The proposed HLF design has been developed based on the information available at the time of reporting. It is acknowledged that a number of activities are either ongoing or yet to be completed to further refine the design and improve confidence in facility performance. Legacy is committed to completing these activities as part of the ongoing design development phases of the project.

Should it be considered necessary, a third-party review and sign-off of the detailed design can be provided to confirm that the commitments have been adequately addressed prior to construction.

Legacy's commitments include:

- Further geotechnical investigation to confirm the foundation conditions will maintain stability and containment performance objectives noted herein.
- Further geotechnical testing of borrow, ore and foundation materials to address current design assumptions. Any necessary design changes will maintain stability and containment performance objectives noted herein.
- Further characterisation and verification of materials proposed for use in low-permeability sub-liner and over-liner construction.

- Definition of the ore placement strategy. Any optimisation to the design to accommodate the preferred placement strategy will maintain stability and support operational and containment performance objectives noted herein.
- Refinement of pond capacities and pumping requirements through updated process inputs, operational scheduling and drain-down assessments. Any optimisations to the design will maintain the containment performance objectives noted herein.
- Completion of one dimensional (1D) transient seepage model, using results from laboratory testing, to validate the operational and containment performance objectives outlined herein.
- Completion of a revised water balance to estimate makeup water requirements.
- Implementation of operational controls, monitoring and instrumentation to manage heap saturation and pore pressures throughout the leaching cycle.
- Preparation of detailed technical specifications, detailed design documentation, risk assessment and operating, maintenance and surveillance manual prior to construction and commissioning of the Stage 1 pad.

2 Basis of Design

The Basis of Design (BoD), design criteria and design parameters for the HLF concept are briefly discussed in the following sections.

2.1 Design assumptions

The design has been based on the following assumptions:

- No intermediate leach solution (ILS) stream will be collected.
- Leaching areas will be modulated in cells and panels.
- A double liner for HLF pad, PLS (pregnant leach solution) pond and Barren pond.
- Initial ore placement of 150 kt using a truck–shovel method.
- Consideration of the LoM concept (Legacy scoping study report).

2.2 Design criteria

The design has been based on the criteria outlined in Table 2-1.

Table 2-1: HLF design criteria

Criteria	Value	Source/Comment
Storm water pond		
Design flood capacity	▪ 24 h, 1:100 AEP runoff ▪ 100% runoff from HLP ▪ 0.5 m contingency	Tailex – conservative freeboard allowance
Processing ponds		
Operating pond volume	▪ 72 h at leaching rate ▪ 1 m minimum operating head	Tailex – conservative freeboard allowance
Factors of Safety – Stability		
Static	1.5	ANCOLD, 2012[1]
Pseudo-static	1.05	NDEP, 2021

[1] This is a typical value adopted for dam design. While a HLF is not a dam, this Factor of Safety (FoS) value was adopted as a conservative target value rather than the minimum FoS of 1.3 recommended by the Nevada Division of Environmental Protection (NDEP, 2021).

AEP – annual exceedance probability, HLP – heap leach pad

2.3 Design parameters

The design has been based on the parameters outlined in Table 2-2.

Table 2-2: Design parameters

Design parameter	Value	Source
Climate		
Average annual rainfall	237 mm	BoM – Laverton
Average annual pan evaporation	1,584 mm	BoM – Kalgoorlie (Factor = 0.6)

Design parameter	Value	Source
Hydrology		
1:100 AEP, 24 h storm	139 mm	BoM - IFD Design Rainfall Data System (2016) for project site
Runoff coefficient	1	Assumed
External catchment area	168,000 m^2	Calculated
Seismicity		
Peak ground acceleration (PGA)	0.025g (10% probability of exceedance in 50 years)	2023 National Seismic Hazard Assessment (NSHA23)
Production		
LoM ore tonnage	850 kt	Legacy scoping study report
Ore schedule	Yr 0 – 1:150 kt Yr 2 – 7: 100 ktpa	Legacy scoping study report
Leach cycle	90 days	Assumed – Typical value (JT Metallurgical Services, email, 16 September 2025)
Leach pad design life	8 years	Legacy scoping study report
Irrigation rate	10 L/h/m^2	Assumed – typical value for gold ore
Ore properties		
Ore specific gravity	2.70	Assumed – typical value for gold ore
Average stored ore dry density	1.72 t/m^3	Assumed – typical value, consistent with porosity of ~36%
Ore saturated permeability	3×10^{-4} m/s	Assumed – Applied permeability criterion: K ≥ 100 × Irrigation rate[2]
Ore angle of repose	35°	Assumed – typical value (JT Metallurgical Services, email, 16 September 2025) consistent with site photo measurements
Ore field capacity	10 %	Assumed – typical value for residual moisture content
Ore operating moisture content	15 %	Assumed – typical value for leaching moisture content
Liner properties		
Liner interface friction angle	20°	Ale, J et al., 2013
HLF geometry		
Stack offset	8 m	Assumed – typical value for access between base of slope and channels
Lift thickness	6 m	Assumed – typical value (JT Metallurgical Services, email, 16 September 2025)
Bench width	6 m	Assumed – adopted to achieve an overall stack slope of ~1V:1.95H (27°)
Min pad height	1 m	Assumed – control against environmental containment
Ultimate HLF height	12 m	
Slopes - Inter-lift - Global	27° 35°	Tailex – Based on angle of repose Tailex – Global slope approximated based on 6 m lift and 6 m bench
Processing ponds		

Design parameter	Value	Source
Slopes	1V:2H	Assumed – Minimum recommended to limited under-liner sloughing
Stormwater pond		
Storm pond volume	100% runoff from HLP	Assumed – plus 20% contingency
Pond spillway	0.5 m depth	Assumed
Ore stacking		
Ore placement	30 t/h	Initial ore placement of 150 kt undertaken using a truck–shovel method, with the crushing and stacker system to be installed at a later stage

1. Denotes assumed parameter to be addressed through the forward works program
2. To be confirmed through test work

3 Site setting

3.1 Topography and drainage

The HLF area lies within a zone of gentle and gradually varying relief, with elevations ranging from approximately RL 397 m to RL 403 m as shown in Figure 3-1. The ground surface is relatively uniform, providing a stable foundation for pad construction and associated infrastructure.

The local topography promotes natural drainage away from the pad footprint, which is advantageous for the design of the solution collection and stormwater management systems, reducing the potential for ponding or infiltration into the foundation materials.

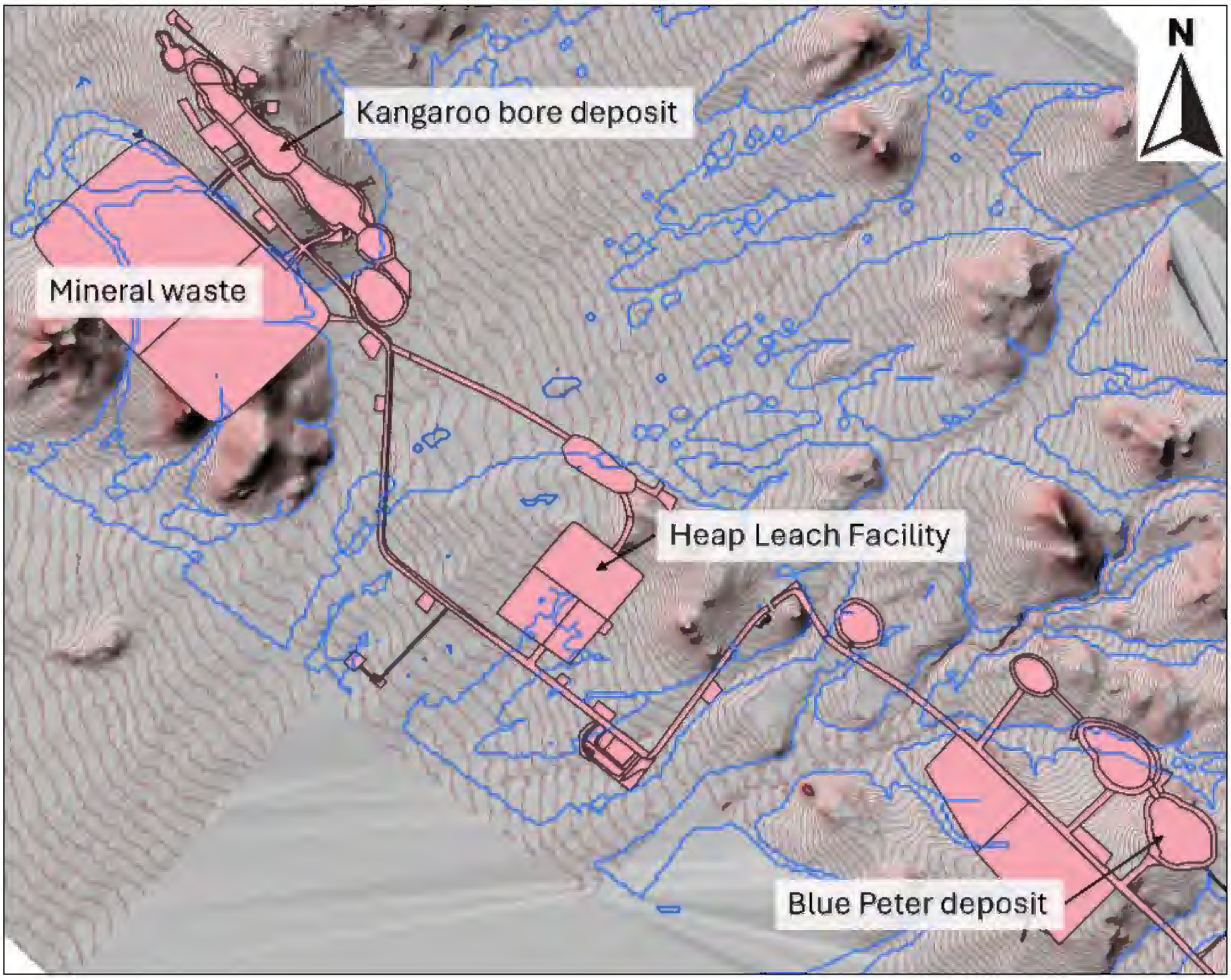

Figure 3-1: Digital terrain model

3.2 Climate

The Mt Celia Project lies within a “hot – persistently dry” region (BWh under the Köppen–Geiger classification), as shown in Figure 3-2. This region characterised by low annual rainfall (<250 mm) and very high evaporation rates (>2,400 mm/year).

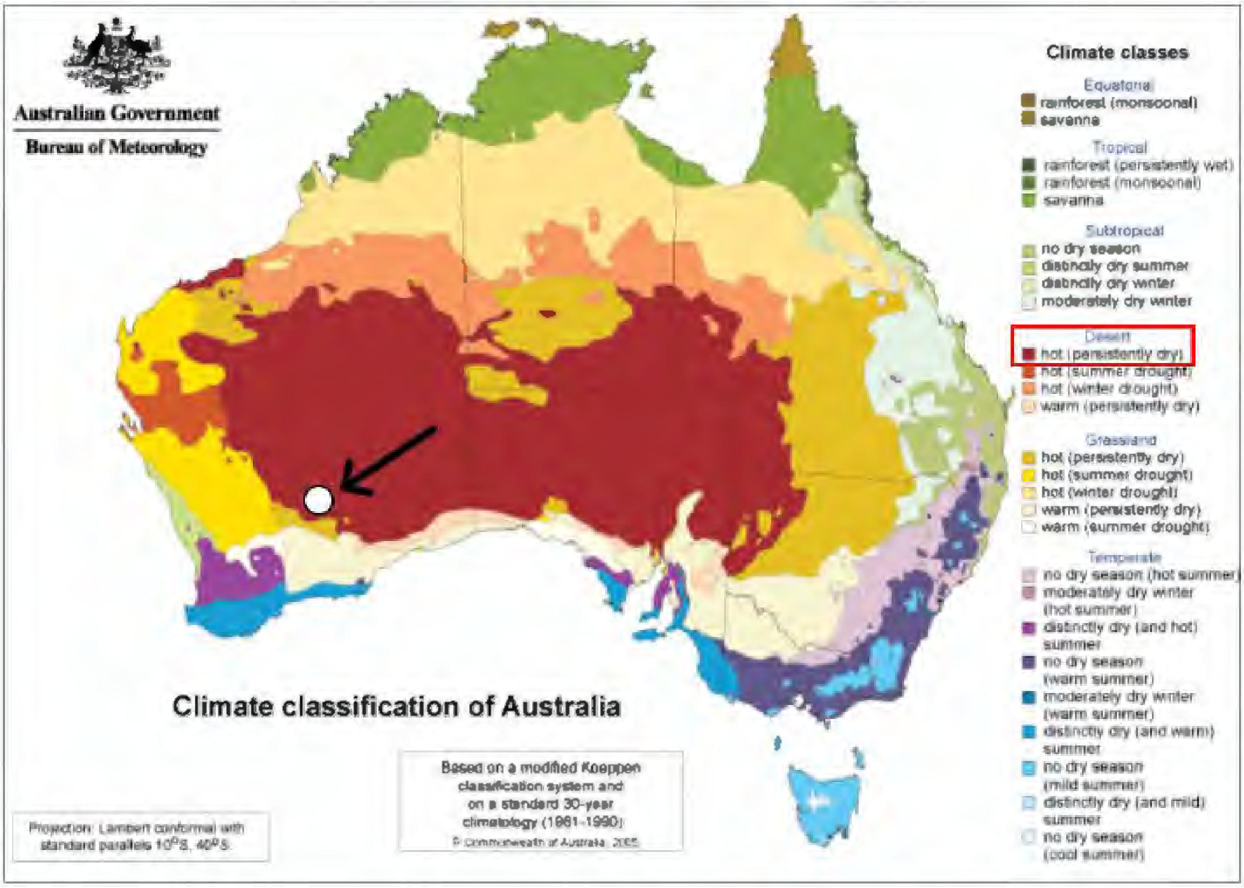

Figure 3-2: Climate classification for the HLF

Source: BoM

3.2.1 Temperature

Historical temperature data obtained from the Laverton BoM weather station indicates that temperatures in the area vary from:

- Mean daily maximum: 35.8°C in January to 17.8°C in July
- Mean daily minimum: 20.5°C in January to 5.2°C in July

3.2.2 Rainfall and evaporation

Climate data for the HLF was sourced from two BoM weather stations: Laverton and Kalgoorlie. The project site is located between these two stations, approximately 100 km southwest of Laverton and 180 km northeast of Kalgoorlie. Given its closer proximity and similar climatic conditions, the Laverton station data were considered the most representative for the project site.

As shown in Table 3-1, annual rainfall is comparable across both locations, with totals of about 237 mm at Laverton and 265 mm at Kalgoorlie. As evaporation data were not available from the Laverton BoM station, long-term evaporation records from the Kalgoorlie station were used, indicating a total of approximately 2,640 mm/annum. This reflects the hot, dry, and semi-arid climate characteristic of the region.

Table 3-1: Rainfall and evaporation data

Month	Laverton BoM	Kalgoorlie BoM	
	Precipitation (mm)	Precipitation (mm)	Pan Evaporation (mm)
January	26.8	26.2	431
February	30.7	31.8	346
March	31.7	25.7	306
April	21.5	20.4	199
May	22.1	23.8	133
June	23.2	27.6	93
July	15.9	24	103
August	12.9	21.6	130
September	8.8	13.4	181
October	9.7	15.5	271
November	15.1	19.6	326
December	18.3	15.8	424
Total	**236.7**	**265.4**	**2,943**

3.2.3 Design storm

Intensity-frequency-duration (IFD) curves obtained for the project location are shown in Figure 3-3.

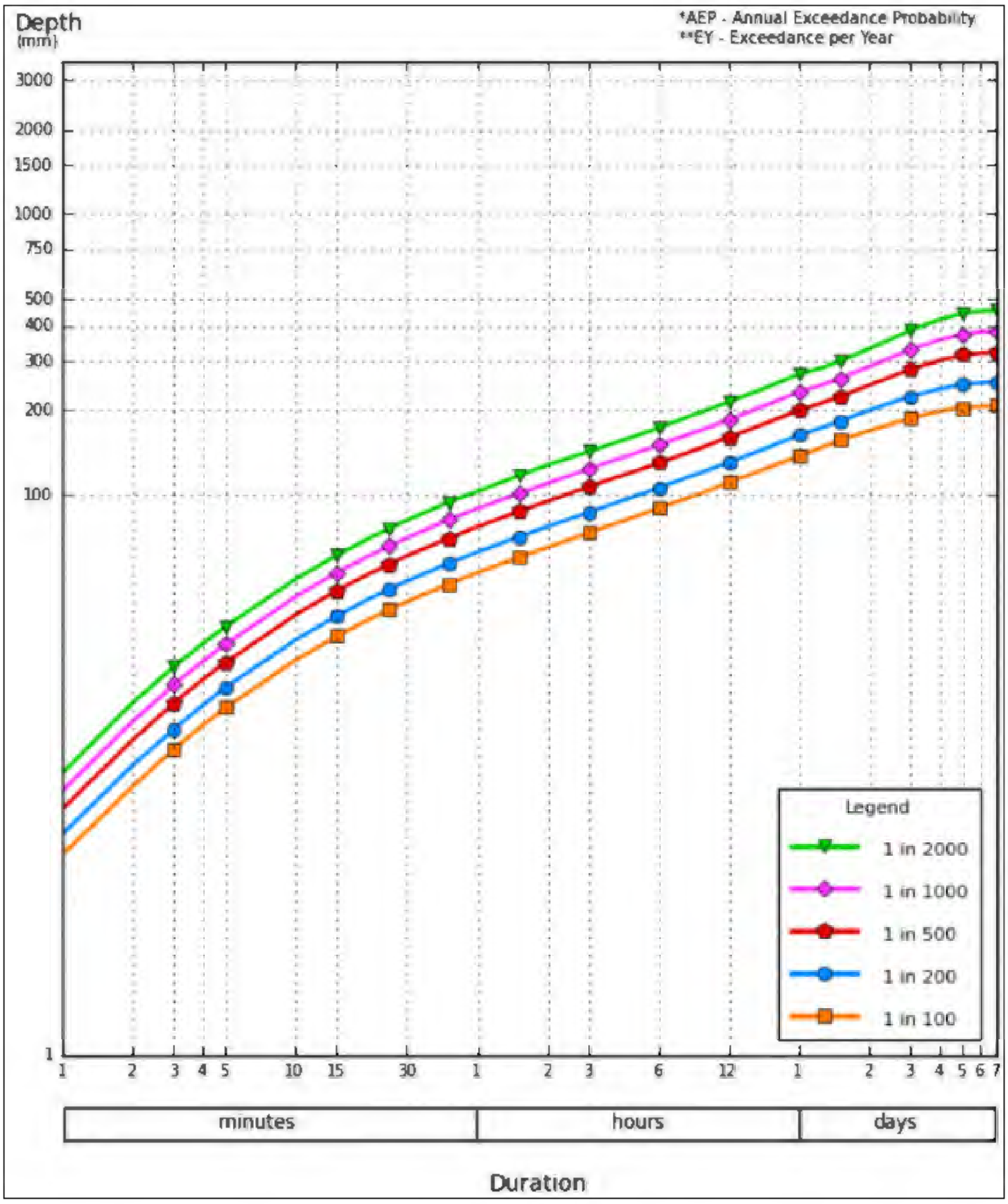

Figure 3-3: IFD chart

Source: BoM – Mt Celia Project location

3.3 Hydrogeology

A hydrogeological assessment was previously undertaken for the Mt Celia Project (AMC, 2021). The study evaluated the regional and local groundwater conditions, aquifer characteristics, and potential impacts associated with mining and processing activities. Figure 3-4 shows the three production bores and six monitoring wells that were included in the hydrogeological assessment (AMC, 2021).

The key findings from the AMC study are summarised below:

- The region is characterised by granite-greenstone rocks with prominent northwest tectonic trend and low- to medium-grade metamorphism.
- The stratigraphy is typically comprised of extremely weathered basalt or clays over basalt or quartz schist.

- The static water table sits at an average depth of 37 m, ranging between 21 m to a maximum depth of 78 m below ground level.
- Groundwater quality is brackish, with total dissolved solids between 6,700 mg/L and 16,000 mg/L and a neutral pH (7.7–7.9).
- Predicted pit inflows are around 25 L/s when mining reaches below 60 m depth. The drawdown radius is expected to remain within 2 km of the pits.

Tailex has been provided with groundwater monitoring data for the period January to September 2025. Monthly reviews of groundwater levels indicate no significant fluctuations in the overall water table. However, AMCMW2 recorded a decline in groundwater level of approximately 4 m each over the monitoring period.

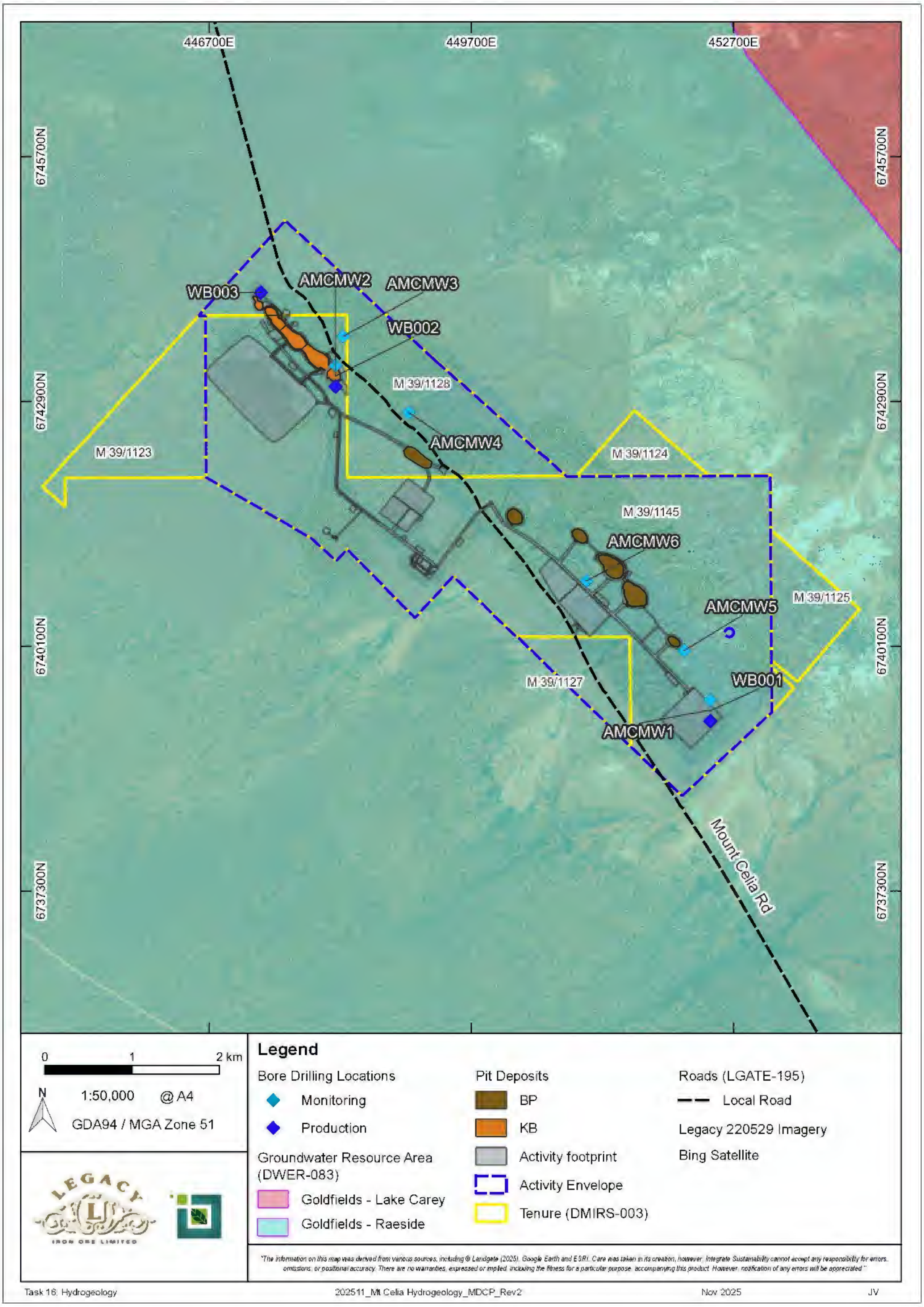

Figure 3-4: Drilling locations – Mt Celia Project

Source: Legacy

3.4 Surface water

The proposed HLF site has a catchment of 168,000 m². A surface water assessment (Hydrologia, 2025) conducted by Hydrologia in November 2025 was reviewed, and the associated flood extents were used to assess the suitability of the proposed HLP location. Flood extents corresponding to a 1% AEP event are presented in Figure 3-5.

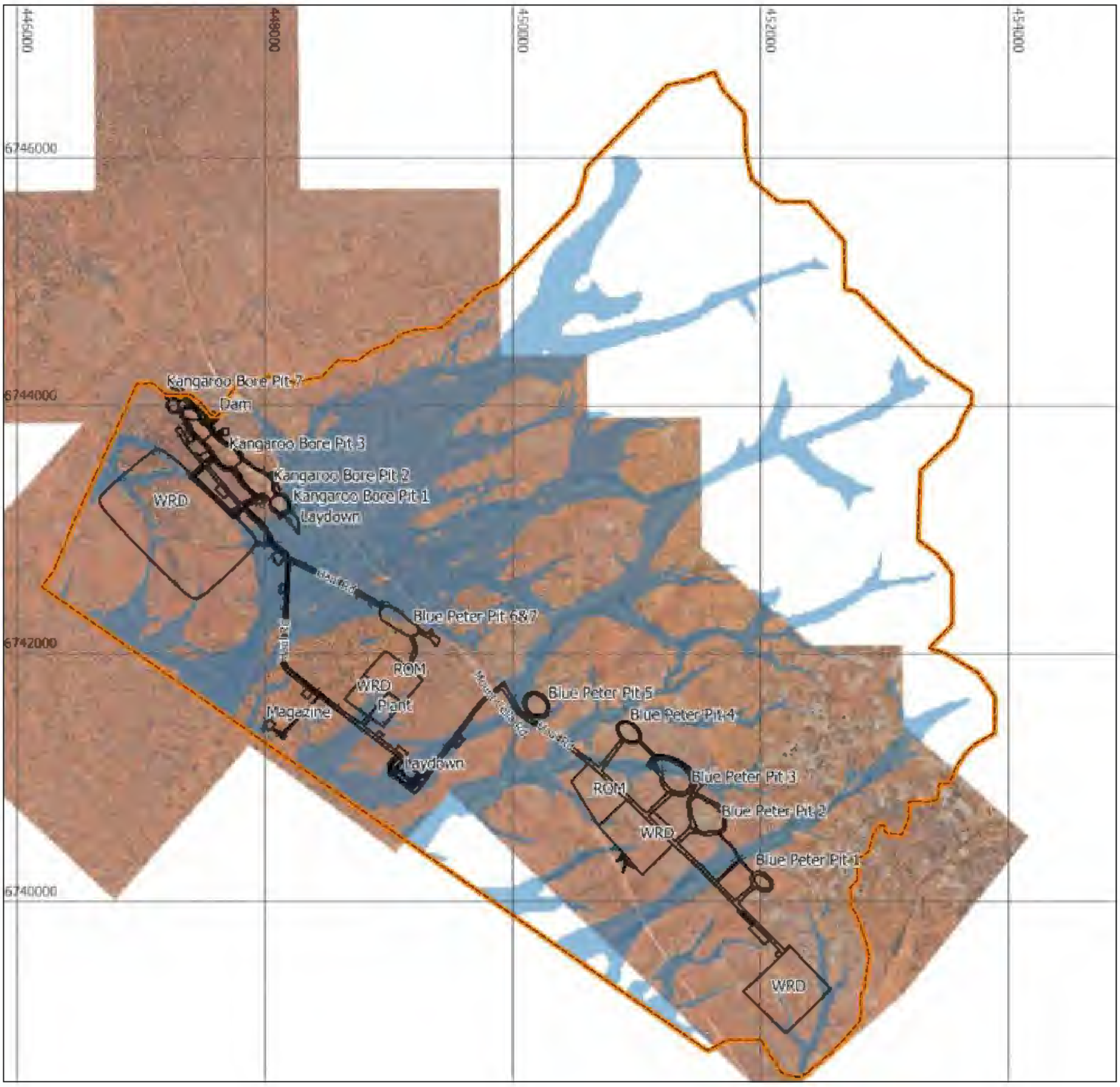

Figure 3-5: Surface water assessment – Mt Celia Project
Source: Hydrologia, 2025

3.5 Geology

The following summary of the local geological conditions underlying and surrounding the proposed heap leach pad (HLP) area is based on interpretations from the Mt Celia Geotechnical Report prepared by SRK (SRK, 2020).

The key geological findings can be summarised as follows:

- The Kangaroo Bore deposit area is situated within the Laverton Tectonic Complex, a structurally complex zone comprising of strongly faulted and folded greenstone sequences. The dominant lithologies at Kangaroo Bore consist of alternating layers of Quartz-Pyrophyllite Schist (AFP) and Quartz-Pyrophyllite Schist with a higher quartz content (AFQ).
- The Blue Peter shear system extends for approximately 2 km. It comprises a series of parallel quartz-filled shear zones developed within mafic and minor ultramafic units, which are located along the flank of an eastern granitoid. The principal rock type identified at the Blue Peter deposit is basalt (Mb).

Figure 3-6 shows the regional geology of the Mt Celia area.

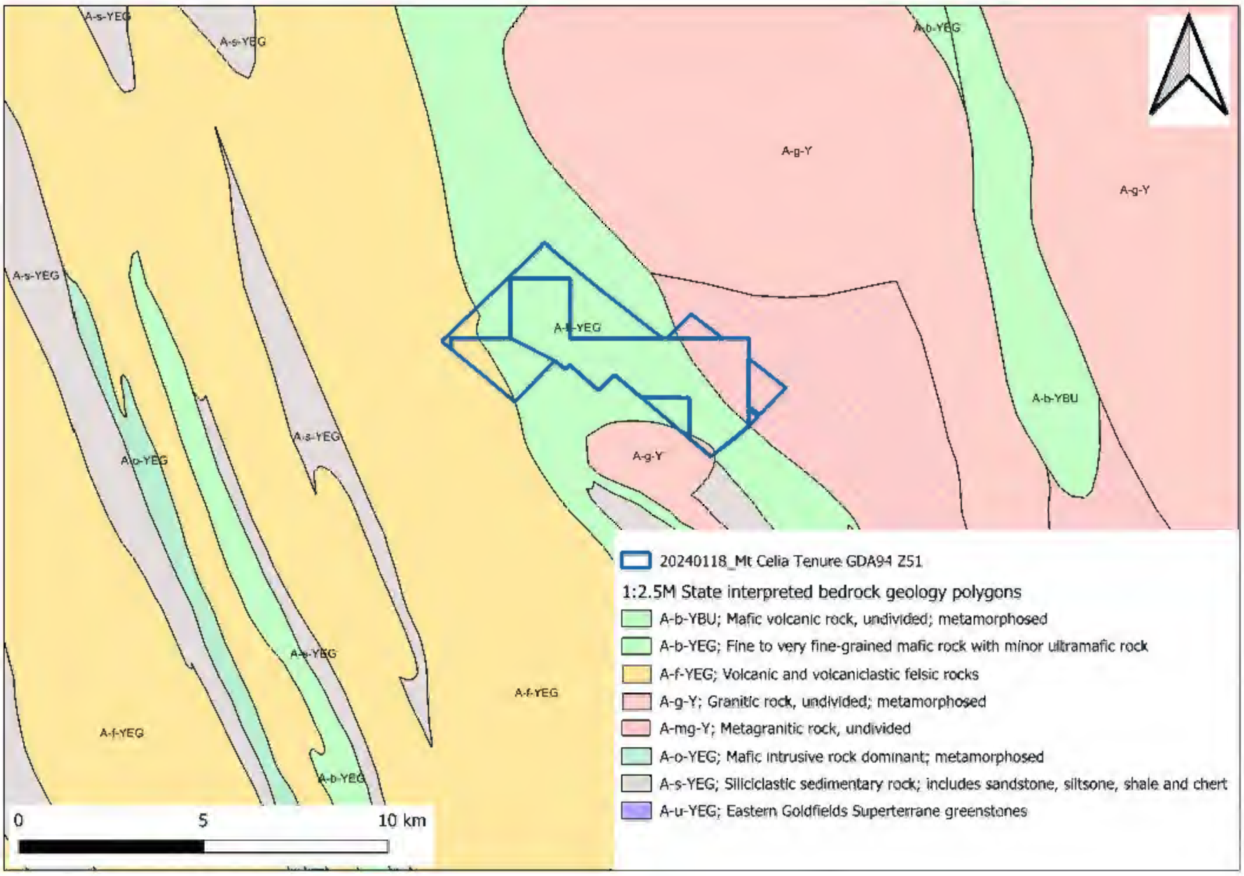

Figure 3-6: Regional geology of the Mt Celia area

Source: Department of Mining and Petroleum (DMP)

3.5.1 Regional geology

The Mt Celia Project is situated on the eastern margin of the Norseman-Wiluna Achaean Greenstone Belt within the Linden Domain of the Eastern Goldfields Province of the Yilgarn Craton. The Norseman-Wiluna granite-greenstone belt is approximately 600 km in length, and is characterised by thick, possibly rift-controlled, accumulations of ultramafic, mafic, felsic volcanic, intrusive and sedimentary rocks. Greenstone successions of the southern Eastern Goldfields have been segregated into elongate structural terranes bound by regional NNW-trending faults. These terranes include the Kalgoorlie Terrane, Gindalbie Terrane, Kurnalpi Terrane and the Edjudina Terrane.

The low-strain Murrin-Margaret sector includes the Edjudina and Yarri domains. These domains are bound to the west by the Keith-Kilkenny tectonic zone (Barba Hills Domain) and to the east by the Laverton tectonic zone (Pinjin and Linden domains).

The Linden and Pinjin domains are narrow greenstone domains situated between the Edjudina Domain to the west and the foliated granite-gneiss-migmatite complex to the east. The relationship between the Linden Domain and the Pinjin Domain, to the south, is not clear. The Linden Domain contains, on the west side, a low-grade sequence of basalt, minor banded iron formation (BIF), some felsic schist and komatiite, as well as a distinct zone of high-grade metamorphism adjacent to the granitoid. The stratigraphic units along the Linden Domain's eastern margin also exhibit a low-angle truncation against the foliated granite-gneiss-migmatite complex.

The rocks include a low-grade sequence of basalt (amphibolite) with minor BIF on the western side, metasedimentary and felsic volcaniclastic rocks (felsic schist) with quartz-aluminosilicate rock as local markers, and at least two komatiite layers. One locally well-exposed komatiite unit to the west appears to be younging to the west. This unit is characterised by substantial volumes of komatiitic basalt dominated by olivine cumulate (peridotite) and pyroxene spinifex-textured (komatiitic basalt) layers. A second thin komatiite unit lies directly along the foliated granitoid contact. Both units can be traced several kilometres to the north. Except for the high-grade metamorphic zone along the granitoid contact, the Linden Domain has been subjected to medium-grade metamorphism (Swager, 1995).

3.5.2 Prospect geology

The most notable topographic features of the area include several silicified, NW-SE trending felsic volcanic ridges and some low, N-S trending mafic-lava hills. Two large barren quartz blows form distinct hills in the southern part of the project area. The prospect geology at Mt Celia is shown in Figure 3-7.

The Mt Celia Project is underlain by an assemblage of deformed and altered Archaean greenstone lithologies of the Linden Domain which have been intruded by foliated pre-to syn-tectonic adamellite and syenite granitic rocks. The mafic metavolcanic rocks have been subjected to medium-grade metamorphism with a higher amphibolite-grade metamorphic zone lying along the granite-greenstone contact.

Several rock sequences have been identified within the project area; these have been described in detail in Carvalho (1985) (WAMEX A17446) and are summarised below:

- Mafic units with minor interbedded ferruginous cherts and felsic volcanics. The mafic units include fine-grained basalt and chlorite schist with a platy schistosity; medium-grained actinolite-tremolite-rich basalt; a massive, weakly schistose, dark green to blue fine-grained basalt interlayered with chlorite schists and commonly containing sulphides – mainly pyrite; and a massive, fine-grained, dark green to blue, high-Mg basalt with a characteristic blocky fracture. A serpentinite-rich ultramafic sill and two medium- to coarse-grained mafic porphyritic units have intruded the high-Mg basalt. Ferruginous and siliceous cherts and felsic volcanics are interbedded with the schists and basalts.
- Fine-grained schistose argillaceous sediments interbedded with silicified quartz-rich volcanics, acid tuffs and ferruginous cherts. These schists have been subjected to low-grade metamorphism. Large concordant bodies of silicified felsic volcanics lie within the andalusite-rich schists.
- Medium- to coarse-grained biotite-rich granitic bodies outcrop along the eastern side and in the southeastern corner of the project area. Some enclaves of coarse-grained amphibolite lie within the granite.
- A sub-vitreous siliceous conglomerate unit, containing silicified fragments of red clay, schists, basalts and rounded white quartz pebbles within a siliceous matrix of angular quartz grains, is situated on the top of some hills. This conglomerate was formed after the main erosional phase of the area and may have been derived from glacial end moraine material.

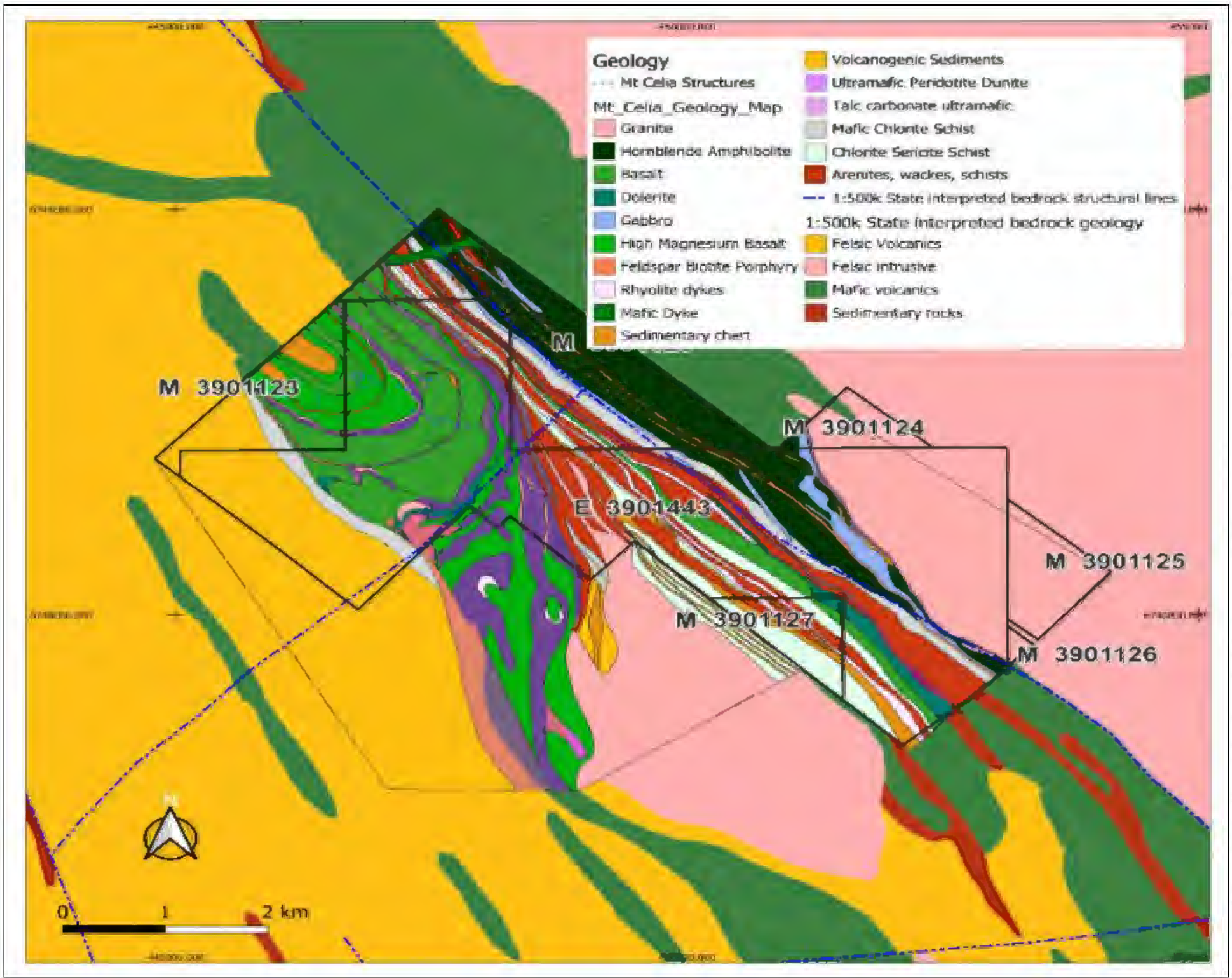

Figure 3-7: Prospect geology of the Mt Celia area
Source: Legacy

3.5.3 Gold mineralisation

Gold mineralisation within the project area is structurally controlled within the northwest striking steeply dipping Kangaroo Bore shear zone. Gold is found in narrow parallel ore lodes 1–5 m thick high-grade central core with a halo of low-grade mineralisation. The ore shoots are associated with quartz-filled shear zones within basalts, chlorite schists and felsic volcanics.

At Kangaroo Bore, the gold is hosted primarily by folded and faulted silicified quartz-pyrophyllite schists, often limited to quartz carbonate veins within the shear zone.

At Blue Peter, the gold mineralisation is hosted but not limited to quartz veins within shear zones in a basalt unit.

The mineral deposits are deeply weathered and, in some areas, covered by a layer of colluvium/alluvium.

3.6 Tenure

The Mt Celia Project comprises of the following tenements:

- E39/1443
- M39/1145

- M39/1125
- M39/1126
- M39/1127
- M39/1123
- M39/1124
- M39/1128
- E39/2262
- E39/2348.

The proposed HLF footprint is located within tenement M39/1145. Sterilisation drilling has been completed in the area surrounding the proposed HLF site, and based on current information, Legacy does not anticipate any constraints to significantly affect the development of the facility. The tenement boundaries are shown in Figure 3-8.

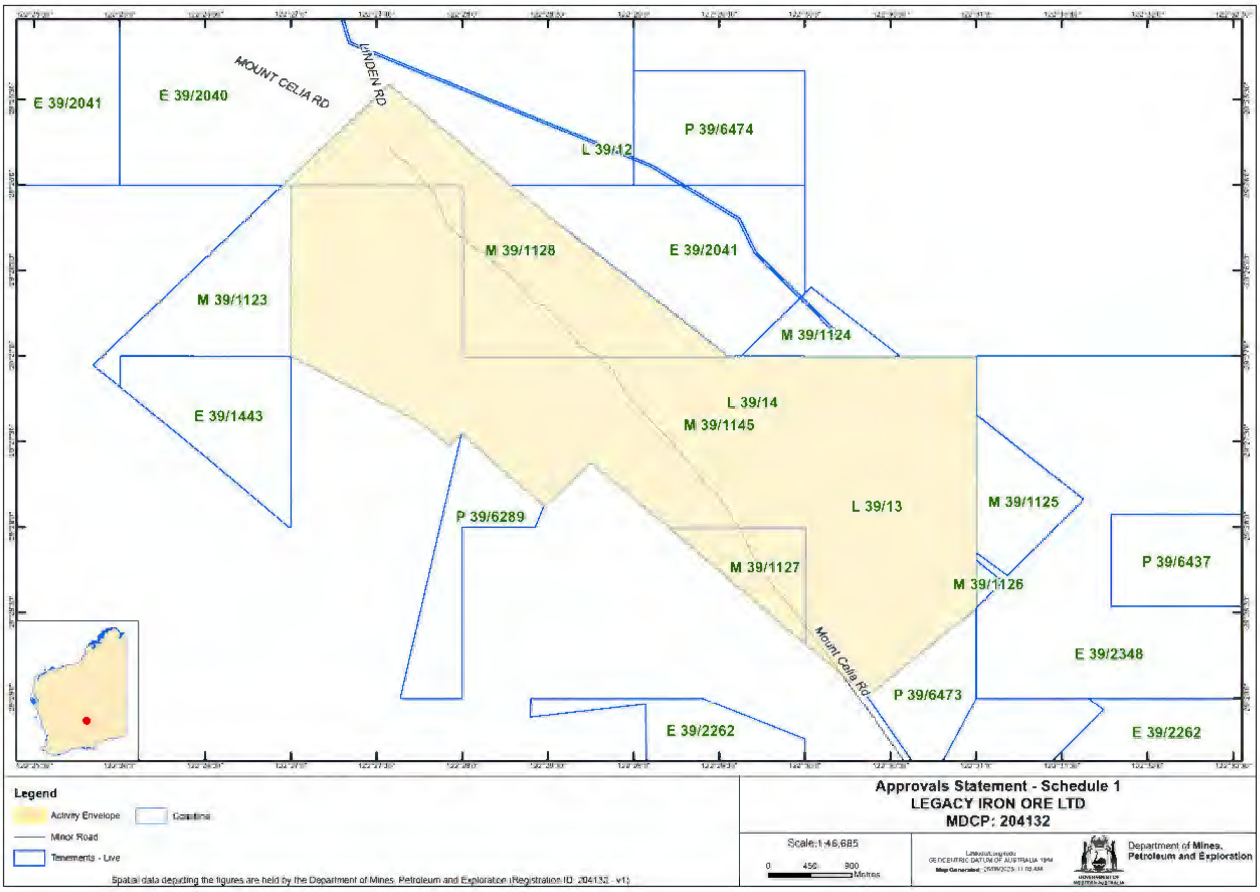

Figure 3-8: Mt Celia Project – tenements

Source: Department of Mines, Petroleum and Exploration (DMPE)

3.7 Heritage

The location of the proposed HLF is within an approved clearing footprint as advised by Legacy. There are no known registered heritage sites within the approved footprint.

3.8 Seismicity

According to the 2023 *National Seismic Hazard Assessment* (NSHA23) published by Geoscience Australia (Allen et al., 2023), seismic hazard across Australia has been mapped to represent the spatial variation in ground motion for events with a 10% and 2% probability of exceedance over a 50-year period. The assessment provides design reference values for various site classifications in accordance with AS1170.4-2007.

The Mt Celia HLF site is considered to fall within subsoil Class Be – Rock, corresponding to a reference shear wave velocity (Vs30) of approximately 760 m/s. Based on this classification, the NSHA23 mapping indicates peak ground acceleration (PGA) of about 0.025g and 0.06g for 10% and 2% probabilities of exceedance in 50 years, respectively. Figure 3-9 shows the location of the HLF project on the seismic hazard map (10% probability of exceedance in 50 years).

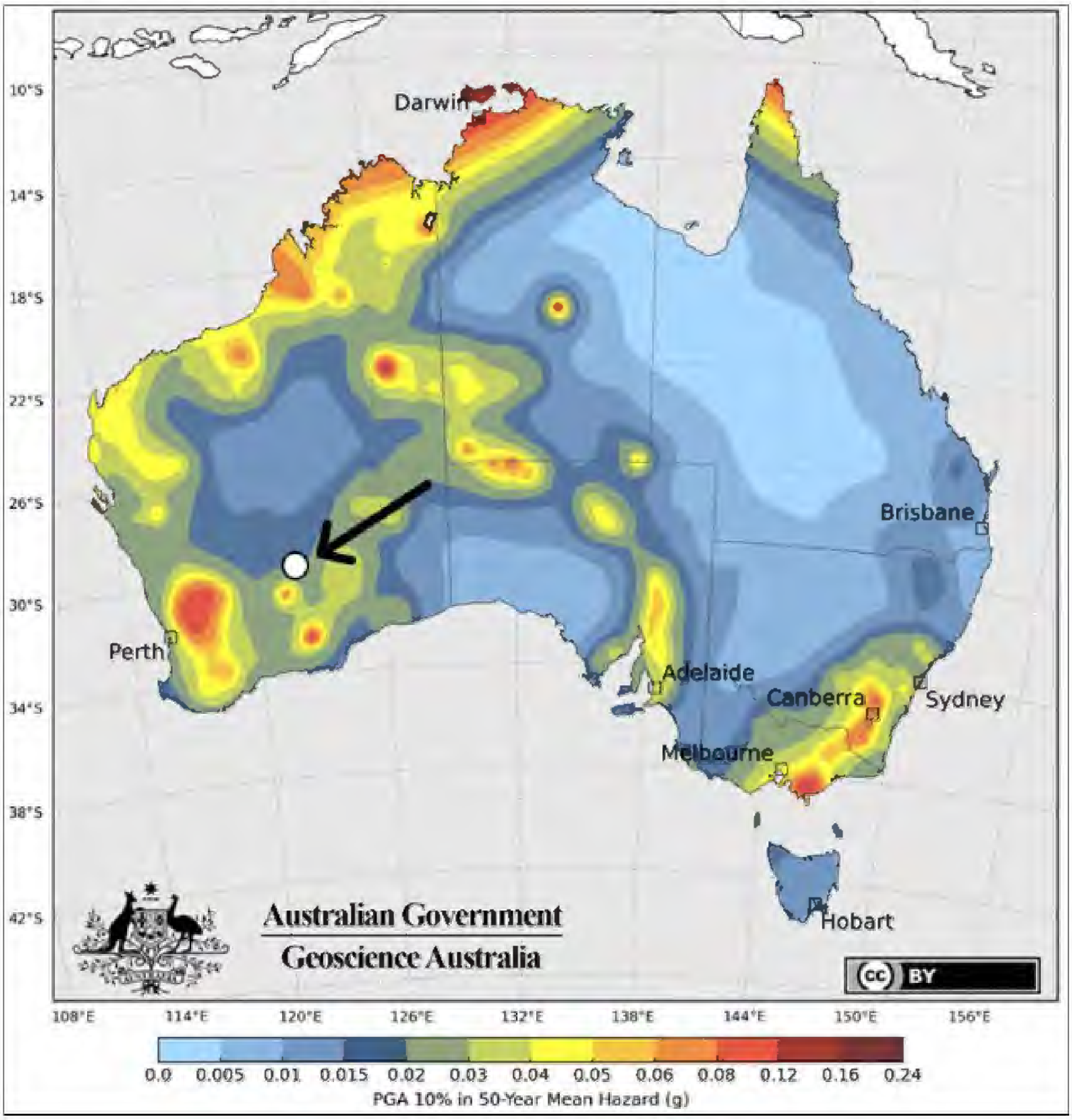

Figure 3-9: NSHA23 map – PGA (10% probability of exceedance in 50 years)

Source: Allen et al., 2023

4 Material characterisation

Material characterisation comprises the following:

- Foundation characterisation
- Borrow characterisation
- Ore characterisation.

4.1 Foundation characterisation

The field investigation was completed to assess the foundation conditions across the proposed HLF site. Details of the site investigation, including construction considerations are included in Appendix C.

Based on the laboratory test results and site observations, the near surface foundation conditions across the investigation area are generally characterised as either:

- Profile 1: A thin layer of topsoil overlying a calcrete horizon
- Profile 2: Colluvial soils

As noted in Section 1.5, Legacy has committed to completing further site investigation suitable to inform HLF construction.

4.1.1 Profile 1 – Shallow calcrete

The calcrete profile was observed across much of the proposed HLF pad footprint.

- Topsoil: Silty SAND (SM/ML), red-brown, fine to medium grained, low plasticity; loose; dry; with organic matter. Thickness generally ranges between 0.2 m and 0.5 m.
- CALCRETE. Fine-grained cemented duricrust, white, amorphous, massive bedding. HCl fizz confirms carbonate cementation (>50% carbonate content). Isolated occurrences of slightly weathered calcrete (TP02 and TP05) allowed limited excavation (0.2 m to 0.7 m) with spoil presenting as gravel to cobble sized clasts within a supported matrix, dry. Beneath this zone, and in locations where the weathered/excavatable material was absent, a very high strength, strongly cemented calcrete horizon was encountered, on which refusal consistently occurred.

TP05 represents a local variation within the profile and was logged as sandy CLAY, approximately 0.85 m thick. Refusal was encountered on calcrete at approximately 1.0 m depth.

4.1.2 Profile 2 – Colluvial soils

The colluvial soil profile was observed across the proposed HLF pond footprint.

- Topsoil: Silty SAND (SM/ML), red-brown, fine to medium grained, low plasticity; loose; dry; with organic matter. Thickness generally ranges between 0.2 m and 0.5 m.
- Colluvial soils Well-graded SAND (SW) to silty SAND (SM), fine to coarse grained, red-brown, dry. The material is generally non-plastic, with occasional zones of low plasticity recorded in TP10 and TP12. Minor gravel was observed within the sand matrix. Excavation termination was generally controlled by excavator reach capacity rather than material refusal.

4.2 Borrow characterisation

Laboratory testing was completed to assess borrow suitability for use as low-permeability material. Two samples were collected.

- TP17 from the existing waste dump within the HLF footprint.
- WD-PBM from the northwestern mineral waste near the Kangaroo Bore pit.

Details of the borrow characterisation are included in Appendix C.

Based on available test results, materials sampled from both identified borrow sources appear to be suitable as low permeability under-liner material. The TP17 sample, being of lower plasticity, is expected to be more workable than the WD-PBM sample.

Both samples would require screening to limit the maximum particle size. Screening of the WD-PBM material to 19 mm may be necessary to achieve consistent in-situ permeabilities to testing results. The screened oversize fraction is likely to exceed the 15% discarded by the laboratory during sample preparation, noting that field sampling also involved scalping larger particles before bagging.

At the time of reporting, a scope for additional borrow characterisation has been submitted to Legacy. As noted in Section 1.5, Legacy has committed to completing further borrow characterisation suitable to inform HLF construction.

4.3 Ore characterisation

At the time of reporting, metallurgical ore testing was underway and a scope for geotechnical ore characterisation has been submitted to Legacy. As noted in Section 1.5, Legacy has committed to completing a geotechnical ore characterisation scope suitable to inform HLF construction.

5 Heap leach facility design

The HLF design concept has been developed at within the boundaries provided by Legacy, using the design criteria (Table 2-1) and design parameters (Table 2-2).

The HLF design concept includes the following elements:

- HLF pad
- Solution collection and recovery
- Surface water management
- Ponds
- Closure.

5.1 Heap leach facility pad design

5.1.1 Pad siting

The HLF layout and associated volumetrics were developed considering 850,000 t of ore (equivalent to 494,186 m^3 at dry density of 1.72 t/m^3) as provided by Legacy.

Conceptual layout options were assessed based on the following factors:

- Pad volume
- Approved clearing boundary (approved for waste dump and landfill)
- Flood zone constraints
- Expansion potential
- Suitable locations for ponds and processing facilities.

The layout preferred by Legacy adopts a northwest–southeast alignment, which offers the best potential for future expansion, minimises total pad fill volume, and provides adequate space downstream for the construction of ponds, stockpiling and agglomeration, and processing plants.

Future design stages may require additional optimisation of the pad layout to incorporate loadout, agglomeration, and ore conveyor infrastructure, based on broader project drivers which have not yet been considered.

The proposed HLF general layout is shown in Drawing LGI001-0010 (Appendix A).

5.1.2 Pad geometry

The HLF geometry is described as follows:

- Total HLF height/elevation:
  - Lift 1 maximum height at northeast corner: 9.60m/RL 410.9 m
  - Lift 2 maximum height at northeast corner: 15.70 m/RL 416.8 m
- Pad height/elevation:
  - Maximum height at northeast corner: 2.6 m/RL 404.5 m
  - Minimum height at northwest corner: ~1 m/RL 403.2 m

- Lift heights: 6 m (Lift 1 and Lift 2).

5.1.3 Pad configuration

The HLF configuration accommodates the LoM ore and is staged to align the assumed leaching cycle with stacking rates presented in Table 2-1. The HLF configuration is described as follows:

- The HLF is developed in two lifts (each lift is 6 m high):
  - Lift 1 is 204 m in length (available ore storage length of the pad) and 244 m in width. Lift 1 panels contain ~483,543 t/281,130 m^3 of ore.
  - Lift 2 is 175 m in length (available ore storage length of the Lift 1 surface) and 215 m in width. Lift 2 panels contain ~368,974 t/214,520 m^3 of ore.
- The HLF ore placement is divided into panels. Each panel is 30 m in width (suitable for truck or stacker operation). The HLF will consist of 30 panels distributed across two lifts. Lift 1 and Lift 2 panels are described as follows:
  - Lift 1 panels are ~100 m in length (half the available ore storage length of the pad). Lift 1 panels align with stacking cycles and mining rates, allowing leaching of one pad at a time.
  - Lift 2 panels are ~87 m in length (half the available ore storage length of the Lift 1 surface). Lift 2 panels are smaller; therefore leaching of two panels will occur concurrently.

5.1.4 Panel schedule

An indicative HLF panel schedule for Lift 1 is shown in Figure 5-1. Panel schedules for Lift 1 and Lift 2 will be refined once ore characterisation and metallurgical testing is completed.

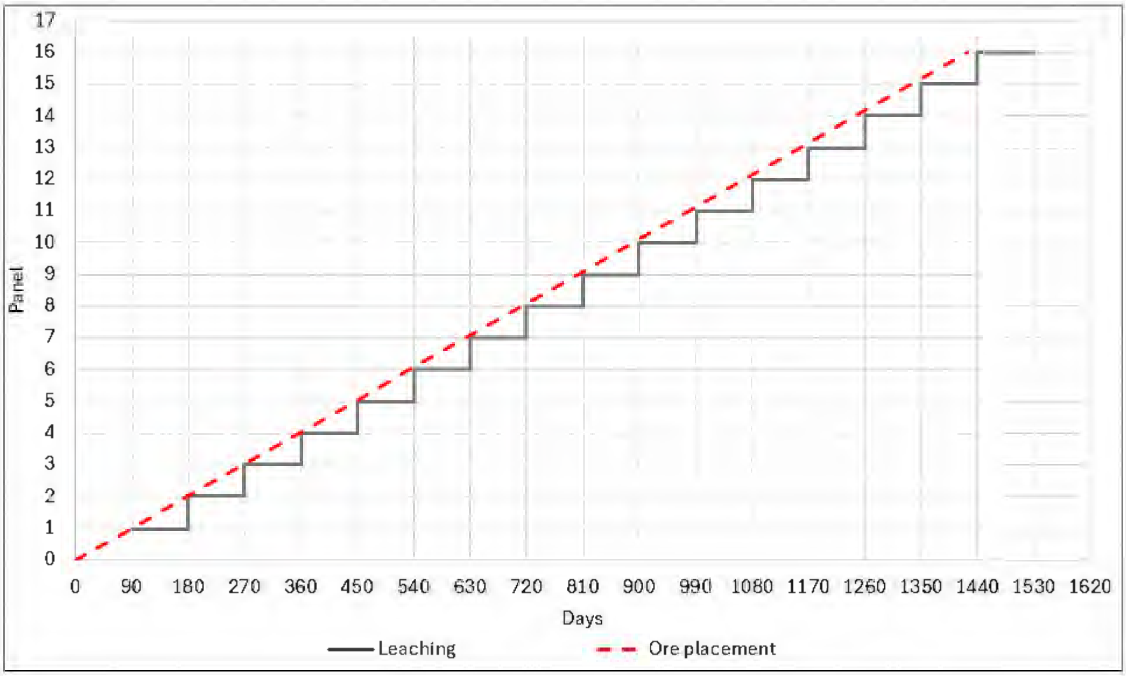

Figure 5-1: Indicative schedule for Lift 1

5.1.5 Pad liner

The proposed HLF conservatively adopts a double composite liner system pending further testwork and analysis to support a typical single liner arrangement.

The adopted double-liner system is configured as follows (from bottom to top):

- 0.30 m low-permeability sub-liner
- a secondary 1.5 mm double-sided textured HDPE (high-density polyethylene) geomembrane
- an intermediate geonet drainage layer functioning as a leak detection layer
- a primary 2 mm double-sided textured HDPE geomembrane.

This double liner configuration provides a robust containment barrier, incorporating both secondary containment and leak detection, while maintaining constructability and alignment with best HLP design practices.

The proposed HLF liner and containment design is shown in Drawing LGI001-0020 (Appendix A) and is described below.

Pad base

The pad base will be constructed using Blue Peter or Kangaroo Bore mine waste material. Due to a flat topography and shallow depth to refusal, the pad base will be built to heights varying between 1 m and 4 m above ground level using compacted mine waste to achieve a ~0.7% longitudinal slope across the pad. The above-ground construction of the pad acts as a containment control, limiting potential surface spillages and lateral migration of solutions. In addition, a seepage barrier is provided by the engineered liner system at the pad base.

Low-permeability sub-liner

A low-permeability sub-liner will be constructed to provide secondary containment and structural support for the primary HDPE geomembrane. The sub-liner will be placed to a thickness of 0.3 m above the mine waste pad fill. Along the perimeter, a section approximately 4.7 m wide will be constructed under the stormwater channel, with 1V:2H side slopes as shown in Detail 1 of Drawing LGI001-0020 (Appendix A). This configuration facilitates proper integration with the channel lining and ensures effective placement and compaction of the sub-liner materials to achieve the required low permeability.

It is anticipated that the sub-liner material will be derived from screened/crushed Mt Celia mine waste (P_{100} <25 mm) compacted to achieve a permeability of >1×10^{-8} m/s. Where suitable material is unavailable, a geosynthetic clay liner (GCL) may be used.

HDPE geomembrane

The liner system will incorporate two double-sided textured HDPE geomembranes (primary and secondary) to provide redundant containment and enhanced stability within the double composite liner system.

The primary geomembrane, installed above the leak detection layer, will act as the main impermeable barrier to leach solutions, while the secondary geomembrane, installed above the low-permeability sub-liner, will provide secondary containment. The primary geomembrane is specified at a thickness of 2 mm, while the secondary geomembrane is specified at a thickness of 1.5 mm.

Leak detection layer (geonet)

A geonet leak detection layer will be installed between the primary and secondary HDPE geomembranes to provide active leak detection. The geonet will function as a high-transmissivity drainage medium, allowing any leakage through the primary geomembrane to be conveyed to the leakage detection sump.

The geonet will be designed to maintain adequate in-plane flow capacity under full heap loading, with consideration given to long-term compressive stresses and potential chemical exposure. A high-strength HDPE geonet will be selected to minimise the risk of clogging, intrusion of fines, or chemical degradation.

Over-liner

An over-liner drainage layer will be constructed to provide both mechanical protection to the primary HDPE liner and efficient drainage of pregnant leach solution (PLS) to the collection system. The over-liner will be placed to a thickness of 0.5 m above the geomembrane and will extend across the full base of the proposed stacked ore footprint.

It is anticipated that the over-liner material will be well graded, screened/crushed Kangaroo Bore mine waste or screened ore with a maximum particle size, P_{100} <25 mm and less than 10% passing the 4.75 mm sieve. This achieves a target permeability three orders of magnitude higher than the solution application rate and one order of magnitude higher than the ore. The over-liner must be shown to be filter compatible with the ore and must be derived from durable, non-reactive material free from deleterious fines. Where no suitable material is available, an imported material may be required. Testing of the over-liner will be completed to confirm the requirement for a cushion layer between the HDPE liner and over-liner to prevent puncture.

Leak detection sump

A leak detection sump will be incorporated into the liner system to collect and manage any solution conveyed by the leak detection layer. The sump will allow monitoring, measurement, and removal of any leakage occurring through the primary geomembrane, supporting early detection of liner performance issues and timely operational response.

The leak detection sump will be located on the HLP at the southwest corner, positioned to receive gravity-fed flows from the leak detection geonet.

The location and arrangement of the leak detection sump is shown on Drawing LGI001-0010 (Appendix A).

5.1.6 HLF stability

A limit equilibrium stability assessment was undertaken, assessing both static and pseudo-static conditions.

Critical global stability is controlled by planar or block-type sliding along the low-strength geomembrane interface. Circular (optimised) global failure surfaces were evaluated but were established to be non-critical.

Shallow failure mechanisms (<5 m) mobilise elevated shear strength due to dilatancy and low normal stress effects that are not captured in limit equilibrium analyses. Given the negligible potential volumes associated with such failures, standard practice is to manage these mechanisms operationally (to be addressed in the HLF operating manual).

The HLF slope geometry is shown in Figure 5-2. The outputs of this study are provided in Appendix B.

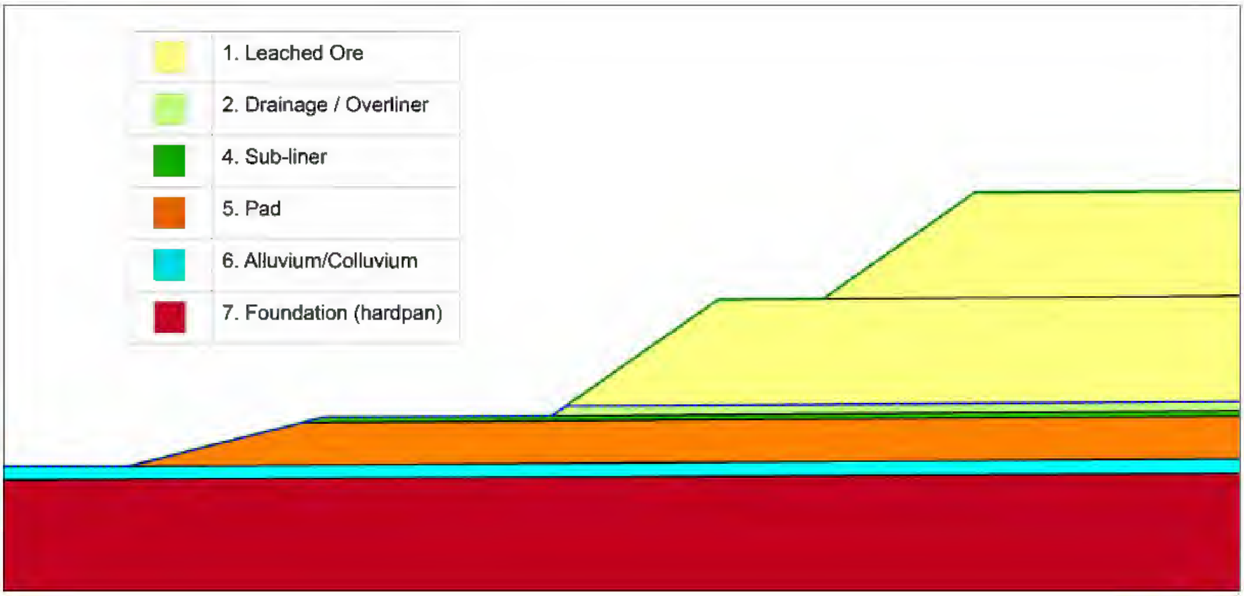

Figure 5-2: Analysed cross section

Assessment criteria

HLF stability has been assessed against the Factor of Safety (FoS) criteria specified in Table 5-1.

Table 5-1: Recommended Factors of Safety

Loading condition	Recommended min. FoS	Shear strength to be used for evaluation	Notes
Long-term drained (static)	1.5	Effective strength	ANCOLD (2012); typical for dam design; more conservative than NDEP (2021) FoS = 1.3
Pseudo-static	1.05	Effective strength	NDEP (2021)

Analysis assumptions

The stability assessment considered the following design assumptions:

- Lift 1 and Lift 2 stability geometries were both considered.
- Phreatic levels are maintained within the over-liner material, a condition which will be validated by monitoring and operational controls.
- The ore, pad fill, compacted sub-liner and foundation colluvial/alluvial materials are expected to remain unsaturated, a condition which will be validated by monitoring and operational controls.
- A conservative (lower-bound) over-liner strength has been assumed, similar to the leached ore.
- A conservative (lower-bound) liner interface friction angle has been adopted to allow incorporation of a cushion layer, should it be required in later stages of design.

Material parameters:

Adopted material strength parameters are summarised in Table 5-2.

Table 5-2: Strength parameters

Material	Bulk unit (kN/m^3)	Cohesion (kPa)	Peak friction angle (°)	Reference
Leached ore	17	-	35	Section 2.3
Over-liner	18	-	35	Leps, 2025
Liner interface	20	-	20	Ale, J et al., 2013
Sub-liner	20	-	30	Assumed
Pad base	20	-	38	Leps, 2025
Alluvium/Colluvium	20	-	25	Assumed
Hardpan	20	Impenetrable		

Pseudo-static parameters

NDEP (2021) recommends performing a pseudo-static assessment using the peak ground acceleration (PGA) corresponding to a seismic event with a 10% probability of exceedance in 50 years. As outlined in Section 3.8, the PGA for this site was estimated to be 0.025g. Although NDEP (2021) allows application of a reduced PGA value (up to 50%) if adequately justified, to maintain a conservative approach a reduction was not applied in this study. The pseudo-static parameters are summarised in Table 5-3.

Table 5-3: Pseudo-static parameters

Seismic coefficient, k (g)	Seismic event	Shear strength to be used for evaluation
0.025	10% probability of exceedance in 50 years	Effective strength – peak conditions

Results

Deterministic stability results are summarised in Table 5.4.

Table 5.4: Stability results

Scenario	Static		Pseudo-static
	Circular failure	Block failure[1]	Block failure[1]
Lift 1	1.63	1.53	1.25
Lift 2	1.56	1.52	1.27

[1] Slip surface forced along the geomembrane liner interface

The HLF achieves adequate FoS under the following conditions:

- The leached ore remains unsaturated.
- Material parameters and expected loading conditions are met.

It should be noted that as confinement increases with depth within the heap, the effective friction angle of the ore mass also increases, resulting in higher overall FoS values for deeper or more confined sections of the stack.

Sensitivity assessment

Sensitivity analyses were undertaken to evaluate the effect of the liner interface shear strength on the HLF stability and to define the minimum calcrete layer thickness influencing the stability. The outcomes are as follows:

- The analyses show that a minimum interface friction angle of approximately 19° is required to achieve an acceptable FoS of ~1.50 for the adopted HLF geometry.
- Assuming a conservative undrained strength ratio (USR) of 0.22 for the foundation layer underlying the calcrete hardpan and modelling the calcrete using strength parameters of c' = 180 kPa and Ø' = 25° (Shaqour, 2017), the results indicate that calcrete thicknesses greater than 2.5 m do not materially influence overall HLF stability under the assumed conditions.

5.1.7 HLF seepage

A qualitative seepage assessment was completed for a single composite liner (HDPE geomembrane over low-permeability compacted clay), consistent with typical practice in Western Australia. Further data are required to confirm seepage inputs and complete the detailed quantitative assessment. Pending this, a conservative double composite liner has been adopted. The qualitative single composite liner assessment is retained below and indicates low seepage risk. The final liner selection will be confirmed during detailed design.

Qualitative assessment (single liner configuration)

Leakage through HDPE geomembranes differs fundamentally from moisture migration through compacted clay liners. In geomembranes, the dominant leakage pathway is flow through construction defects (holes or punctures), whereas flow through clay liners follows Darcy's Law (Qian, 2002).

To illustrate the potential magnitude of seepage through a liner defect, a simple conceptual calculation was undertaken, assuming:

- a 1 cm^2 defect in the primary HDPE liner
- a maximum hydraulic head of 0.5 m
- an underlying 0.3 m-thick compacted clay liner with k = $1E^{-8}$ m/s and porosity = 0.35.

Using Darcy's equation, Q = k i A, the potential leakage through such a defect is approximately $6E^{-12}$ m^3/s, equivalent to $1.5E^{-3}$ m^3 of leachate over an 8-year LoM. In the absence of a leak detection layer, this volume would migrate downward at a rate comparable to the clay's permeability.

Assuming a standard anisotropic behaviour with a permeability ratio of k_v/k_y = 0.1, the affected soil volume beneath the defect can be represented by a cone with sides defined by k_v/k_y = 0.1, plus a cylindrical zone (radius ≈ 0.1 m) of clay directly below. The resulting pore volume (~$3E^{-3}$ m^3) exceeds the potential leakage volume by roughly a factor of 2.

This assessment is conservative, as it assumes a fully saturated hydraulic conductivity of $1E^{-8}$ m/s; in reality, the clay beneath the liner would remain partly unsaturated, with an unsaturated permeability potentially several orders of magnitude lower, further reducing any potential seepage. Accordingly, the estimated leakage is negligible, and the risk of migration to foundation soils is considered very low at the conceptual design stage.

As noted in Section 1.5, Legacy has committed to complete a 1D seepage analysis to confirm these results.

5.2 Solution collection and recovery

The PLS collection and recovery system comprises a network of drainage pipes. A fully contained gravity-fed drainage system conveys leachate to the PLS/stormwater pond, to avoid open-channel flow.

Sizing of the proposed solution collection and recovery system considers the following:

- Irrigation rate of 10 L/h/m^2
- Direct precipitation from a 24 h, 1: 100 AEP event (139 mm)
- Surge allowance (10% of irrigation rate).

The proposed HLF solution collection and recovery system is shown in Drawing LGI001-0010 (Appendix A) and summarised as follows:

- Perforated collector pipes: 100 mm OD HDPE (dual-wall, smooth interior, perforated) installed at 6 m spacing under the ore footprint. Collector pipes run at 45° to the header pipes.
- Panel header pipes: 200 mm OD HDPE (smooth interior, solid) at ~19.5 m spacing under the ore footprint. Header pipes run parallel to the pad slopes. Panel header pipes receive flows from perforated collector pipes.
- Cell header pipes: 300 mm OD HDPE (smooth interior, solid) at 30 m spacing under the ore footprint. Header pipes run parallel to the pad, running the full length of each cell. Cell header pipes receive flows from the panel header pipes.
- PLS pipe: 500 mm OD HDPE (smooth interior, solid) along the downstream boundary of the pad within the stormwater channel, with a slope of ~0.5%. The conveyance pipe receives flows from the header pipes, and discharges into the PLS/stormwater pond.

The HLF is planned as a two-lift facility. Performance of the solution collection and recovery system will depend on the permeability of the lower lift once loaded, which will be confirmed through subsequent geotechnical testing. An intermediate liner and solution collection system can be used for the second lift if ore permeabilities are inadequate.

5.3 Surface water design

The HFL surface water management strategy is as follows:

- Contact surface water management: collection of direct precipitation on the HLF slopes (and conveyance to the stormwater pond) to prevent release of contaminated runoff.
- Non-contact water management: diversion of external runoff to prevent contact with the HLF.

Previous flood modelling outputs covering the broader Mt Celia site were reviewed, confirming the proposed HLF site has limited reporting upstream catchment and minimal influence from flooding.

5.3.1 Contact surface water

Contact surface water shedding from the HLF slopes is routed to the stormwater pond via perimeter channels excavated into the HLF pad. Sizing of the proposed channels considers the following:

- 100% of pad runoff from a 24 h, 1:100 AEP event (139 mm)
- Uniform cross section for peak flow capacity
- Freeboard (0.5 m).

The proposed channel sizing and location is shown in Drawing LGI001-0010 (Appendix A) and summarised as follows:

- Minimum grade of 0.5%
- Minimum base width 1 m (for constructability)
- Minimum depth of 0.5 m
- Slopes 1V: 2H.

The stormwater pond containment system is described in Section 5.5.3.

The PLS conveyance pipe is located within a portion of the stormwater diversion channel, a common design approach for small HLFs with pregnant solution only. This does not affect the channel's ability to convey design storm flows. Any leakage from the pipe will be contained within the stormwater channel.

Contact surface water falling on the HLF crest percolates through the ore and is captured by the solution collection and recovery system (described in Section 5.2).

Contact surface water management infrastructure for the broader HLF operation, including stockpiles, PLS plant, and agglomeration circuit, will be designed by others.

5.3.2 Non-contact surface water

A diversion bund will divert non-contact surface water around the HLF footprint. The HLF is situated outside significant drainage channels, with a limited local catchment. Compacted perimeter bunds (nominally 1 m high) are proposed to maintain non-contact water separation by diverting external runoff while also containing minor contaminated flow or sediment within the HLF footprint. The proposed bund alignment is shown in Drawing LGI001-0010 (Appendix A).

5.4 Water balance

A basic water balance was used to inform pond sizing. The preliminary flows to/from system include:

- Inflows:
  - Direct rainfall onto the HLP and ponds
  - Irrigation applied to the heap
  - Ore moisture
- Outflows:
  - Evaporation
  - Non-drainable wet-up volume within the heap
  - Solution recovered via the collection system.

The water balance assessment was undertaken using long-term climate data from the Laverton BoM station. Key outcomes include:

- Under normal operating conditions, the HLF is a net water consumer and requires makeup water supplementation during the dry season.
- The solution pond storage volumes defined in Section 5.5 are considered adequate to manage the predicted operational water balance under the assumed climatic and operating conditions.

- Based on assumed ore permeabilities, an estimated 20 ML of makeup water is required.

The water balance model will be reviewed as additional operational, climatic, and design information becomes available.

5.5 Pond design

The HLF surface water and liquor management will be as follows:

- PLS pond
- Barren pond
- Stormwater pond.

Pond designs have been informed by a preliminary HLF water balance, with key design assumptions detailed in Section 2.1. The water balance will be revised as additional or refined input data become available.

5.5.1 PLS pond

Leachate from the HLF is directed to the PLS pond via the conveyance pipe. Sizing of the PLS pond considers the following:

- 72 h drain-down (active area) plus 50% allowance for residual drainage
- Minimum operating head (1 m)
- Direct precipitation from a 24 hr, 1:100 AEP event (139 mm)
- Freeboard (0.5m) for wave run-up.

The PLS pond has a design capacity of ~7,000 m^3. The proposed PLS pond sizing and layout are shown in Drawing LGI001-0010 (Appendix A).

The PLS pond will be constructed with a double-liner system. The liner system will comprise a 2.0 mm HDPE primary geomembrane overlying a 1.5 mm HDPE secondary geomembrane, with a geonet installed between the two liners. The geonet will convey any leakage from the primary liner to a recovery sump located at a low point in the pond.

5.5.2 Barren pond

The Barren pond provides storage and operational surge capacity for the recycled leach solution being returned from the process plant to the HLP. The pond receives barren solution from the process circuit and serves as the source pond to for the heap irrigation pumps. Sizing of the Barren pond considers the following:

- 72 h drain-down (active area) plus 50% allowance for residual drainage
- Direct precipitation from a 24 h, 1:100 AEP event (139 mm)
- Minimum operating head (1 m)
- Freeboard (0.5 m) for wave run-up.

The Barren pond has a design capacity of ~7,000 m^3 and will be constructed using the same double-liner concept as the PLS pond.

The proposed Barren pond sizing and layout are shown in Drawing LGI001-0010 (Appendix A).

5.5.3 Stormwater pond

Contact surface water shedding from the HLF slopes is directed to the PLS pond via perimeter channels. The stormwater is conveyed from the PLS pond to the stormwater pond through a spillway. Sizing of the stormwater pond considers the following:

- HLF runoff (full stack and pad) from a 24 h, 1: 100 AEP event (139 mm)
- Direct precipitation from a 24 h, 1: 100 AEP event (139 mm)
- Freeboard (0.5 m) for wave run-up.

The stormwater pond has a design capacity of ~10,000 m^3. The proposed PLS pond sizing and layout is shown in Drawing LGI001-0010 (Appendix A).

The stormwater pond will be constructed with a single-liner system. The liner system will comprise a 2 mm-thick HDPE primary liner placed over a 0.3 m-thick compacted clayey layer.

5.6 Starter HLF

Construction of the HLF will be undertaken in stages. The starter HLF (Stage 1 pad) will be developed at the northwestern extent of the LoM footprint. The starter HLF is the first lift across panels 1–6 and will provide capacity for approximately 150,000 t of ore.

Construction of the LoM ponds, as described in Section 5.5, will be required to support operation of the Stage 1 pad. Ancillary infrastructure to support starter HLF operations, including surface water diversion works and access roads, will also be constructed.

Prior to construction and commissioning of the Stage 1 pad, detailed technical specifications, detailed design documentation, risk assessments, and an Operating, Maintenance and Surveillance (OMS) manual will be prepared.

Any design optimisation undertaken to accommodate the Stage 1 pad will maintain the stability, operational, and containment performance objectives defined in this report.

5.7 Construction

The frequency and extent of quality control activities will be defined as part of detailed design and documented in construction specifications.

An as-constructed report for the Stage 1 pad will be developed, providing a brief and accurate descriptions of the construction processes undertaken to build each component of the HLF pad and ponds.

5.8 Closure

The conceptual closure strategy has been developed to reflect the post-closure objectives outlined by the DMPE (DMPE, 2025). The following specific design objectives have been identified:

- To maintain the hydrological regimes, quality and quantity of groundwater and surface water so that environmental values are protected
- To maintain the quality of land and soils so that environmental values are protected
- Mining activities are rehabilitated and closed in a manner to make them physically safe to humans and animals, geotechnically stable, geochemically non-polluting/non contaminating, and capable of sustaining an agreed post-mining land use, with consideration for cultural values and without unacceptable liability to the State.

Closure will involve heap rinsing, capping, and pond decommissioning to minimise environmental impacts and ensure long-term stability. The conceptual closure approach is outlined as follows:

- Heap rinsing will be undertaken following cessation of operations, with the duration established based on ore permeability and drain-down behaviour observed during operations. Rinsing is expected to occur over approximately 3 years, subject to monitoring of return water quality, to reduce residual cyanide concentrations, stabilise pH and limit soluble metals within the heap.
- Following completion of rinsing, the heap will be regraded to form a stable post-closure landform. Outer slopes will be regraded to a nominal inclination of approximately 1V:3H to achieve long-term geotechnical stability and reduce erosion potential.
- The final heap geometry will promote controlled surface runoff and minimise the development of erosion features, with localised surface drainage measures incorporated where required to safely convey runoff away from the heap.
- An engineered soil cover will be placed across the heap surface following regrading, consisting of either a low-permeability soil layer or an evapotranspiration-style cover, depending on material availability and detailed design outcomes, to limit rainfall infiltration and reduce percolation through the heap.
- The upper cover layer will support vegetation establishment and contribute to erosion control, dust suppression and evapotranspiration, using locally appropriate, drought-tolerant species to promote development of a stable and self-sustaining landform.
- Process ponds will be progressively decommissioned following heap closure, including emptying, cleaning and capping, with residual effluents managed through recycling or evaporation systems until acceptable closure criteria are achieved.

The HLF closure strategy will be refined further during subsequent design and operational stages, informed by operational monitoring data, material characterisation and observed performance of closure elements.

6 Heap leach facility operations

The HLF pad and pond operations will be guided by an OMS manual developed prior to construction. The manual will provide information of the operating procedures to be followed and the outcomes that these procedures are expected to achieve. The manual will also outline the responses to be implemented in the event of a systems failure and identify the parties to be contacted.

Details used to inform future development of the OMS manual are provided in the following subsections.

6.1 Ore placement

The ore placement methodology has been defined and will be implemented in stages. The initial placement of approximately 150 kt of ore will be carried out using the mining fleet (truck placement), allowing early commencement of operations. Following this initial phase, a conveyor and stacker system will be constructed and used for subsequent ore placement to enable continuous and efficient stacking.

This staged approach is not expected to result in material changes to the overall pad concept, although it may be necessary to make minor local adjustments to the pad footprint to accommodate temporary infrastructure or operational access during the initial trucking phase.

Access to the HLP will be provided via a ramp located at the northwest corner of the facility, near the high point of Cell 1. The ramp has been designed at approximately 10° to enable safe access for heavy equipment onto the heap surface.

6.2 Ore leaching

The leach pad will be irrigated at an average rate of approximately 10 L/h/m^2 applied to the surface of the heap using dripper pipes and/or wobblers. The solution application system consists of a header system off the main distribution pipe that runs from the plant around the western perimeter of the pad.

The leaching application design will be completed by others.

6.3 Monitoring

Performance monitoring will be carried out on an ongoing basis during operations, rehabilitation and the post-closure period to ensure that the design intent of the HLF and ponds is maintained.

Instrumentation will be installed to assist in performance monitoring of the HLF and ponds. The design/specification and location of these instruments will be undertaken as part of the detailed design of each cell.

Typical monitoring tasks include:

- Monitoring of standpipes or vibrating wire piezometers (VWPs) installed in over-liner material to assess heap saturation and:
  - Ensure liner head levels remain within design limits to minimise potential for seepage
  - Ensure phreatic levels remain within design limits to minimise potential for sloughing/slope instability.
- Monitoring of standpipes installed within pad and foundation materials to identify seepage. The environmental monitoring program is currently being developed by Legacy and will be incorporated in the OMS manual.

- Monitoring of PLS grades through designated sampling points within pipelines.
- Monitoring of wildlife interactions with leachate:
  - On-stack ponding will be controlled by managing application rates and applying auditory deterrents (bird cannons) where necessary.
  - The PLS and Barren ponds will be managed using auditory deterrents and, where practical, protective netting.

6.4 Inspections

Typical inspections will include:

- Inspection/monitoring of HLF and pond liner performance to assess integrity and remaining service life.
- Inspection/monitoring of pond freeboard.
- Inspection of slopes for signs of erosion cracking, settlement, or sloughing.

6.5 Maintenance

Typical maintenance tasks will include:

- Cleaning of debris-lined surface water channels and ponds by hydraulic flushing or mechanical/manual cleaning. Cleaning may be supported by bypass lines to maintain operations during maintenance.
- Cleaning of debris from header and conveyance pipes to maintain flow efficiency. Cleaning may be supported by access risers outside the HLF or footprint.
- Routine maintenance of pipelines and flow measurement devices to ensure accurate data and system reliability.

6.6 Emergency Action Plan

An Emergency Action Plan will be developed and included in the OMS manual prior to operations.

6.6.1 Erosion, sloughing and settlement

Some surficial sloughing and erosion on the HLF slopes are expected, consistent with typical operations. The small volume of material mobilised by such events will be captured by perimeter bunding. If detected, a qualified engineer should immediately assess risk and implement short-term fixes (if necessary).

6.6.2 Large-scale failure

If a major failure of the HLF or ponds occurs:

- Immediately assess the risk of further mobilisation of ore and/or the release of leachate to the environment.
- Take urgent safety actions (e.g. cease solute application, evacuate downstream areas).
- Stabilise the structure with short-term measures, clean up any ore release, and implement and monitor long-term solutions.

6.6.3 Reportable incidents

The following are considered reportable incidents:

- Any fauna death on or near the proposed HLF
- Any uncontrolled release of ore to the external environment
- Any pond overtopping events
- Any major defects to pad or pond liner systems.
- Any major seepage occurrence (e.g. a discernible impact on vegetation, soil contamination)
- Any major defects in the structure of the proposed HLF or ponds which could lead to large-scale failure and or release of leachate.

Should any of the above incidents occur, the relevant authorities must be notified.

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Closure

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Principal Consultant

All data, text, tables, figures, and attachments in this document have been reviewed and prepared following standard professional engineering and environmental practices

Document ID: 9d414b12d28f3b7a48d61f5da144691260ecb005dabd082f91729a398643f345

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Appendix A Drawing set

50 0 50 100 150 200 250

SCALE 1:2,500

SITE LAYOUT
SCALE 1:2,500

CONTOUR INTERVALS U.N.O.
EXISTING TOPOGRAPHY: 2m & 10m
DESIGN TOPOGRAPHY: 2m & 10m

COORDINATE SYSTEM
HORIZONTAL DATUM: MGA51
VERTICAL DATUM: GDA94

FOR CLIENT REVIEW
PLOTTED: Monday, 19 January 2026 10:00:44 AM

DRAWING No.	DRAWING TITLE

REFERENCE DRAWING TABLE

REV.	REVISION DESCRIPTION	DRAWN	DESIGNED	REVIEWED	APPROVED	DATE
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HEAP LEACH DESIGN

DRAWING TITLE
SITE LAYOUT

DRAWING NUMBER
LGI001-0000

REVISION
A

SCALE 1:1,000 (20 0 20 40 60 80 100)

GENERAL ARRANGEMENT

SCALE 1:1,000

CONTOUR INTERVALS U.N.O.
EXISTING TOPOGRAPHY: 2m & 10m
DESIGN TOPOGRAPHY: 2m & 10m

COORDINATE SYSTEM
HORIZONTAL DATUM: MGA51
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DRAWING TITLE: GENERAL ARRANGEMENT

DRAWING NUMBER: LGI001-0010

REVISION: A

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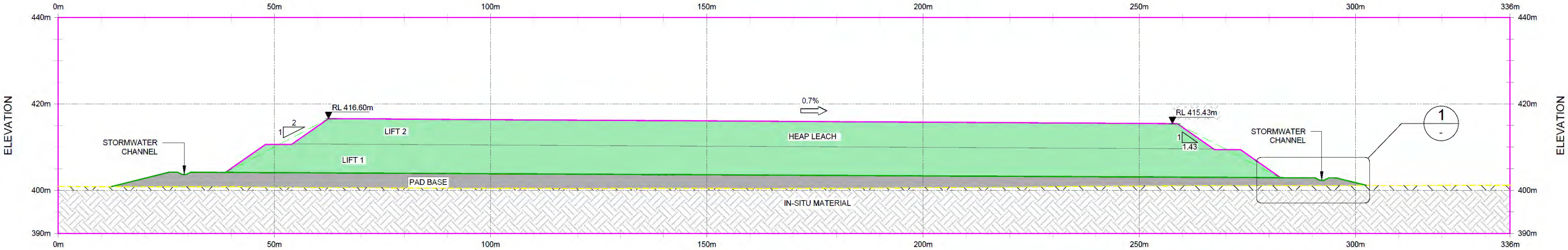

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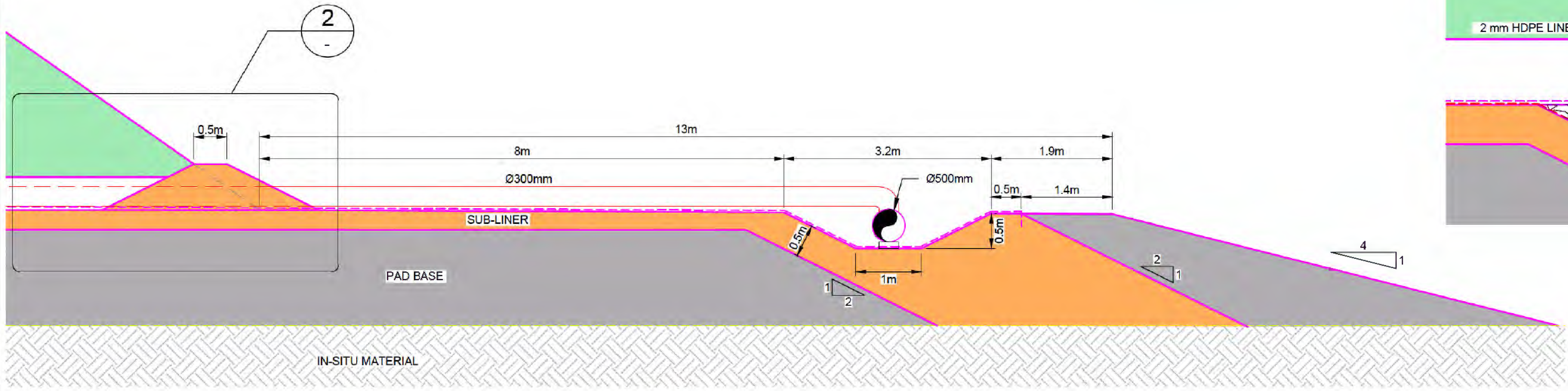

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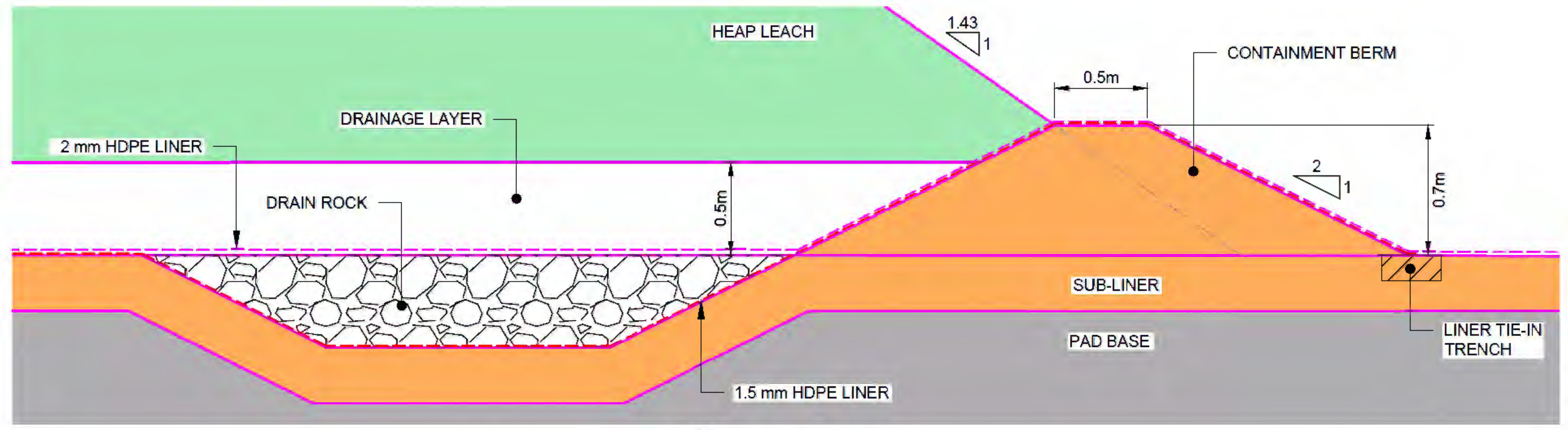

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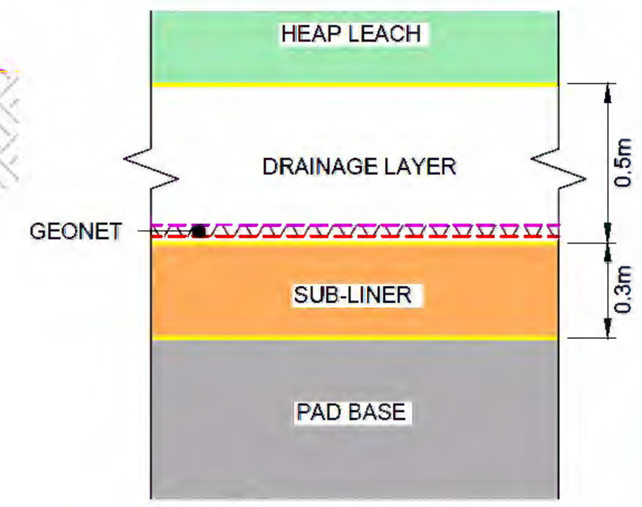
SCALE 1:25



3 DETAIL
SCALE 1:20

LEGEND:

IN-SITU MATERIAL	DESIGN
PAD BASE	2 mm HDPE LINER
SUB-LINER	1.5 mm HDPE LINER
DRAINAGE LAYER	CELL HEADER PIPE
HEAP LEACH	CONVEYANCE PIPE
CUT	
FILL	
DRAIN ROCK	

SCALE 1:500 SCALE 1:50 SCALE 1:25 SCALE 1:20

COORDINATE SYSTEM
HORIZONTAL DATUM: MGA51
VERTICAL DATUM: GDA94

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HEAP LEACH DESIGN

DRAWING TITLE
SECTIONS AND DETAILS

DRAWING NUMBER LGI001-0020

REVISION A

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SCALE 1:1,000

DRAINAGE LAYOUT

SCALE 1:1,000

CONTOUR INTERVALS U.N.O.
EXISTING TOPOGRAPHY: 2m & 10m
DESIGN TOPOGRAPHY: 2m & 10m

COORDINATE SYSTEM
HORIZONTAL DATUM: MGA51
VERTICAL DATUM: GDA94

FOR CLIENT REVIEW
PLOTTED: Monday, 19 January 2026 10:00:47 AM

DRAWING No.	DRAWING TITLE
REFERENCE DRAWING TABLE	

REV.	REVISION DESCRIPTION	DRAWN	DESIGNED	REVIEWED	APPROVED	DATE
A	ISSUED FOR CLIENT REVIEW	AROD	SKDL	MORE		19.01.26

REVISION HISTORY TABLE

SHEET SIZE A1

IF THE ABOVE BAR DOES NOT SCALE 25mm, THE DRAWING SCALE IS ALTERED

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Tailex

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FILE: C:\USERS\ALEJANDRO\ONEDRIVE - TAILEX PTY LTD\PROJECTS - DOCUMENTS\LGI001_HFL PFS DESIGN\03_WORKING FILES\02. DRAFTING\00 - DRAWINGS\01 - SHEETS\LGI001 - 0030 - DRAINAGE LAYOUT

LEGACY IRON ORE LIMITED

LEGACY IRON ORE LIMITED

HEAP LEACH DESIGN

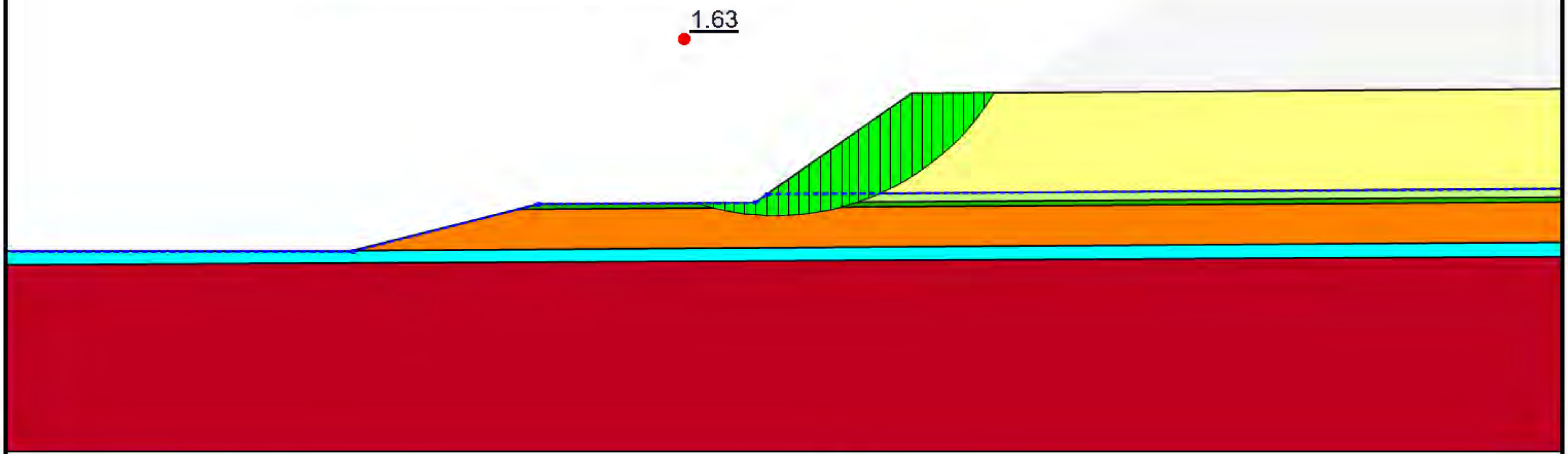
DRAWING TITLE
DRAINAGE LAYOUT

DRAWING NUMBER LGI001-0030

REVISION A

Appendix B Stability assessment

Color	Name	Slope Stability Material Model	Unit Weight (kN/m³)	Effective Cohesion (kPa)	Effective Friction Angle (°)
	1. Leached Ore	Mohr-Coulomb	17	0	35
	2. Drainage / Over liner	Mohr-Coulomb	18	0	35
	4. Sub-liner	Mohr-Coulomb	20	0	30
	5. Pad	Mohr-Coulomb	20	0	38
	6. Alluvium/Colluvium	Mohr-Coulomb	20	0	25
	7. Foundation (hardpan)	Mohr-Coulomb	25	180	25



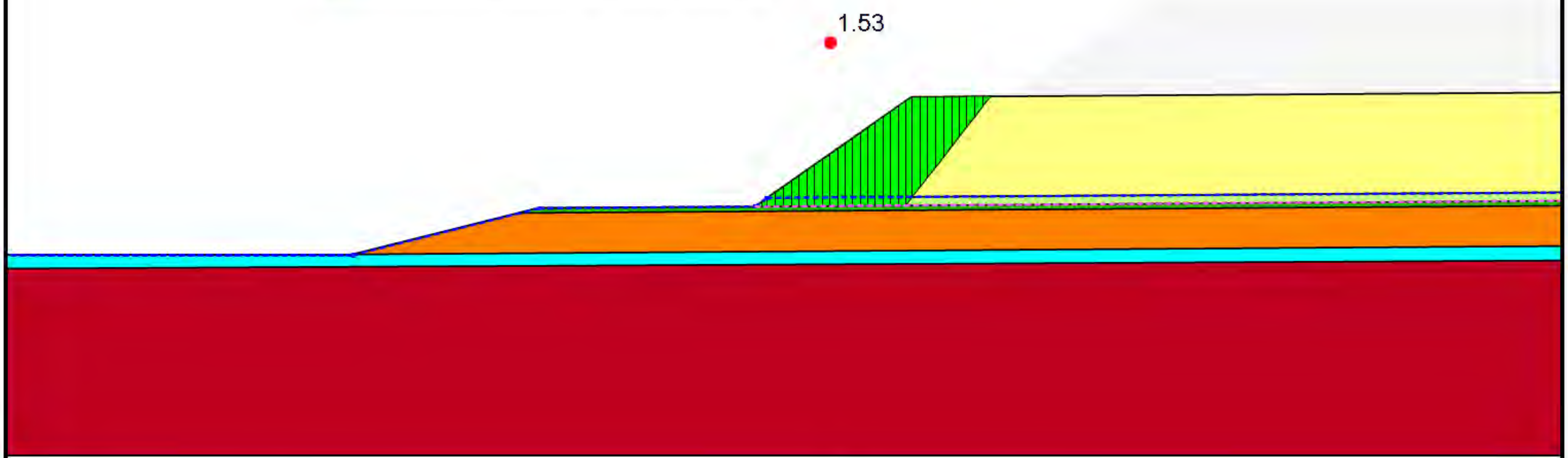
Tailex

Circular (1 lift)

Prelim Stability_revB.gsz

19/01/2026 1:350

Color	Name	Slope Stability Material Model	Unit Weight (kN/m³)	Effective Cohesion (kPa)	Effective Friction Angle (°)
	1. Leached Ore	Mohr-Coulomb	17	0	35
	2. Drainage / Over liner	Mohr-Coulomb	18	0	35
	3. Liner Interface	Mohr-Coulomb	20	0	20
	4. Sub-liner	Mohr-Coulomb	20	0	30
	5. Pad	Mohr-Coulomb	20	0	38
	6. Alluvium/Colluvium	Mohr-Coulomb	20	0	25
	7. Foundation (hardpan)	Mohr-Coulomb	25	180	25



Tailex

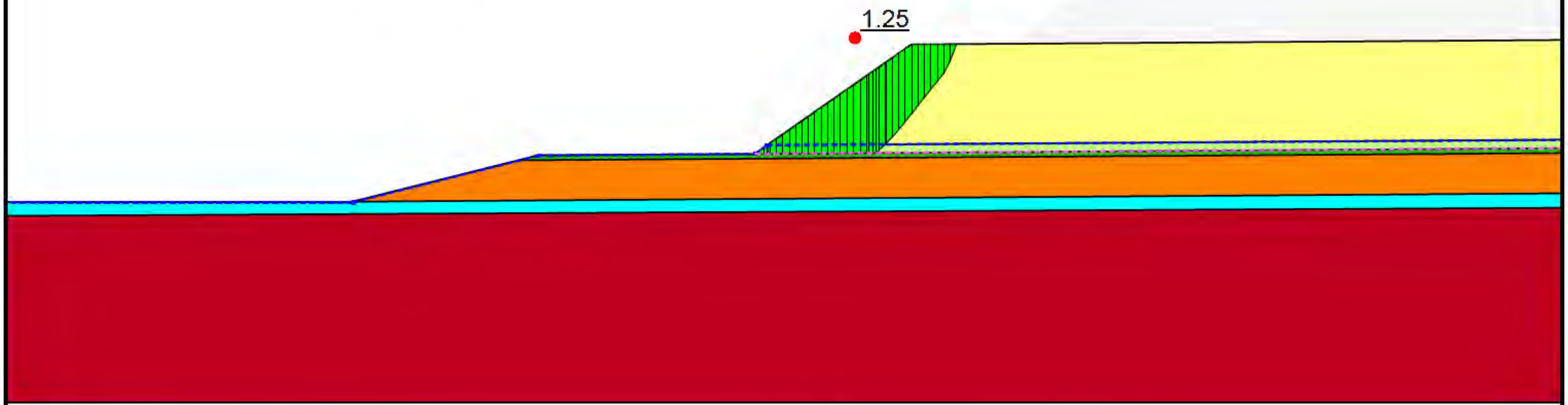
Block search (1 lift)

Prelim Stability_revB.gsz

19/01/2026 1:350

Color	Name	Slope Stability Material Model	Unit Weight (kN/m^3)	Effective Cohesion (kPa)	Effective Friction Angle (°)
	1. Leached Ore	Mohr-Coulomb	17	0	35
	2. Drainage / Over liner	Mohr-Coulomb	18	0	35
	3. Liner Interface	Mohr-Coulomb	20	0	20
	4. Sub-liner	Mohr-Coulomb	20	0	30
	5. Pad	Mohr-Coulomb	20	0	38
	6. Alluvium/Colluvium	Mohr-Coulomb	20	0	25
	7. Foundation (hardpan)	Mohr-Coulomb	25	180	25

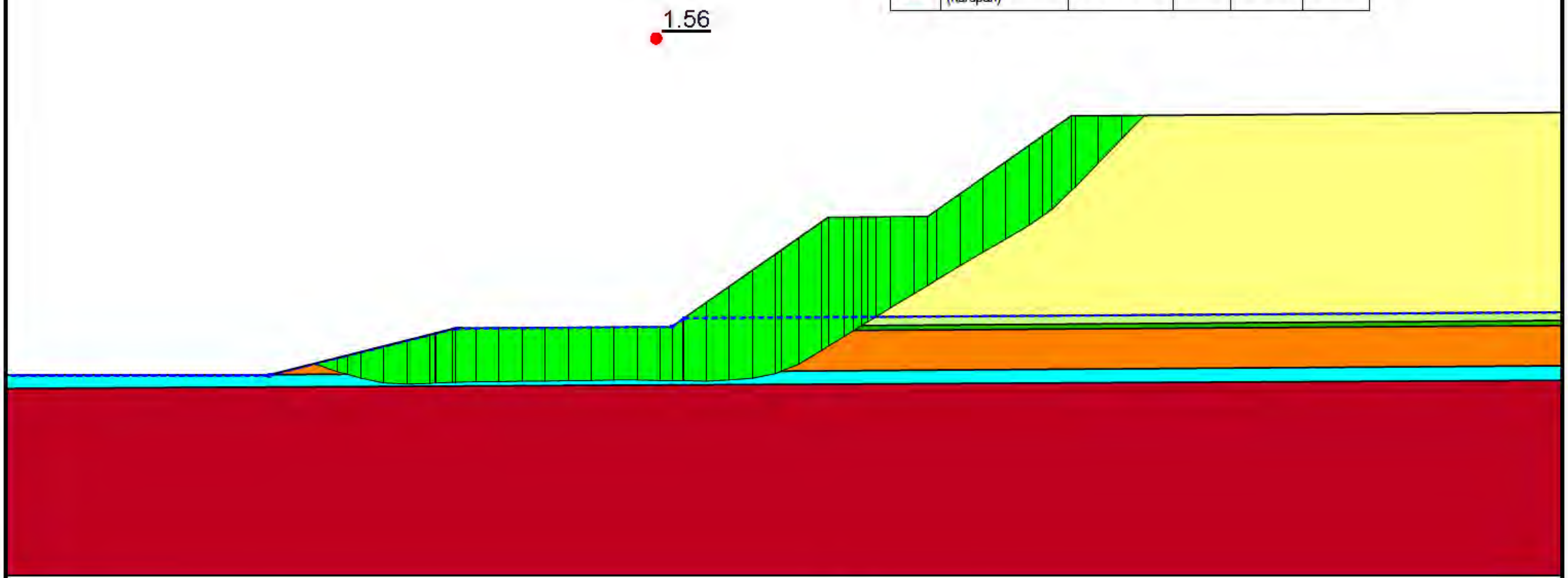
Horz Seismic Coef.: 0.025



Tailex

Pseudo static (Kh) (1 lift)	
Prelim Stability_revB.gsz	
19/01/2026	1:350

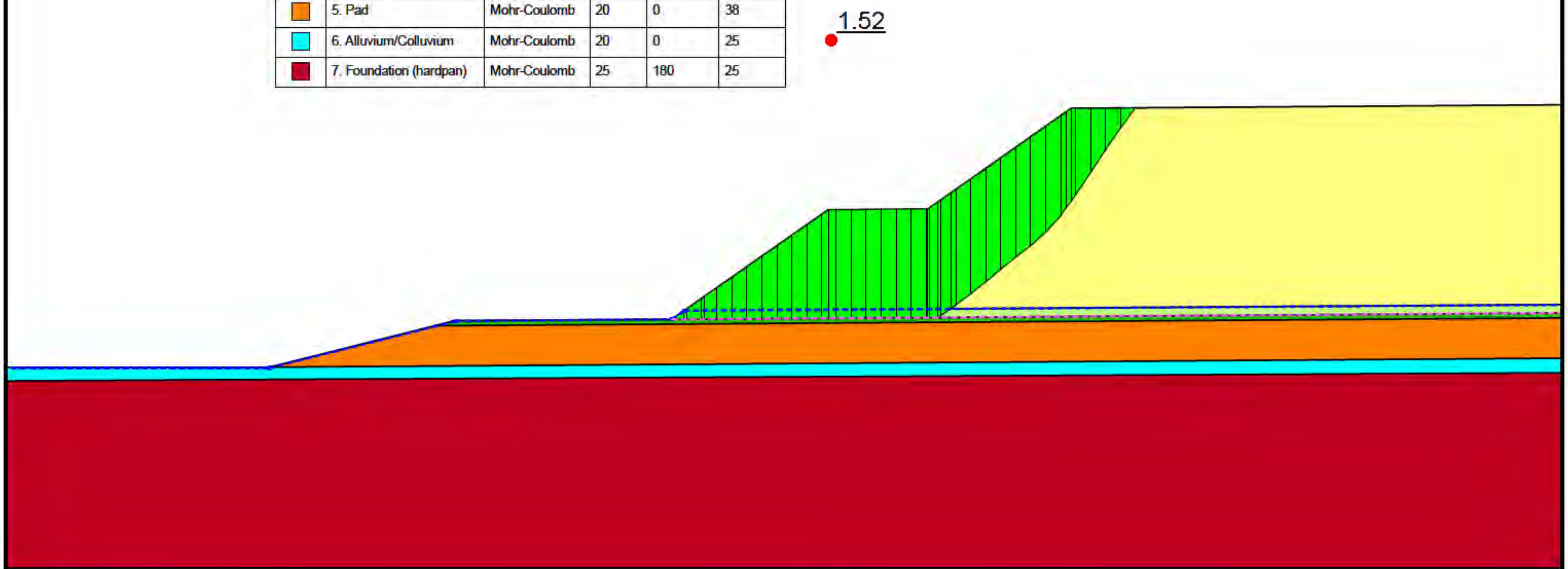
Color	Name	Slope Stability Material Model	Unit Weight (kN/m³)	Effective Cohesion (kPa)	Effective Friction Angle (°)
	1. Leached Ore	Mohr-Coulomb	17	0	35
	2. Drainage / Over liner	Mohr-Coulomb	18	0	35
	4. Sub-liner	Mohr-Coulomb	20	0	30
	5. Pad	Mohr-Coulomb	20	0	38
	6. Alluvium/Colluvium	Mohr-Coulomb	20	0	25
	7. Foundation (hardpan)	Mohr-Coulomb	25	180	25



Tailex

Circular (2 lift)	
Prelim Stability_revB.gsz	
19/01/2026	1:350

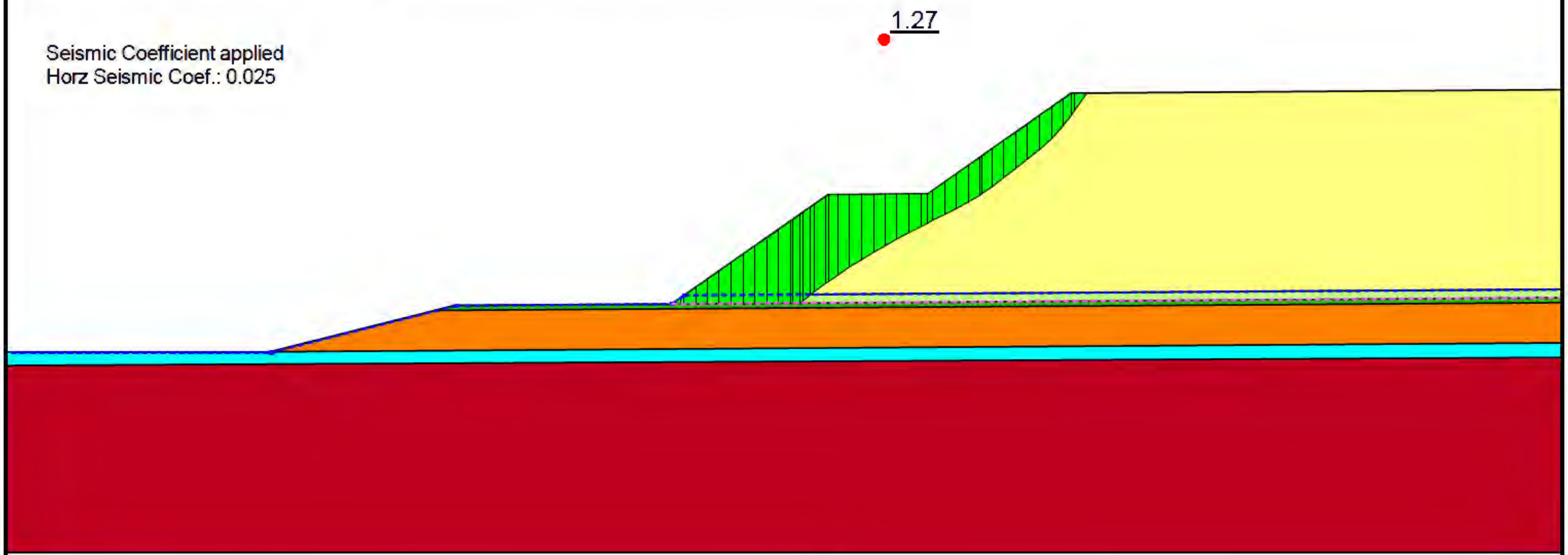
Color	Name	Slope Stability Material Model	Unit Weight (kN/m³)	Effective Cohesion (kPa)	Effective Friction Angle (°)
	1. Leached Ore	Mohr-Coulomb	17	0	35
	2. Drainage / Over liner	Mohr-Coulomb	18	0	35
	3. Liner Interface	Mohr-Coulomb	20	0	20
	4. Sub-liner	Mohr-Coulomb	20	0	30
	5. Pad	Mohr-Coulomb	20	0	38
	6. Alluvium/Colluvium	Mohr-Coulomb	20	0	25
	7. Foundation (hardpan)	Mohr-Coulomb	25	180	25



Tailex

Block search (2 lift)
Prelim Stability_revB.gsz
19/01/2026 1:350

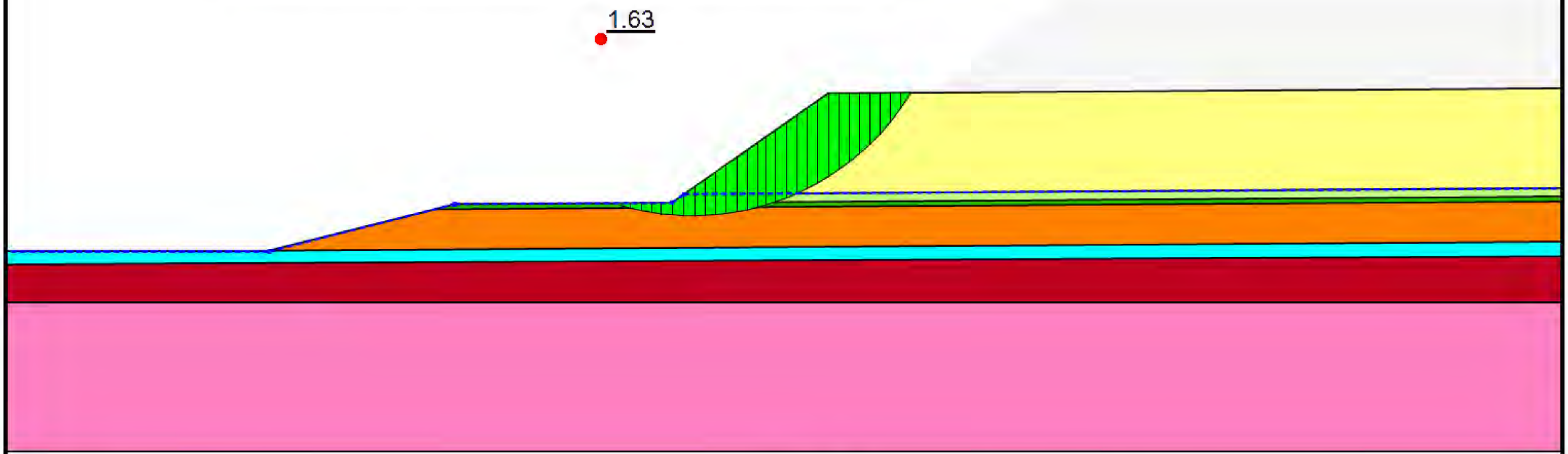
Color	Name	Slope Stability Material Model	Unit Weight (kN/m³)	Effective Cohesion (kPa)	Effective Friction Angle (°)
	1. Leached Ore	Mohr-Coulomb	17	0	35
	2. Drainage / Over liner	Mohr-Coulomb	18	0	35
	3. Liner Interface	Mohr-Coulomb	20	0	20
	4. Sub-liner	Mohr-Coulomb	20	0	30
	5. Pad	Mohr-Coulomb	20	0	38
	6. Alluvium/Colluvium	Mohr-Coulomb	20	0	25
	7. Foundation (hardpan)	Mohr-Coulomb	25	180	25



Tailex

Pseudo static (Kh) (2 lift)	
Prelim Stability_revB.gsz	
19/01/2026	1:350

Color	Name	Slope Stability Material Model	Unit Weight (kN/m³)	Tau/Sigma	Minimum Shear Strength (kPa)	Constant Unit Wt. Above Piezometric Surface (kN/m³)	Effective Cohesion (kPa)	Effective Friction Angle (°)
	1. Leached Ore	Mohr-Coulomb	17				0	35
	2. Drainage / Over liner	Mohr-Coulomb	18				0	35
	4. Sub-liner	Mohr-Coulomb	20				0	30
	5. Pad	Mohr-Coulomb	20				0	38
	6. Alluvium/Colluvium	Mohr-Coulomb	20				0	25
	7. Foundation (hardpan)	Mohr-Coulomb	25				180	25
	8. Undefined foundation	SHANSEP	20	0.22	0	0		

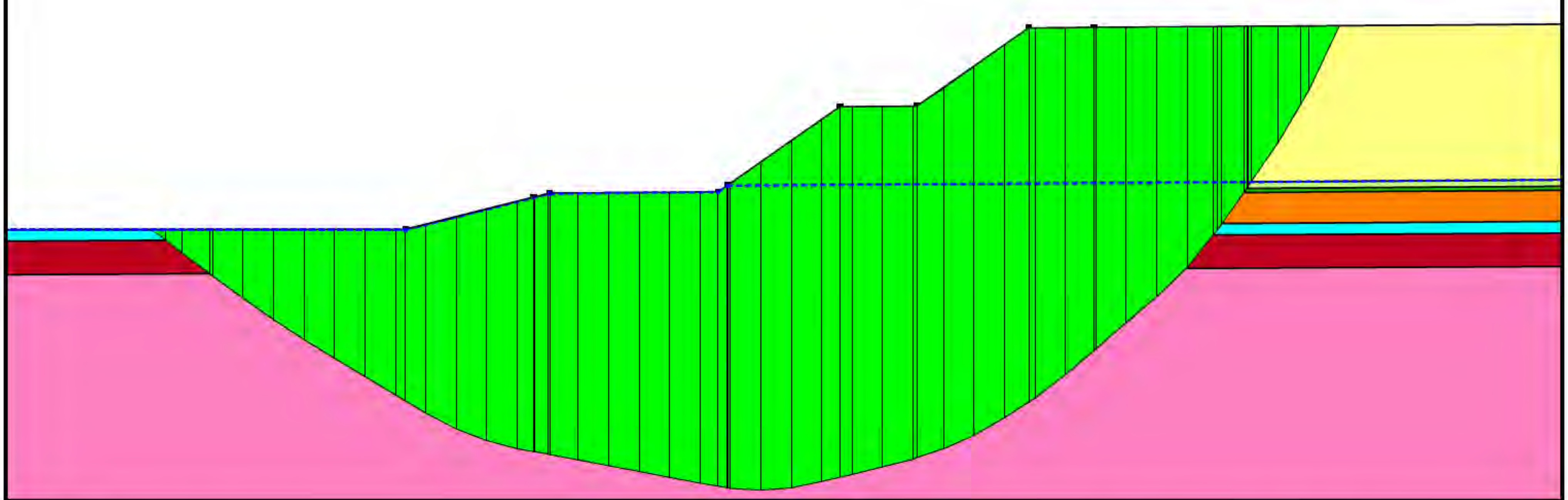


Tailex

Circular (1 lift) - Sensitivity (2.5m calcrete thickness)	
Prelim Stability_revB.gsz	
19/01/2026	1:350

Color	Name	Slope Stability Material Model	Unit Weight (kN/m³)	Tau/Sigma	Minimum Shear Strength (kPa)	Constant Unit Wt. Above Piezometric Surface (kN/m³)	Effective Cohesion (kPa)	Effective Friction Angle (°)
	1. Leached Ore	Mohr-Coulomb	17				0	35
	2. Drainage / Over liner	Mohr-Coulomb	18				0	35
	4. Sub-liner	Mohr-Coulomb	20				0	30
	5. Pad	Mohr-Coulomb	20				0	38
	6. Alluvium/Colluvium	Mohr-Coulomb	20				0	25
	7. Foundation (hardpan)	Mohr-Coulomb	25				180	25
	8. Undefined foundation	SHANSEP	20	0.22	0	0		

1.49



Tailex

Circular (2 lift) - Sensitivity (2.5m calcrete thickness)

Prelim Stability_revB.gsz

19/01/2026 1:450

Appendix C Preliminary site investigation report

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Technical Memorandum

To	Chandra Verma; Ranajit Das	**Client**	Legacy
From	Sam Kendall; Pepe Moreno	**Project**	LGI002
Cc	Alejandro Rodriguez	**Date**	25/02/2026

Subject Mt Celia HLF preliminary geotechnical site investigation

1 Introduction

Tailex Pty Ltd (Tailex) was appointed by Legacy Iron Ore Limited (Legacy) to undertake a geotechnical test pit campaign for the proposed heap leach facility (HLF) design concept for its Mt Celia Project. The Mt Celia deposit lies in Legacy's South Laverton project located in the Eastern Goldfields of Western Australia, approximately 180 km northeast of Kalgoorlie. The project location is shown in Figure 1-1.

This memorandum provides the outcomes of this preliminary site investigation and laboratory testing program.

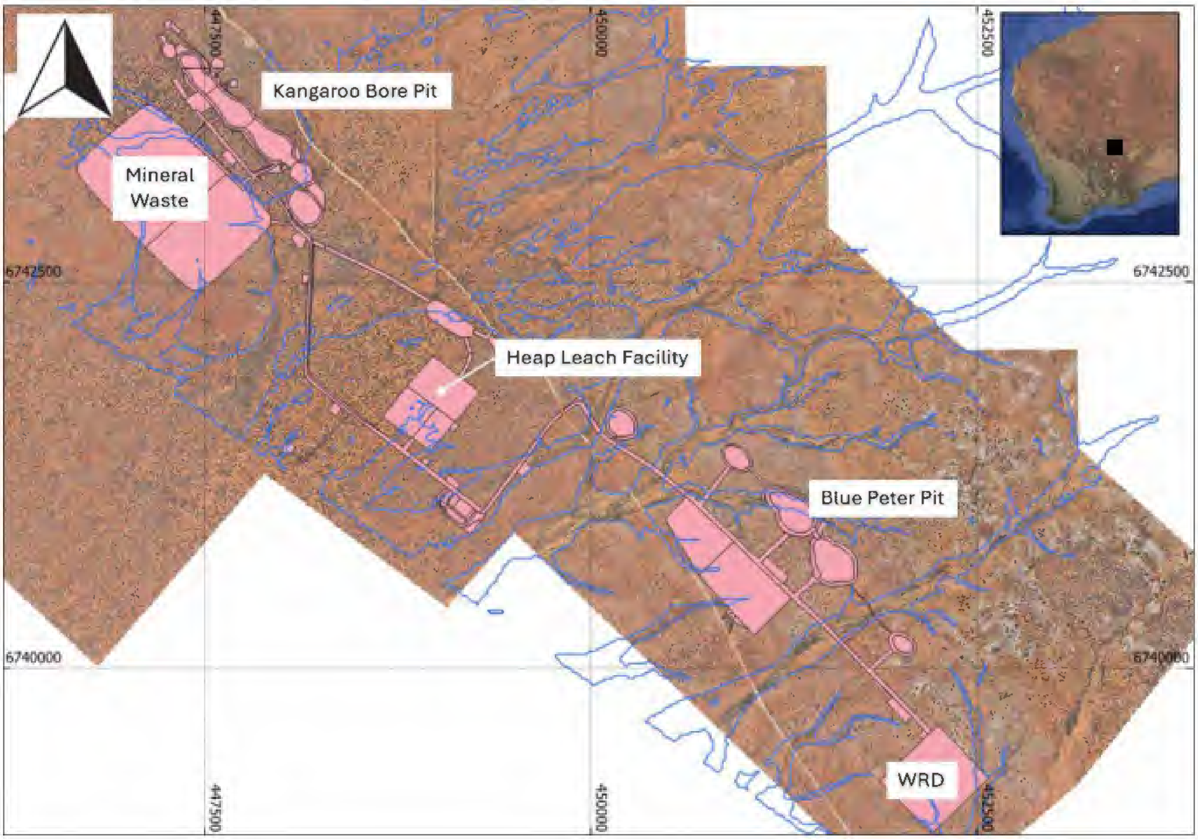


Figure 1-1: Project location
Source: Legacy

2 Objectives

The objectives of the investigation were to:

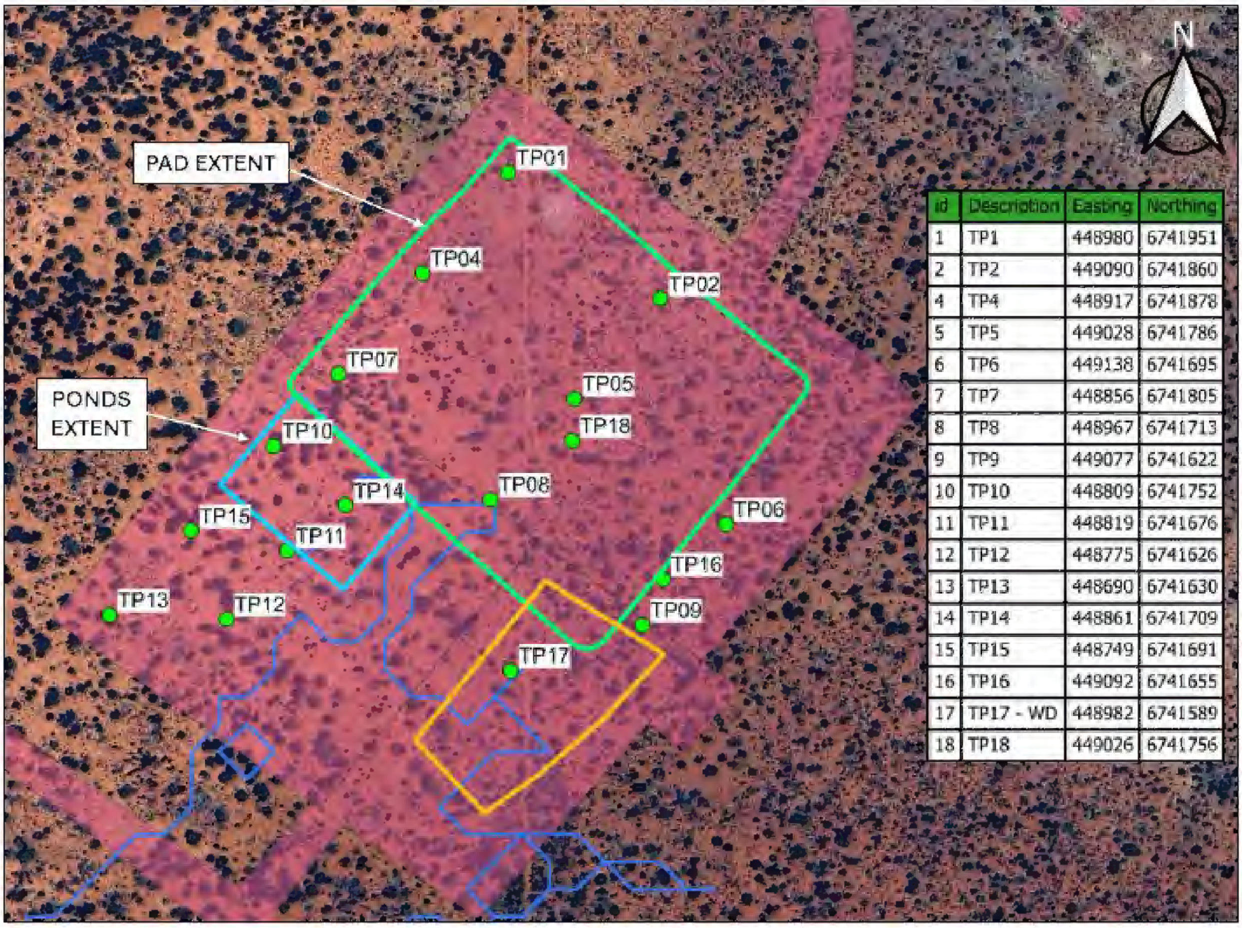
- Assess the foundation conditions across the HLF site
- Assess the potential borrow materials for construction purposes
- Identify potential problem soils/ areas within the HLF footprint which may require further investigation
- Assess geotechnical parameters for input to the HLF design

3 Fieldwork summary

The field investigation for the HLF was undertaken on 22 and 23 of October 2025 and comprised:

- Excavation of 17 test pits, located as follows:
  - Within the HLF footprint at 10 locations, to depth ranging between 0.2 m and 1.4 m.
  - Within the pond and plant areas at six locations, to depths ranging between 1.6 m and 3.0 m.
  - Within the existing waste dump at one location for borrow material assessment.
- Collection of 12 bulk samples for laboratory testing.

Locations were selected based on surface observations, accessibility, and preliminary geological mapping. A layout of the test pits campaign is shown in Figure 3-1. All test pits were logged in the field and georeferenced using GPS coordinates (Easting/Northing).



id	Description	Easting	Northing
1	TP1	448980	6741951
2	TP2	449090	6741860
4	TP4	448917	6741878
5	TP5	449028	6741786
6	TP6	449138	6741695
7	TP7	448856	6741805
8	TP8	448967	6741713
9	TP9	449077	6741622
10	TP10	448809	6741752
11	TP11	448819	6741676
12	TP12	448775	6741626
13	TP13	448690	6741630
14	TP14	448861	6741709
15	TP15	448749	6741691
16	TP16	449092	6741655
17	TP17 - WD	448982	6741589
18	TP18	449026	6741756

Figure 3-1: Test pit campaign layout

Note: The dump extent (observed on site) is shown in orange. The background aerial imagery predates the dump.

3.1 Test pits

Test pits were excavated using a Komatsu PC200 LC excavator supplied and operated by the contractor. A rock breaker attachment was available to assist with hard digging conditions.

All test pits were logged in general accordance with Australian Standard AS 1726:2017. The criteria for refusal were defined as the point at which the excavator bucket was unable to make further progress under normal operating conditions. The rock breaker attachment was used once in TP01 to assess the hardness and thickness of the hardspan, confined calcrete duricrust, having minimal impact on the confined rock mass.

Photographs documenting the excavation and subsurface conditions are included in Attachment 1. Test pit logs are presented in Attachment 3.

3.2 Sampling

Bulk soil samples (~30 kg each) were collected from nominated HLF test pits at depths chosen to target distinct soil strata for laboratory testing.

A summary of the collected samples and the laboratory testing undertaken is provided in Table 4-1.

4 Laboratory testing

Laboratory testing was completed by Construction Sciences (NATA-accredited), with the scope of testing summarised in Table 4-1. Test certificates are presented in Attachment 2.

Table 4-1: Sampling testing summary

Sample ID	PSD	Atterberg limits	SG	SMDD	Permeability
	(AS 1289 3.6.1, 1.1)	*(AS 1289 3.1.1, 3.3.1, 3.2.1, 3.4.1)*	*(AS 1289.3.5.1)*	*(AS 1289 5.1.1, 2.1.1, 1.1)*	*(AS 1289.6.7.1)*
TP4 - (0-0.4 m)	X		X		
TP5 - (0-0.85 m)	X	X	X		
TP10 - (1.5 m)	X	X	X		
TP10 - (3.0 m)	X	X	X	X	X[1]
TP11 - (1.0 m)	X	X	X		
TP11 - (2.0 m)	X	X	X		
TP12 - (0.3 -1.0 m)	X	X	X		
TP12 - (1.0-1.5 m)	X	X	X		
TP13 - (2.0 m)	X		X		
TP14 - (1.0 m)	X		X		
TP17 - existing WD		X			
WD - PBM		X		X	X[1]

Notes:

[1] : Permeability tests were completed by Trilab Laboratory.

4.1 Foundation characterisation

Laboratory results from 10 samples collected from the proposed foundation footprint and nearby areas are summarised below.

4.1.1 Particle size distribution

The particle size distribution (PSD) curves of foundation samples are plotted in Figure 4-1.

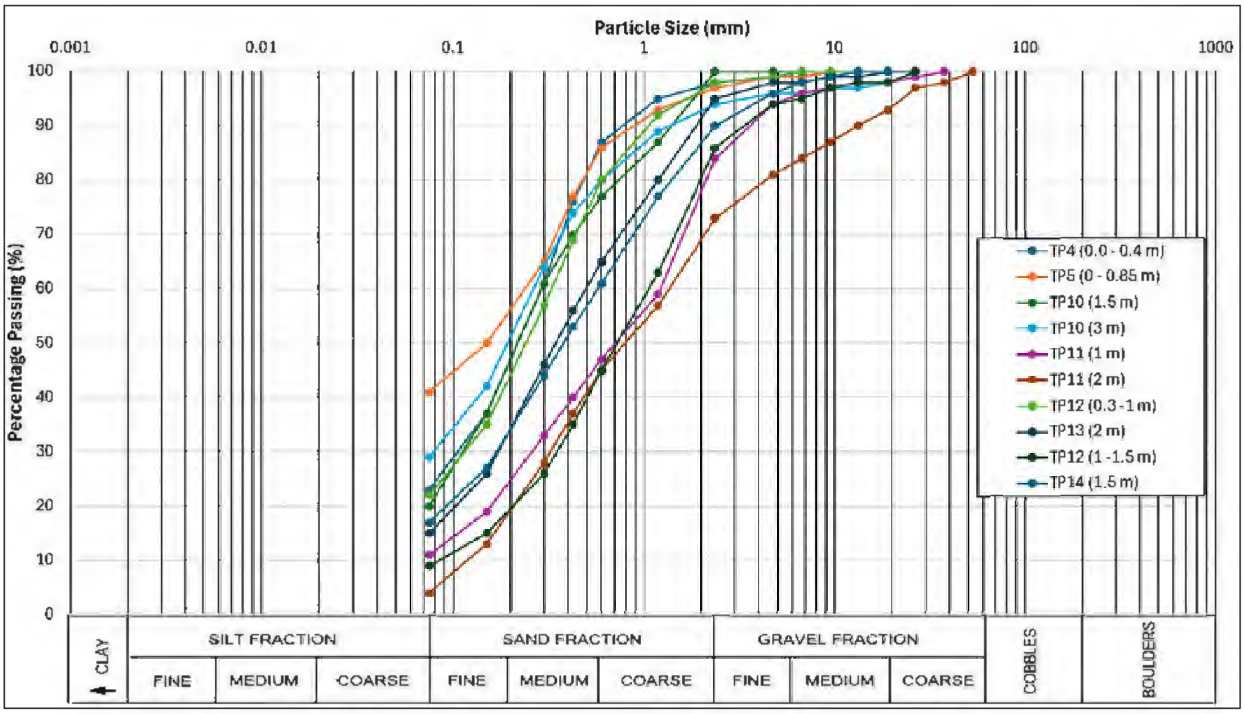


Figure 4-1: PSD of foundation samples

The following is of note:

- Foundation samples are predominantly SAND, with varying amounts of fine to medium gravel. The fines content is generally < 30%, and most samples exhibit a relatively broad gradation.
- The sample from TP5 is an exception, which was classified as a sandy CLAY and recorded a fines content ~40%.

4.1.2 Atterberg limits

The Atterberg limits test results are plotted in Figure 4-2.

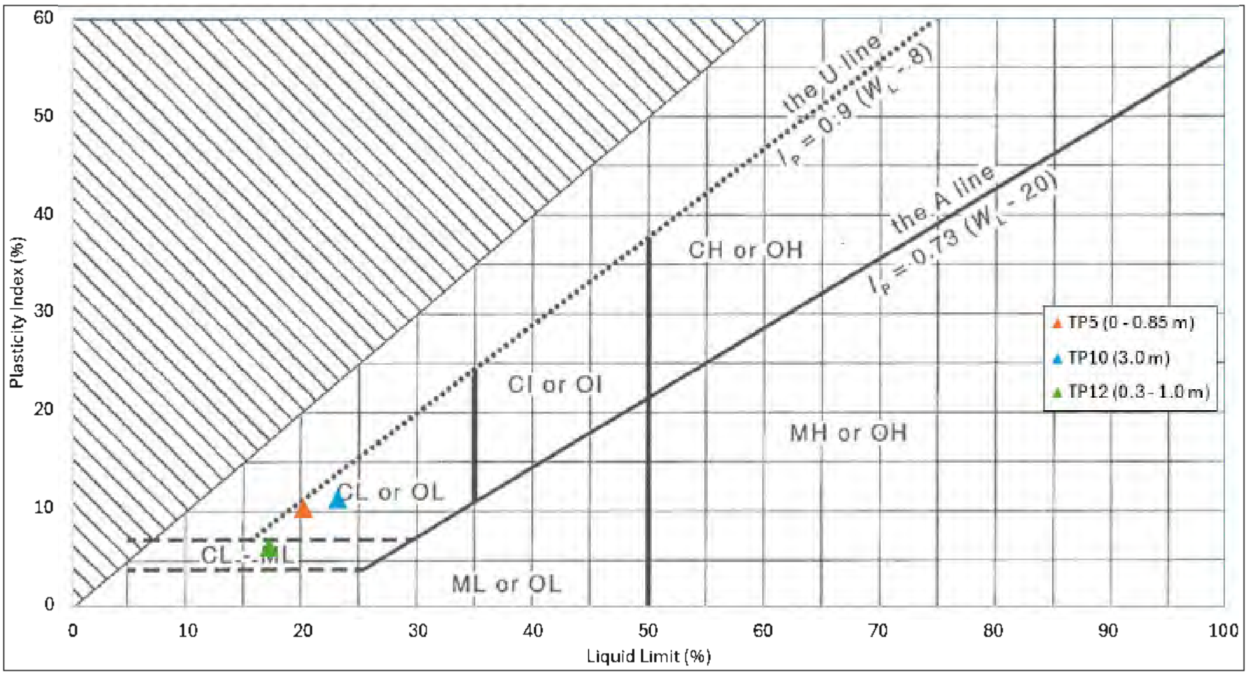


Figure 4-2: Plasticity chart – Foundation materials

Source: AS1726:2017, Figure 5

The following is of note:

- Four foundation samples were classified as non-plastic (NP) and therefore are not represented on the plasticity chart.
- TP5 and TP10 have the highest fines contents and plot as CL (low plasticity clay).
- TP12 has a lower fines content and plots as ML (low plasticity silt) or CL (low plasticity clay).

4.1.3 Density

The Standard Maximum Dry Density (SMDD) results for sample TP10 (3.0m) are presented in Figure 4-3 and summarised below:

- Maximum Dry Density (MDD) = 2.07 t/m^3
- Optimum Moisture Content (OMC) = 9.0 %

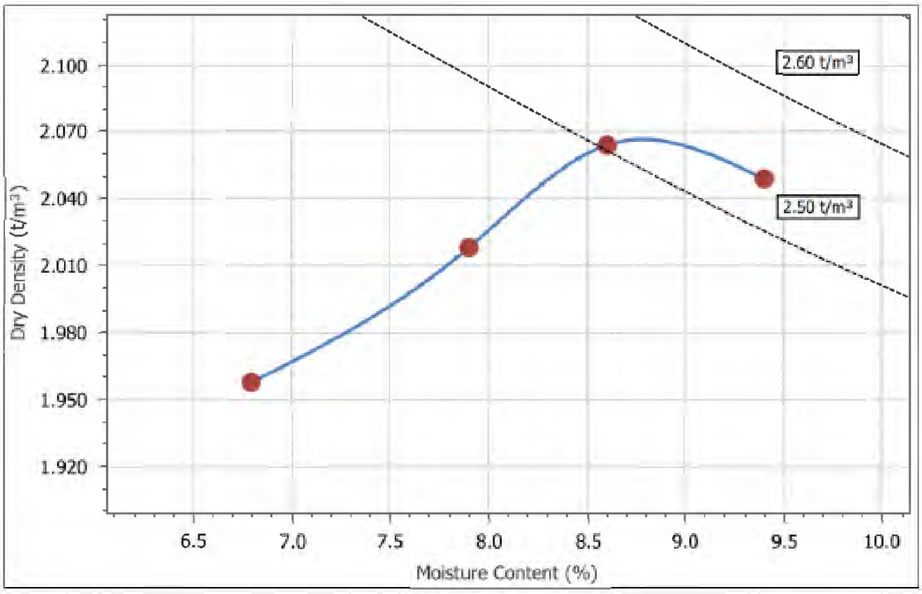


Figure 4-3: TP10 (3.0 m) - SMDD curve

The following is of note:

- TP10 (3.0 m) was taken from the proposed pond area and represents the in-situ material that will form the under-liner.
- Subgrade compaction should be achievable with conventional earthworks and routine moisture control.

4.1.4 Permeability

The constant head permeability results, for sample TP10 (3.0m) remoulded to 95%SMDD, summarised below:

- 95% Maximum Dry Density (MDD) = 2.07 t/m^3
- Saturated permeability (ksat) = 2.3×10^{-8} m/s

The following is of note:

- TP10 (3.0 m) was taken from the proposed pond area and represents the in-situ material that will form the under-liner.
- The measured permeability exceeds the design guidance of 1×10^{-9} m/s (*Guideline for Heap Leach Pad Liner System Design*) by one of order of magnitude, noting that this value represents typical guidance rather than a strict acceptance criterion.
- Subject to seepage modelling and supporting justification, the in-situ material may be suitable as a secondary liner, potentially allowing a single HDPE liner system. In the absence of modelling, the results suggest the in-situ material still provides additional redundancy alongside the proposed double liner system.

4.1.5 Summary

A summary of the laboratory testing results from the foundation characterisation is provided in Table 4-2.

Table 4-2: Summary of foundation characterisation testing results

Sample information		TP4 (0 - 0.4 m)	TP5 (0 - 0.85 m)	TP10 (1.5 m)	TP10 (2.8 – 3.0 m)	TP11 (1 m)	TP11 (2 m)	TP12 (0.3 -1 m)	TP12 (1 -1.5 m)	TP13 (2 m)	TP14 (1.5 m)
Specific Gravity (SG)		2.44	2.33	2.37	2.39	2.43	2.33	2.44	2.39	2.64	2.60
PSD	**% Gravel**	2	3	0	6	16	27	2	14	5	10
	% Sand	75	56	80	65	73	69	76	77	80	73
	% Fines	23	41	20	29	11	4	22	9	15	17
Atterberg limits	**Liquid Limit (LL)**	-	20	NO	23	NO	NO	17	NO	-	-
	Plastic Limit (PL)	-	10	NO	12	NO	NO	11	NO	-	-
	Plasticity Index (PI)	-	10	NP	11	NP	NP	6	NP	-	-
	Linear Shrinkage	-	3	0	3	0	0	1.5	0	-	-
Soil Classification[1]	**Symbol**	SM	CL	SM	SC	SM	SP	SM	SM	SM	SM
	Description	Non-plastic Silty SAND	Low plasticity Sandy CLAY	Non-plastic Silty SAND	Low plasticity clayey SAND	Non-plastic SAND with Silt and Gravel	Non-plastic SAND with Gravel	Low plasticity - Silty SAND	Non-plastic SAND with Silt	Silty SAND	Silty SAND
Density (SMDD)		-	-	2.07 t/m^3 – 9% (OMC)	-	-	-	-	-	-	-
Permeability					2.3x10^{-8} m/s						
Location		HLF	HLF	Ponds	Ponds	Ponds	Ponds	Plants	Plants	Plants	Ponds

Notes:

[1] : In accordance with AS1726:2017

NO: Not obtainable

NP: Non-plastic

4.2 Borrow material characterisation

Laboratory results from two samples collected to assess borrow suitability for use as low-permeability material are summarised below:

- TP17 from the existing waste dump within the HLF footprint,
- WD-PBM from the northwestern mineral waste near the Kangaroo Bore pit (Figure 1-1).

4.2.1 Particle size distribution

The particle size distribution (PSD) curves of potential borrow samples are plotted in Figure 4-4.

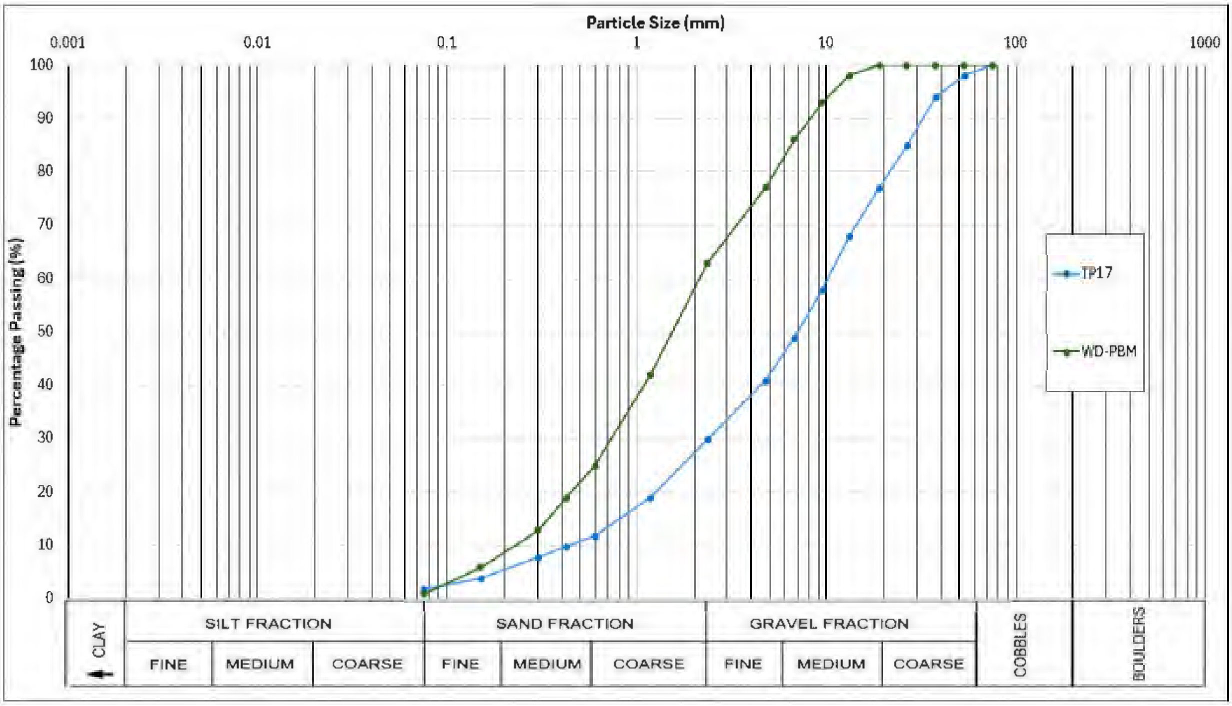


Figure 4-4: PSD of borrow material

The following is of note:

- TP17 sample is predominantly GRAVEL, with a significant sand fraction, very low fines content (~2%) and low plasticity.
- WD-PBM sample is predominately SAND with a substantial gravel content and negligible fines (~1%).
- Bulk samples were collected from the borrow source following in situ scalping of oversize material.
- For sample WD-PBM, the laboratory reported that approximately 15% by mass of the total submitted sample was retained on the 19 mm sieve (equivalent to ~85% passing 19mm) during laboratory preparation for compaction and permeability testing (R. Groves, email, dated 19 February 2026).
- The proportion retained on the 19 mm sieve provides an indication of the degree of screening necessary to achieve the permeability values obtained for the sample (Section 4.2.4).

4.2.2 Atterberg limits

The Atterberg limits test results are plotted in Figure 4-5.

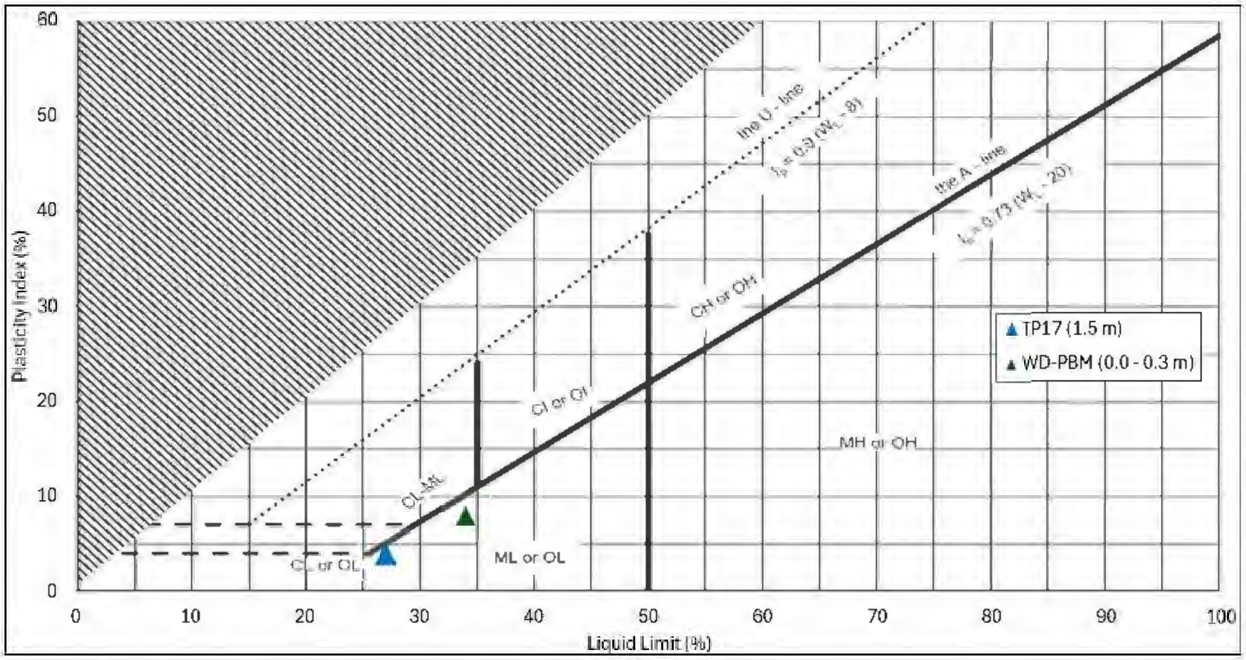


Figure 4-5: Plasticity chart - Potential borrow materials

The following is of note:

- TP17 and WD-PBM plot near the A-line as ML (low plasticity silt)

4.2.3 Density

SMDD results are presented in Figure 4-6 and summarised as follows:

- Sample WD – PBM:
  - Maximum Dry Density (MDD) = 2.05 t/m^3
  - Optimum Moisture Content (OMC) = 9.0 %

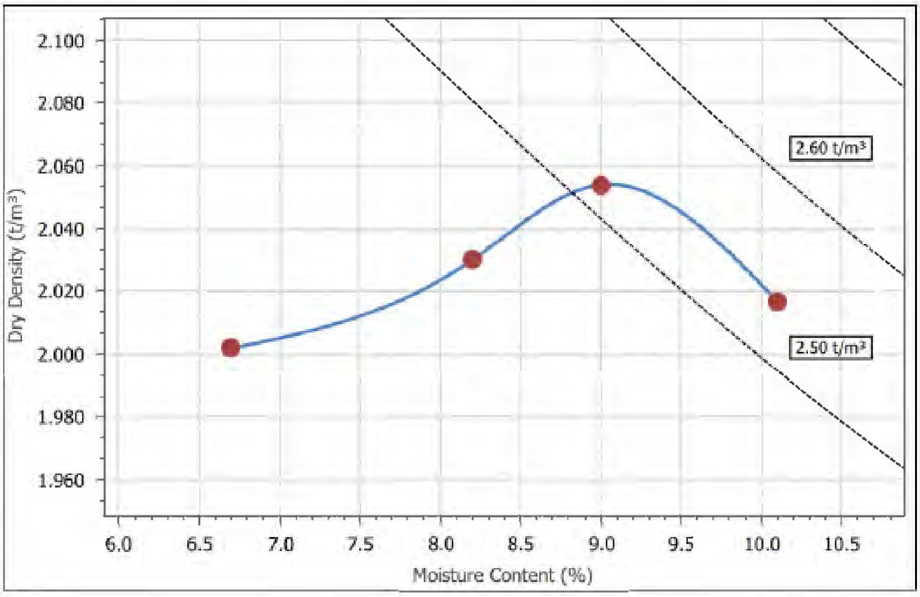


Figure 4-6: WD-PBM - SMDD curve

The following is of note:

- WD – PBM was taken from the northwestern mineral waste near the Kangaroo Bore pit and represents the possible pad under-liner material placed between the HDPE liner and waste rock to be used in pad construction
- Compaction should be achievable with conventional earthworks and routine moisture control.

4.2.4 Permeability

The constant head permeability results, for sample WD–PBM remoulded to 95%SMDD, are summarised below:

- 95% Maximum Dry Density (MDD) = 2.05 t/m^3
- Saturated permeability (ksat) = 1.3 x 10^{-8} m/s

The following is of note:

- WD–PBM was taken from the northwestern mineral waste near the Kangaroo Bore pit and represents the possible pad under-liner material placed between the HDPE liner and waste rock to be used in pad construction, provided that the material is screened to achieve a maximum particle size (Dmax) of 19 mm (consistent with permeability test specifications).
- The measured permeability exceeds the design guidance of 1x10^{-9} m/s (*Guideline for Heap Leach Pad Liner System Design*) by one of order of magnitude, noting that this value represents typical guidance rather than a strict acceptance criterion.
- Subject to additional sampling and testing to confirm consistency of permeability results (only 1 currently available) and completion of seepage modelling, the borrow material may prove suitable as a secondary liner, potentially allowing a single HDPE liner system. In the absence of modelling, the results suggest the in-situ material provides additional redundancy alongside the proposed double liner system.

4.2.5 Summary

A summary of the laboratory testing results from the borrow material characterisation is provided in Table 4-3.

Table 4-3: Summary of borrow material characterisation testing results

Sample information		TP17 (1.5 m)	WD - PBM
PSD	% Gravel	70	37
	% Sand	28	62
	% Fines	2	1
Atterberg limits	Liquid Limit (LL)	27	34
	Plastic Limit (PL)	23	26
	Plasticity Index (PI)	4	8
	Linear Shrinkage	1.5	2.5
Density (SMDD)		-	2.05 t/m^3 – 9% (OMC)
Permeability		-	1.3x10^{-8} m/s

5 Idealised foundation profiles

Based on the laboratory test results and site observations, the near surface foundation conditions across the investigation area are generally characterised as either:

- Profile 1: A thin layer of topsoil overlying a calcrete horizon
- Profile 2: Colluvial soils

Some variations in these profiles are expected in isolated areas.

Further details regarding the site geology are provided in the HLF Design report (Tailex, 2025).

Photographs documenting the excavation and subsurface conditions observed during the test pit investigation are included in Attachment 1. Test pit logs are presented in Attachment 3.

5.1 Profile 1 – Shallow calcrete

The calcrete profile was observed across much of the proposed HLF pad footprint.

- Topsoil: Silty SAND (SM/ML), red-brown, fine to medium grained, low plasticity; loose; dry; with organic matter. Thickness generally ranges between 0.2 m and 0.5 m.
- CALCRETE. Fine-grained cemented duricrust, white, amorphous, massive bedding. HCl fizz confirms carbonate cementation (>50% carbonate content). Isolated occurrences of slightly weathered calcrete (TP02 and TP05) allowed limited excavation (0.2 m to 0.7 m) with spoil presenting as gravel to cobble sized clasts within a supported matrix, dry. Beneath this zone, and in locations where the weathered/excavatable material was absent, a very high strength, strongly cemented calcrete horizon was encountered, on which refusal consistently occurred.

TP05 represents a local variation within the profile and was logged as sandy CLAY, approximately 0.85 m thick. Refusal was encountered on calcrete at approximately 1.0 m depth.

5.2 Profile 2 – Colluvial soils

The colluvial soil profile was observed across the proposed HLF pond footprint.

- Topsoil: Silty SAND (SM/ML), red-brown, fine to medium grained, low plasticity; loose; dry; with organic matter. Thickness generally ranges between 0.2 m and 0.5 m.
- Colluvial soils Well-graded SAND (SW) to silty SAND (SM), fine to coarse grained, red-brown, dry. The material is generally non-plastic, with occasional zones of low plasticity recorded in TP10 and TP12. Minor gravel was observed within the sand matrix. Excavation termination was generally controlled by excavator reach capacity rather than material refusal.

6 Borrow materials

Based on the limited available test results, screened material from WD–PBM may be suitable as low permeability under-liner material. Given similarities in characterisation results, similar permeabilities from TP17 material may be possible (to be confirmed).

The material would require screening to limit the maximum particle size and achieve consistent in-situ permeabilities. It is noted that oversized materials were not fully sampled, therefore further testing and evaluation by screening contractor would be required to assess economic feasibility.

There might be a discrepancy between the borrow material grading and behaviour shown in permeability testing. Further investigation is required to clarify, as only one permeability result is currently available. If confirmed by repeat testing, the permeability results (1×10^{-8} m/s) would remain an order of magnitude above the typical under-liner criterion (1×10^{-9} m/s). Without a detailed seepage model to justify a higher-permeability under-liner for a single HDPE liner, the proposed double-liner system remains appropriately conservative at this stage.

No borrow sources for over-liner material have been tested. Appropriate over-liner borrow materials should be confirmed as part of forward works.

7 Construction considerations

7.1.1 Heap leach facility area

The HLF area is expected to require minimal cut, with the foundation level largely governed by the rippability of the surficial calcrete horizon. The depth to competent founding material may vary depending on how readily the upper calcrete can be ripped. Assessment of rippability was not a focus of the current investigation and should be confirmed as part of forward works.

Foundation preparation would include removal of loose surface soils (~200 mm) within the HLF footprint. This material may be stockpiled for later use in site rehabilitation. The exposed subgrade would then be ripped and recompacted where sandy soils overlie the calcrete, or prepared directly on competent calcrete where encountered. Won materials from pond excavations may be suitable for use as fill where required, subject to construction control.

Areas of the HLF pad near the ponds may transition from thicker soils to shallow calcrete, which may result in differential settlement. Minor differential settlement within the serviceability limits of the pipes and liners is not considered critical, as these areas form the low point of the pad and drainage will be maintained.

The leachate chemistry is expected to be alkaline, and as such is not anticipated to promote dissolution of carbonate calcrete materials, which is most susceptible under low pH conditions.

Calcrete thickness and the characteristics of underlying materials are unknown. Investigation of underlying materials is proposed as part of further works to inform landform stability assessments.

During foundation preparation, deviations from the idealised profiles should be noted. The foundation should be inspected for fractures, structures, or discontinuities that may create high permeability pathways, with remediation undertaken as directed by the design engineer.

7.1.2 Ponds area

Founding levels within the pond area will be defined by the design excavation depth, which is considered feasible based on the test pits completed. The pond base is expected to be founded predominantly on silty sands. Foundation preparation may include ripping and re-compacting the exposed sandy subgrade to achieve consistent in-situ permeabilities to testing results.

Compaction test results indicate that the site materials are suitable for compaction and that the required subgrade preparation is feasible using conventional earthworks methods.

7.1.3 Plant area

Light structures are anticipated within the plant area. Shallow foundations bearing on sandy soils are considered feasible, subject to standard subgrade preparation and removal of any loose or disturbed near-surface materials.

8 Forward works

Details of the recommended forward works are presented in the HLP Design Report (Tailex, 2025) and are not repeated herein.

Regards
Tailex Pty Ltd

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Principal Consultant

Attachments:

Attachment 1 Site photographs
Attachment 2 Test certificates
Attachment 3 Test pits logs