

## Memorandum

**Date** 26 February 2026  
**To** [REDACTED]  
**Cc** Mine Technical Services, Mount Holland Mine Operations  
**From** [REDACTED]  
**Subject** Twinings Pit (Jasmine and Darjeeling) - Dewatering Effluent Disposal

### Executive Summary

Covalent Mt Holland Mining Operations (MTH) is currently dewatering the Earl Grey Lithium Pit (EGLP) in accordance with DWER Works Approval W6919/2024/1. Extracted mine pit water is temporarily stored in the Earl Grey Gold Pit (EGGP). Mechanical evaporators, currently in the commissioning phase at EGGP, support management of the EGLP water balance.

As the EGGP temporary water storage location is located within the EGLP mining pit shell, it must be emptied to allow future mine pit progression. MTH proposes to transfer stored water from the EGGP to the Twinings Pit (Jasmine and Darjeeling), which will serve as the permanent storage and disposal location. The mechanical evaporator system will be relocated from the EGGP to the perimeter of the Twinings Pit to support ongoing disposal of EGLP dewatering effluent.

This memorandum outlines the operational strategy, staging, and environmental management measures for transferring dewatering effluent from EGGP to the Twinings Pit.

### 1 Introduction

The EGLP is dewatered in accordance with W6919/2024/1, with water currently stored in EGGP. Figures 1 and 2 illustrate the relationship between EGLP, EGGP and Twinings Pit (Jasmine and Darjeeling pits), including the life of mine EGLP footprint which will consume the EGGP. Note the footprint of the life of mine EGLP is part of the Part IV LOM Proposal and Stage 3 Mining Proposal applications currently under assessment by the EPA and DMPE respectively.



Figure 1: EGLP, EGGP and Twinings Pit.



Figure 2: Life of Mine EGLP and EGGP.

The current approved dewatering infrastructure under W6919/2024/1 is shown in Figure 3 and consists of:



- a. In pit dewatering pumps.
- b. Surface transfer pipelines.
- c. Saline water tank farm used for dust suppression with overflow directed into the EGGP.
- d. Mechanical evaporator system (highwall pump, break tanks, evaporator cannons, motor control centre, generator, fuel tank) located on the EGGP perimeter.



Figure 3: EGGP Evaporator Layout as per W6919/2024/1.

## 2 Twinings (Jasmine and Darjeeling) Pit

The Twinings Pit is located 630 metres north of the EGGP and consist of the Darjeeling Pit (south) and Jasmine Pit (north), separated by an inaccessible pillar.

The Twinings Pit is enclosed by an abandonment bund and have 13% more storage capacity than EGGP.

Freeboard management will follow EGGP approved practices, maintaining at least 5 metres freeboard.

Table 1 below shows the EGGP and Twinings Pit void properties and available storage volume.

Storage	Total volume (m3)	Top surface area (m2)	Min RL (m AHD)	Max RL (m AHD)	Freeboard (m)	Maintained volume at freeboard (ML)
EGGP	1,336,345	52,477	385	445	5	1063
Twinings Pit	1,563,423	74,108	393	449	5	1223

A cross section of the Twinings Pit is illustrated in Figure 6 below.



Figure 6: Twinings Pit Cross Section, Darjeeling Pit (South), and Jasmin Pit (North).



### 3 Operating Strategy

The operational strategy to relocate and install new dewatering infrastructure to Twinings Pit will occur in two stages to ensure effective environmental management and mining continuity.

#### 3.1 Stage 1 - Empty the EGGP

The highwall pump will stay in its current location at EGGP and will transfer water via pipeline to Twinings Pit, via the mechanical evaporator system, which will be relocated and installed on the perimeter of the Twinings Pit. Siting on the perimeter will be determined by seasonal conditions and operational requirements.

During this period, EGLP dewatering can continue to discharge into the EGGP while water is being transferred. With an estimated EGLP extraction rate of approximately 25 L/s and an evaporator system throughput of 75 L/s, the EGGP water level can be reduced at a net rate of approximately 50 L/s.

If required, the highwall pump may be operated independently of the evaporator system to transfer water directly from the EGGP to the Twinings Pit at rates of up to 100 L/s. This contingency provides operational flexibility to maintain EGGP water levels below adjacent mining elevations within the EGLP to mitigate seepage or inrush risk.

The Stage 1 concept is shown in Figure 4 below.

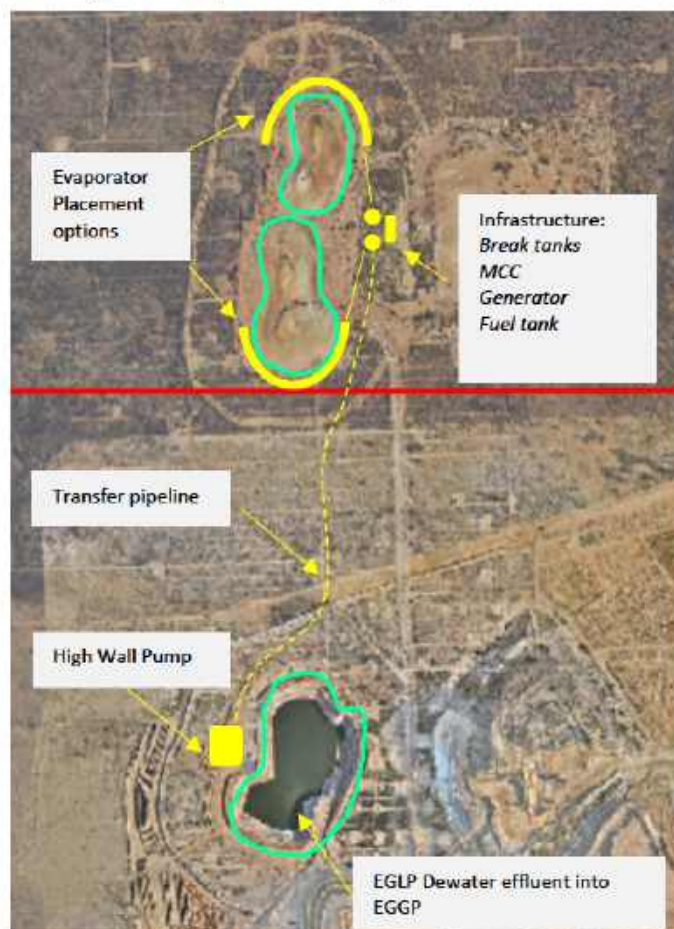


Figure 4: Stage 1 Infrastructure



### 3.2 Stage 2 - Permanent Relocation

Once the EGGP is largely emptied, the highwall pump will be relocated to the perimeter of the Twinings Pit. Final siting on the perimeter will be determined by seasonal conditions and operational requirements.

The Twinings Pit will become the permanent storage and disposal location for EGLP dewatering effluent. The evaporator system will operate as a standalone disposal system, extracting stored water from within the Twinings Pit and discharging it through mechanical evaporators to accelerate evaporation.

Following relocation, EGLP dewatering effluent will be transferred directly to the Twinings Pit for disposal. Due to the combined vertical lift and horizontal transfer distance, the total dynamic head pressure exceeds the operating limits of a single in-pit dewatering pump in the EGLP. Accordingly, a staged pumping configuration will be implemented:

- a. Staging system: Break tanks positioned on the pit wall with a staging pump to reduce vertical head pressure and maintain controlled pump parameters.
- b. Surface transfer sump and pump: A temporary transfer unlined sump located within the mining pit shell, equipped with a transfer pump to convey water approximately 1,300 metres from the EGLP to the Twinings Pit. The sump will be equipped with a standpipe to enable dust suppression use and freeboard management of the sump. As mining progresses north, the sump location will be progressively relocated and ultimately mined out. The size of the sump will be determined by operational requirements namely the actual dewater and transfer rates and is expected to be approximately 15 000m<sup>3</sup>

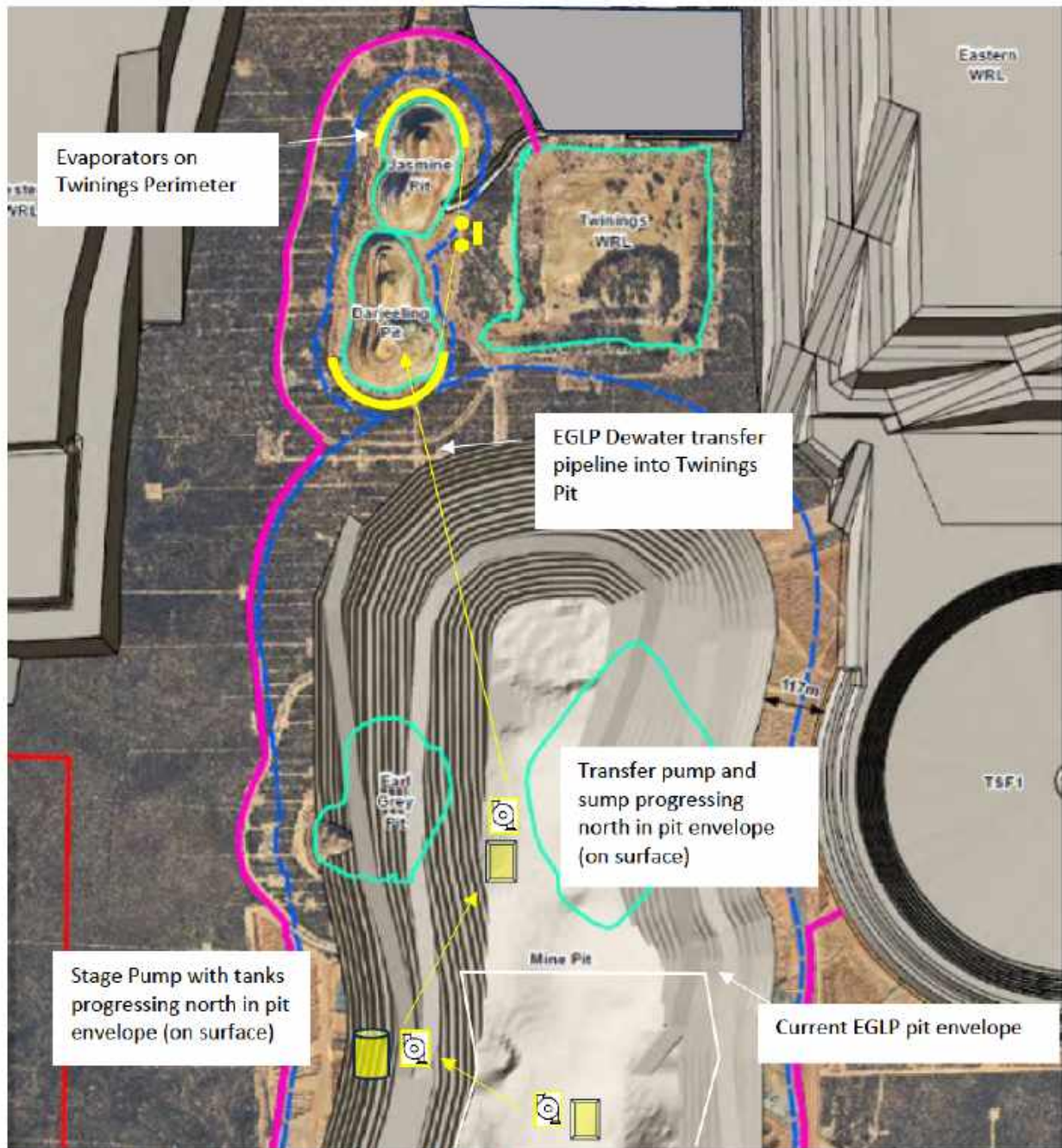


Figure 5: Stage 2 Life of mine EGLP conceptual dewatering layout.



## 4 Environmental Risk Assessment

### 4.1 Stage pump with tanks

- Located on surface but within cleared pit shell boundary, with overflow therefore contained in pit shell.
- Equipped with automatic start/stop controls to maintain tank levels.
- Pressure tested to AS/NZS 4766.

**Residual risk:** Low – overflow or spills contained within the pit shell.

### 4.2 Pipelines

- High-density polyethylene (HDPE), PE100 rated PN8-PN16, butt welded/electrofusion welded connections by certified HDPE welders.
- In line with project environmental standards, all pipelines containing saline water will be banded with any areas of spillage drainage towards approved storage location (EGGP or Twinings Pit depending on location of pipelines).

**Residual risk:** Low – pipes rated through recognised test criteria and banded to contain accidental release.

### 4.3 Pumps

- Selected based on dynamic head pressure and pump rates to achieve required flow rate over required distance.

**Residual risk:** Low – pumps rated to application to eliminate overpressure in pipelines.

### 4.4 Transfer sump

- The transfer sump will be located within the future mining pit shell waste sections on the surface. As the mine progresses north, the temporary sump locations will be consumed and mined out to the designated waste rock landforms. Therefore, the sumps will not be lined.
- The sumps will be banded and equipped with transfer pump with a level sensor to manage the minimum freeboard level of 0.5 metres.
- The sump locations will be designed to minimise capture of surface water flows to further reduce the risk of overtopping.
- The sumps will be equipped with a standpipe for dust suppression and to extract water to maintain freeboard if required.

**Residual risk:** Low – sumps located in mine pit footprint, isolated from environmental impact and equipped with water level management measures.

### 4.5 Twinings Pit Freeboard Management

- The water level will be managed by mechanical evaporation and is scalable based on the groundwater abstraction rate. As example, the current system at the EGGP consists of two evaporators with a throughput of 75 L/s combined, and the evaporation rate is 43% of the throughput. The pit dewatering rate is approximately 22 L/s, and the annualised evaporation rate is 37 L/s therefore the system has the capacity to maintain and reduce the water level to maintain a minimum freeboard level of 5 metres.
- Should the pit dewatering rate increase the system can be scaled by adding additional evaporators.

**Residual risk:** Low – mechanical evaporator system is scalable to demand and may include up to 8 evaporators.

### 4.6 Spray Drift and Aerosol Control for Evaporators

- The evaporator placement is designed and engineered using meteorological data to select the optimum position to manage the risk of overspray or spray drift into the surrounding area.
- The system will be used at an elevation of 0° to the horizontal or low elevations which significantly reduces the risk of overspray whilst maintaining efficiency.
- The Environmental Management System (EMS), equipped with a weather station which will ensure the system only operates under approved wind speed and direction conditions. The system will automatically stop or fail to start up if the weather station is defective as a failsafe measure. The EMS and system are protected against unauthorised setting changes through a login function.



- Existing native and regrowth vegetation and topsoil material within close proximity of the mechanical evaporators will be removed in advance of operation to prevent loss of rehabilitation resources (noting this area is within the project disturbance footprint once approval received).
- The spray extends and spray drift elimination is modelled and engineered by the original equipment manufacturer (OEM) of the system based on site meteorological data. The modelled deposition area for the system deployed at EGGP is illustrated in Figure 7.

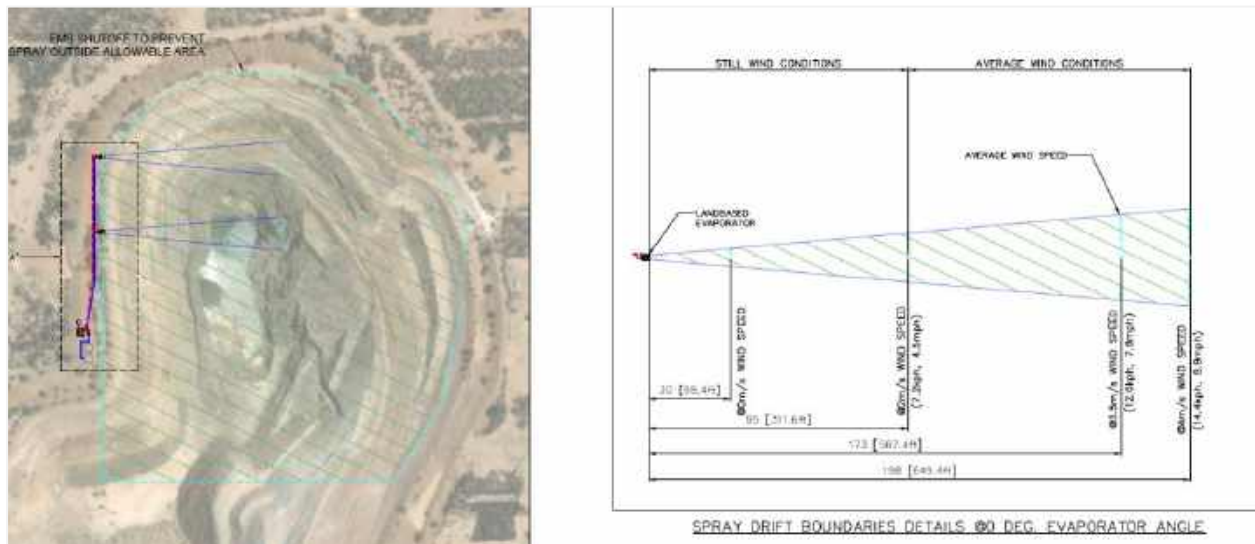


Figure 7: Spray drift control at horizontal ( $0^\circ$ ) angle.

**Residual risk:** Moderate – no spray drift is anticipated during routine operation under EMS controls. A moderate residual risk remains during commissioning of the EMS, and if pre-installation vegetation and topsoil clearing is not completed, increasing the potential for unintended environmental impact.

#### 4.7 Saline Water Containment and Spill Control

- All pipelines to be PE100 HDPE designed for the appropriate pressure (8 to 10 bar) with associated couplings.
- Evaporators will be placed at a 2% gradient fall toward EGGP.
- The safety bund in front of the pad will be constructed of permeable rock to allow drainage into the Twinings Pit.
- The evaporator feed pump is equipped with a low pressure high RPM shut-off control in PLC to shut off the pump automatically in case of a rupture or leak in the piping systems.
- The system, which includes the break tanks and evaporator water lines will be equipped with drain lines into the Twinings Pit to enable drainage of saline water into Twinings Pit during maintenance.
- The break tanks will be fitted with an overflow line to direct saline water into Twinings Pit in case of inadvertent overflow of the tanks.
- The pad for the highwall pump on the crest will be constructed with same gradient to ensure drainage of saline water into Twinings Pit.
- All saline water pipelines will be located within bunds to ensure all liquors are captured and are not released into the environment.
- Daily inspection of infrastructure will be carried out when operational.
- A bund will be constructed to contain any saline water in case of a major spill and to direct surface water away from the system.
- Any spills will be reported as internal environmental incidents and cleaned up immediately.
- All vegetation and topsoil material within the containment bund and pit will be removed to prevent loss of rehabilitation resources (noting this area is within the project disturbance footprint once approval received).

**Residual risk:** Moderate – all saline water contained within approved saline storage areas in line with standard site environmental management practices.



#### 4.8 Noise Emissions

- The system is in a remote location with no nearby environmental receptors. The noise generated by the system is typical to a mine operational environment. The required safety signs will be installed near the equipment indicating the required personal protective equipment requirement.

**Residual risk:** Negligible

#### 4.9 Fuel Storage

- Self-bunded diesel fuel pod of approximately 6000 litres will be installed for fuel supply to the highwall pump and power generator.
- Fuel pod will be installed on hard standing and spill trays used when refuelling.

**Residual risk:** Negligible

#### 4.10 Dust Emissions (Construction)

- All vehicles and mobile equipment restricted to designated routes and speed limits.
- Water Carts utilised for dust suppression activities as required.
- Visual inspections to ensure dust control measures are suitable.

**Residual risk:** Negligible

### 5 Monitoring

The following monitoring will be carried out during the proposed dewatering activities:

- Volumetric flow rate – discharge from EGLP to EGGP – continuous via flowmeter.
- Volumetric flow rate – discharge from EGLP and EGGP to Twinings Pit – continuous via flowmeter.
- Volumetric flow rate – used for dust suppression – via mass balance.
- pH and EC – effluent discharged to Twinings Pit – spot sample in accordance with AS/NZS 5667.1, in-field non-NATA accredited analysis.
- Laboratory parameters as per Table 7 Licence L9326/2022/1 – 3 monthly monitoring events.

### 6 Inspections and Maintenance

MTH will operate, inspect and maintain the system as per existing dewatering infrastructure requirements of W6919/2024/1.

Inspection requirements in line with W6919/2024/1 will continue (daily visual inspections of the dewatering pipeline and mechanical evaporators, weekly inspections of dewatering tanks, and weekly inspection of EGGP and Twinings Pit freeboard).

### 7 Conclusion

This staged transfer and relocation strategy ensures continued dewatering of the EGLP while supporting environmental compliance, minimising operational risk and maintaining future mining flexibility.