

## SMR Operations and Development

SIMEC Mining continues to plan its transition from an historically hematite focused operation with some magnetite, into an expanded operation with a predominant focus on magnetite mining and processing.

The key project to enable this transition and ongoing mining in the region is the development of the Magnetite Expansion Project.

The Magnetite Expansion Project is made up of several phases. The first phase, MEP1, will see upgrades to the existing processing circuit, to allow for processing of ore previously considered waste and to increase production from 2.2 Mtpa to 2.5 Mtpa of Direct Reduction (DR) grade concentrate, suitable for downstream Green Steel.

Following this, the second phase of the project, MEP2, will be implemented and will increase magnetite production to 3 times what is produced today at the SMR and extend the life of mine by more than 20 years.

To enable the continuation of magnetite mining prior to MEP2 execution, SIMEC Mining are currently undertaking a program of works to extend the Life of Mine (LOM). This program will form part of MEP1 operations.

Execution of this program, and transition of the MEP1 from the study phase into execution will be the primary focus of SIMEC Mining in the coming months. Studies and statutory approvals for MEP1 are underway, with the plan to submit documentation for assessment by the Department for Energy and Mining in the 2<sup>nd</sup> half of 2024.

To prepare for the transition from the study phase into execution, SIMEC Mining plans to increase the focus on activities related to MEP1. To allow resources to be directed to support this, the execution schedule for MEP2 has been pushed out with MEP2 operations expected to commence circa 2028/29.

Further details are provided on the projects throughout this brief.

## Exploration Activities

The Chieftain West resource exploration program has progressed throughout 2024 and will continue in 2025 to further define the magnetite deposit.

The exploration team are currently finalising an updated geological model and mineral resource estimate for Chieftain West which is expected to significantly increase SIMEC Mining's reportable resource portfolio.

Progressive rehabilitation continues to be undertaken as part of our obligations under the Exploration Program for Environmental Protection and Rehabilitation (ePEPR).

## Hematite Iron Ore Operations

Mining of the Cooks North and the Cooks Northwest Project resources has now been completed, as of mid-2024. The rehabilitation of both sites has begun and is expected to be completed within FY25.

Supplementary crushing of Chieftain low-grade stockpiles occurring adjacent to Cooks North in the Chieftain area is underway and will be ongoing until mid- to late 2025. It is expected that access roads and other infrastructure present in the Chieftain area will continue to be utilised as part of future operations.

## Magnetite Iron Ore operations

### MEP1 – Initial Duchess Pit Deposit

Under the proposed operations and with an initial cutback, the Duchess Pit deposit will continue to be mined to enable further extraction of the resources and ongoing production of magnetite concentrate at the SMR.

Proposed upgrades to the existing processing plant will allow the use of ore that was previously considered waste, a key enabler in the continuation of mining at the Duchess Pit deposit. These technologies will also increase throughput and improve operational efficiency of the existing mine.

## South Middleback Range July 2024

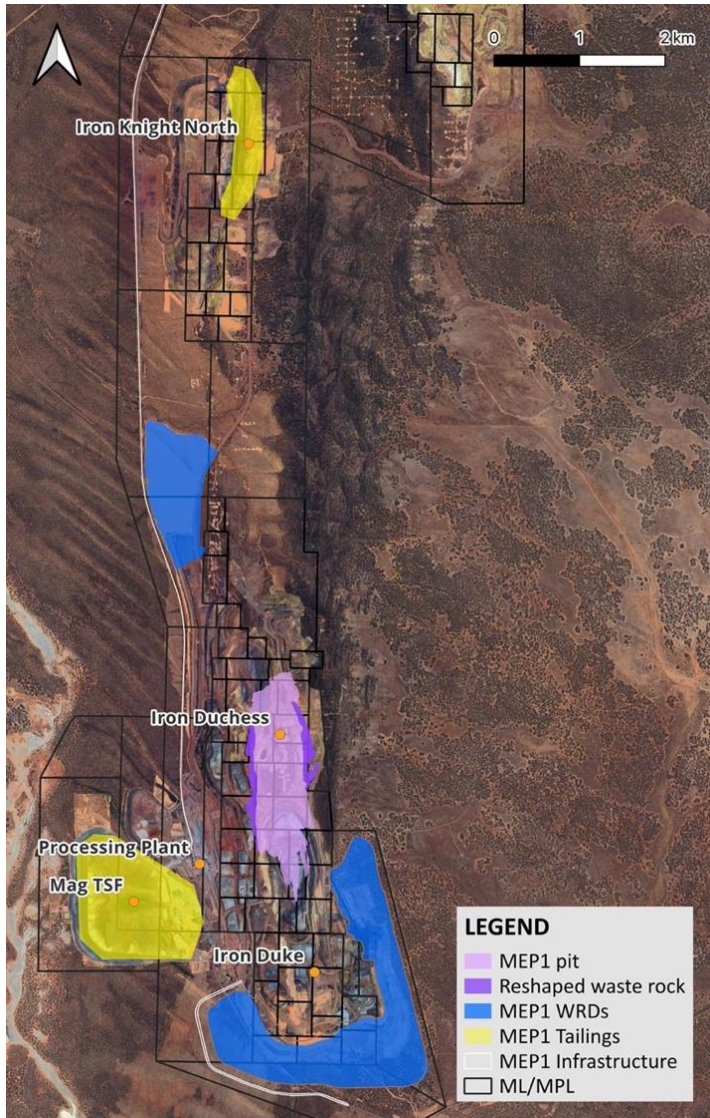


Figure 1. Mine layout

As part of the MEP1 development, planned to commence in 2025, the current mine access road from Port Lincoln Highway will need to be re-routed around the proposed waste rock footprint. There will be no change to the position of the entrance to the mine. Some existing waste rock dumps will also be reshaped as part of the mining program.

In addition to these proposed activities, several other projects are currently being assessed as part of the MEP1 work program. This includes continued works to investigate the use of the Iron Knight North pit as an in-pit Tailings Storage Facility (TSF) to provide additional

storage capacity to accommodate ongoing tailings production in advance of MEP2 execution. The southern end of the Iron Duke pit is also being considered for use as an in-pit TSF further into the future.

The existing slurry and water pipeline will also undergo an inspection to determine if remediation works are required. SIMEC Mining are currently engaging with its stakeholders to facilitate land access for inspection works.

### Regulatory Approval Status

While some of the proposed operations, including development of a waste rock dump (WRD) north of the Duchess deposit, are already approved under the existing Program for Environmental Protection and Rehabilitation (PEPR), some elements will require further approvals. These approvals will be submitted in several stages to align with progress of engineering studies.

The first stage of the approvals will include a [Change in Operations](#) application and PEPR update to allow for the expansion of existing WRD onto existing Miscellaneous Purpose Licence 32 at the mine site access road, which is not currently authorised for waste storage. The PEPR update will also cover the re-routing of the mine site access road from the Lincoln Highway, and the aforementioned processing upgrades. These approvals are planned for submission in the 2<sup>nd</sup> half of 2024.

Later approval stages will cover disposal of magnetite tailings into the Iron Knight and, in the future, Iron Duke pit.

### Environmental Impact Assessment

Technical and environmental studies have been undertaken to assess and mitigate the potential impacts of the proposed extension to the LOM. These include assessments on noise, water, air quality, geochemistry and ecology.



## Flora and Fauna

Numerous surveys by specialist ecologists have been conducted across the project area, as part of ongoing studies looking at the SMR. Based on the outcomes of these surveys and considering the proposed activities, it has been concluded that executing the program of works is not likely to have a significant impact on listed threatened species known to occur in the area.

## Dust

Dust modelling has been undertaken to predict impacts to air quality from the proposed operations. Outcomes of modelling show that with the outlined controls proposed by SIMEC Mining, dust levels at receptors, including nearby homesteads, will remain below the applicable criteria in the [Environment Protection \(Air Quality\) Policy 2016](#).

Three additional deposition gauges have also been installed east of the mine site and two additional real time monitors are planned for installation to the north and west of the site in Q3 2024.

## Noise

Baseline noise monitoring has been completed and have been used to inform noise modelling and impact assessments. Outcomes of the assessment show that noise and vibration emissions from the proposed operations will comply with relevant requirements under legislation. SIMEC Mining will implement standard procedures and blasting protocols to control impacts from these operations.

## Visual

Visual montages have been developed to show what the proposed landforms and mining activities will look like, when seen from public viewpoints.

Figure 2 shows the view from the south of the mine, as it would be seen from the Lincoln Highway. Visual rendering has also been completed for additional viewpoints to the east and south-east of the mine site and can be made available for review upon request.



Figure 2. SMR as viewed from the Lincoln Highway - before and after MEP1

## South Middleback Range July 2024

### Groundwater

Development of a groundwater model to enable the impact assessment is ongoing. It should be noted that overall, the project is considered to pose a low risk to groundwater systems.

### Geochemistry

Static testwork on waste and ore samples from Duchess Pit has been completed. Outcomes of the testwork are currently being interpreted to develop the geochemical assessment and material management plan for the placement of waste rock. This management plan will identify and mitigate the risk of potential issues relating to acid mine drainage occurring during the operation.

An ongoing operational work program will also be undertaken as to continuously improve the understanding of the resource and the management plan.

### MEP2 – Further Expansion of Duchess Pit Deposit

Currently, SIMEC Mining's primary focus is the transition of MEP1 from the study phase into execution. with MEP2 operations expected to commence in approximately 2029.

While SIMEC Mining's focus is the transition to MEP1 execution, the regulatory approvals program for MEP2 continues to progress, with a [referral](#) under the *Environment Protection and Biodiversity Conservation Act 1999* being submitted in May 2024. The referral is currently under assessment by the Department for Climate Change, Energy, the Environment and Water (DCCEEW). This process can take up to 12 months.

Studies to support MEP2 also continue to progress.

Data initially collected for MEP2 regulatory studies has been used to development assessments for MEP1. However, these studies will continue to be expanded and used for the purpose of MEP2 including, but not limited to studies such as groundwater, air quality, mine geochemistry, etc.

MEP2 proposes to expand the SMR footprint by an additional 1300ha to the east to accommodate an integrated waste landform. This will be enabled by a mineral lease application in the first half of 2025.

SIMEC Mining continues to engage with potential joint venture funding partners for the MEP2 Project.

### Magnetite Tailings Storage Facility

SIMEC Mining's current magnetite tailings storage facility is at its Raise 8 stage, and will require a further raise to accommodate 18-24 months' life for tailings during the initial operation of MEP1 and availability of Iron Knight and Iron Duke for in-pit tailings storage.

SIMEC Mining appreciates that landholders and stakeholders may have concerns about what would happen in the highly unlikely event of a tailings release incident. The Accredited and Tailings Engineer-of-Record (WSP-Golder) have developed Trigger Action Response Plans (TARPs) which includes a Tailings Storage Facility Safety Emergency Action Plan, which describes SIMEC's risk management and mitigation measures. The Tailings Storage Facility are regulated by the Mining Act 1971 (SA) and managed in accordance with the requirements contained in the Program for Environmental Protection and Rehabilitation (PEPR) approval issued by the Department for Energy and Mining (DEM) and site-specific Environmental Management Plans and procedures (Figure 3).

In the highly unlikely event of a TSF release incident, SIMEC would comply with State and local regulations, environmental recovery and rehabilitation obligations and commercial compensation obligations. SIMEC is conscious that stakeholders and landholders have locally relevant knowledge and appreciation of the value of the environment, cultural and natural resources local to the Mag TSF, and would undertake to restore and rehabilitate the affected environment in the highly unlikely event of a Mag TSF release incident.

