



BEEBYN-W11 PROJECT

WORKS APPROVAL W6941/2024/1  
AMENDMENT APPLICATION

## **ATTACHMENT 3B**

### **ACTIVITY DETAIL**

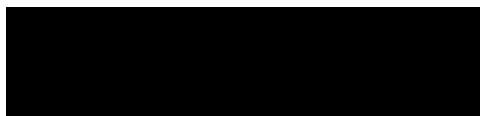
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## 1.0 PROJECT OVERVIEW

### 1.1 Location

Fenix Beebyn Pty Ltd (Fenix Beebyn) has commenced development of the Beebyn-W11 Iron Ore Project (the Project), approximately 600 km north-east of Perth and 85 km south-west of Meekatharra in the Mid-West Region of Western Australia. Fenix Beebyn is a wholly owned subsidiary of Fenix Resources Pty Ltd. The site is accessed from Cue via the Beringarra-Cue Road and Wilgie Mia Road. The location of the Beebyn-W11 Project is shown in Figure 1.1.

### 1.2 Ownership

The project is located on an existing mining lease – M51/869 – held by Sinosteel Midwest Corporation Ltd (SMC). Development of the Project will be undertaken by Fenix Beebyn under an agreement with SMC. Miscellaneous Licence L20/92, held by Fenix Beebyn Pty Ltd, connects the Beebyn-W11 project to Fenix’s Iron Ridge Project. Table 1.1 provides ownership and company details.

Table 1.1: Ownership and company details.

Tenement details			
Tenement	Holder	Granted date	Expiry date
M51/869	Sinosteel Midwest Corporation Limited	03/06/2015	02/06/2036
L20/92	Fenix Beebyn Pty Ltd	26/11/2024	25/11/2045
Proponent Details			
Company name	Fenix Beebyn Pty Ltd		
ACN/ABN	ACN: 671 632 321		
Address	[REDACTED]		
Postal address			
Key contact representatives			

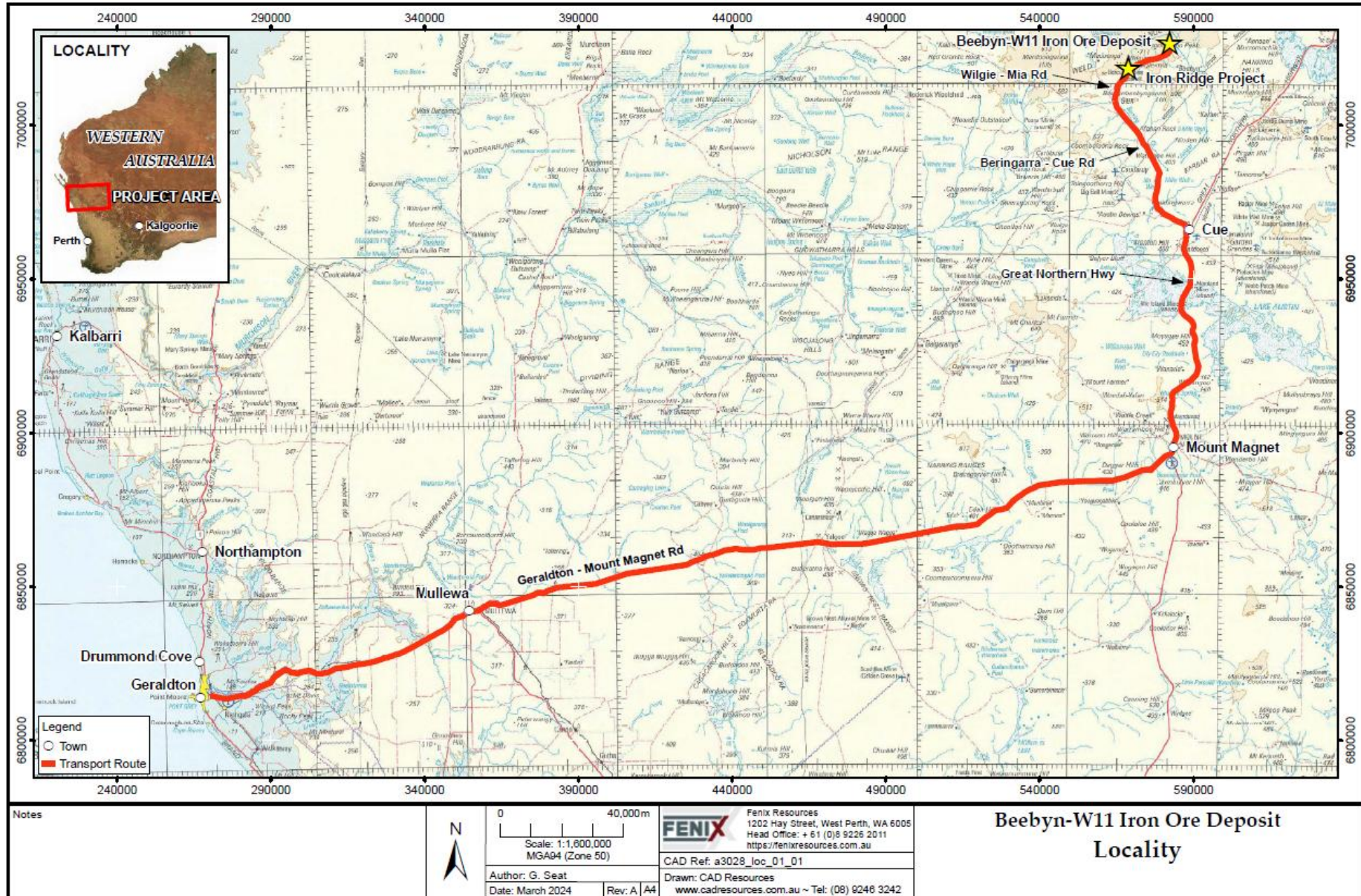


Figure 1.1: Beebyn-W11 Iron Ore Project regional location and transport route.

### 1.3 Project Activities

Stage 1 of the project, which commenced operation in June 2025, involves mining of approximately 3.9 million tonnes (Mt) of high-grade iron ore over a four year mine life. The second stage of the project will produce an additional 10.5 Mt of ore, increase the crushing and screening rate (to 3 Mtpa) and extend the mine life by approximately three years. Iron ore is crushed on site using a semi-mobile crushing plant, then trucked to Geraldton for export to overseas customers. Three prescribed activities will be undertaken to facilitate the operation, as outlined in Table 1.2.

**Table 1.2: Prescribed activities associated with the project.**

Category	Description	Design Capacity	Proposed output
5	Processing or beneficiation of metallic or non-metallic ore (a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed <i>50 000 tonnes or more per year</i>	Existing - 2 million tonnes per annum (Mtpa)  Proposed – 3 Mtpa	Existing - 1.5 Mtpa Proposed – 3 Mtpa
6	Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore. <i>50 000 tonnes or more per year</i>	Existing - 520,000 tonnes per annum (tpa)  Proposed – 750,000 tpa	Existing 520,00 tpa Proposed – 750,000 tpa
64	Class II or III putrescible landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the Landfill Waste Classification and Waste Definitions 1996, is accepted for burial. <i>20 tonnes or more per year</i>	New category proposed  Up to 450 tpa Up to 50 used tyres pa	New category proposed  Up to 450 tpa Up to 50 used tyres pa

The workforce operates on a fly-in, fly-out (FIFO) roster and is accommodated at Fenix’s existing Iron Ridge facility, approximately 20 km to the west of the Beebyn-W11 mine site.

The mining operation will extend below the water table and will therefore require dewatering. It is anticipated that most of the dewater produced will be used for dust suppression and domestic purposes within the project area. The groundwater is fresh to brackish and is suitable as livestock drinking water.

Bulk fuel is stored in three 100,000 litre tanks at a purpose-built fuel storage facility adjacent to the mine workshops and administration facility. This “fuel farm” supplies the generators and mining equipment. Portable double skinned self-bunded tanks are used, with a concrete apron installed at the main fuel farm for fuel transfer activities. Power for the mining operation will be supplied by a number of portable generators located nearby the fuel storage facility.

Domestic waste from the operation will be buried in a Class II landfill within the waste dumps. It will be operated as a trench that is progressively backfilled as waste is deposited. During operations, up to 8.5 tonnes per week will be deposited into the landfill (no more than 450 tonnes per annum). Up to 50 used tyres will also be buried in a separate trench to other waste.

Mining Proposal (Revision 0 Version 3) was approved for the project in February 2025. A Mining Development and Closure Proposal (MDCP) was submitted to DMPE for assessment in September 2025 for the proposed Stage 2 of the project.

A Clearing Permit 10636/1 has been granted for the project, allowing up to 262.1 ha of native vegetation clearing within the project envelope. An amendment application has been submitted for the increased disturbance associated with Stage 2 of the project.

Groundwater Licence GWL165387(5) is in place for the project, held by Sinosteel Midwest Corporation Ltd, for use by Fenix under the mining agreement. The licence allows for an annual extraction of 200,000 kL, which is sufficient for the construction phase of the operation. An application to increase the allowance to 750,000 kL has been submitted to DWER for assessment.

There are no changes to Prescribed Premises Boundary (Figure 1.2) proposed within this Works Approval amendment application. Figure 1.3 shows the proposed site layout, including the locations of each of the prescribed activities approved and proposed in this Works Approval amendment application.

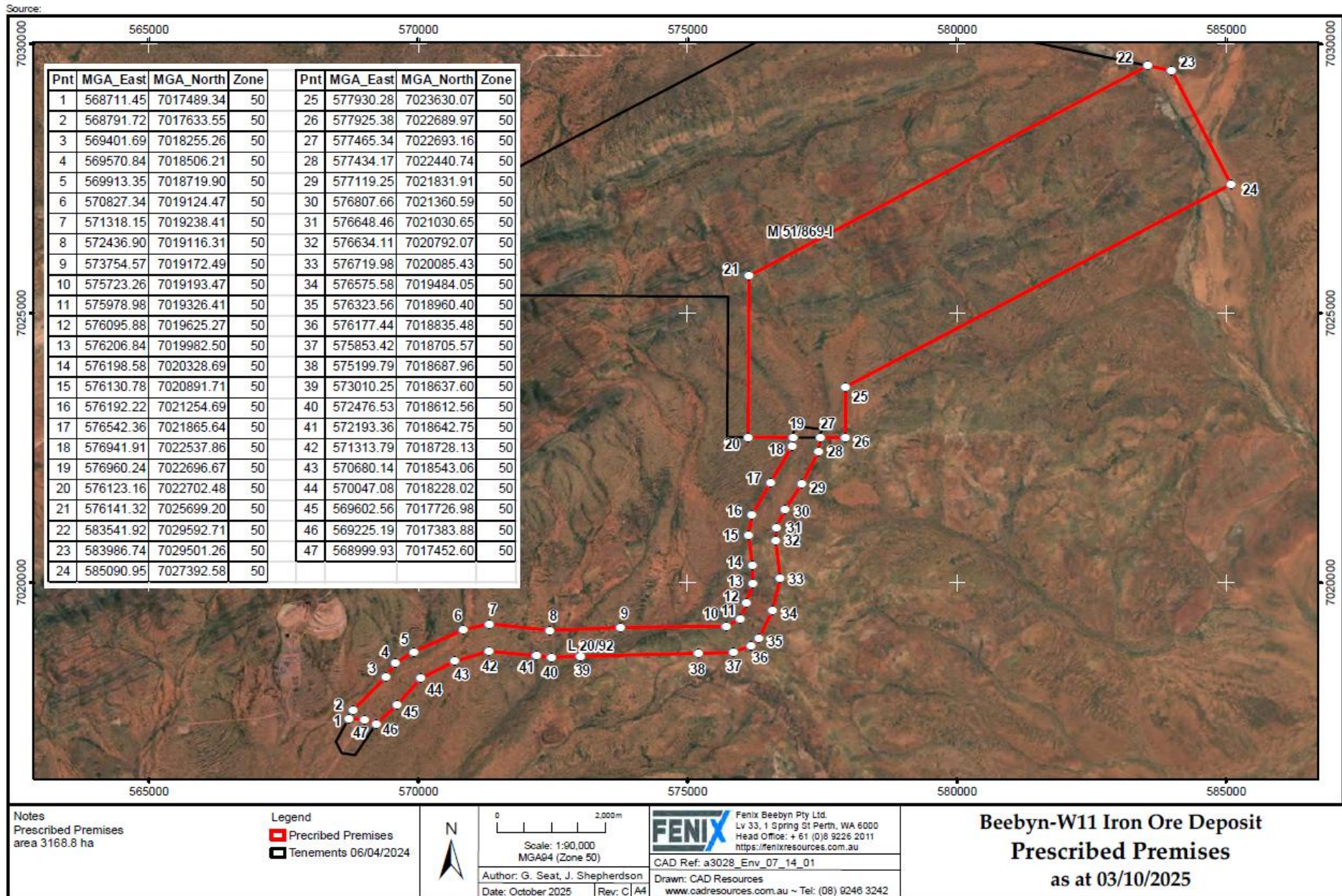


Figure 1.2: Beebyn-W11 Project prescribed premises boundary.

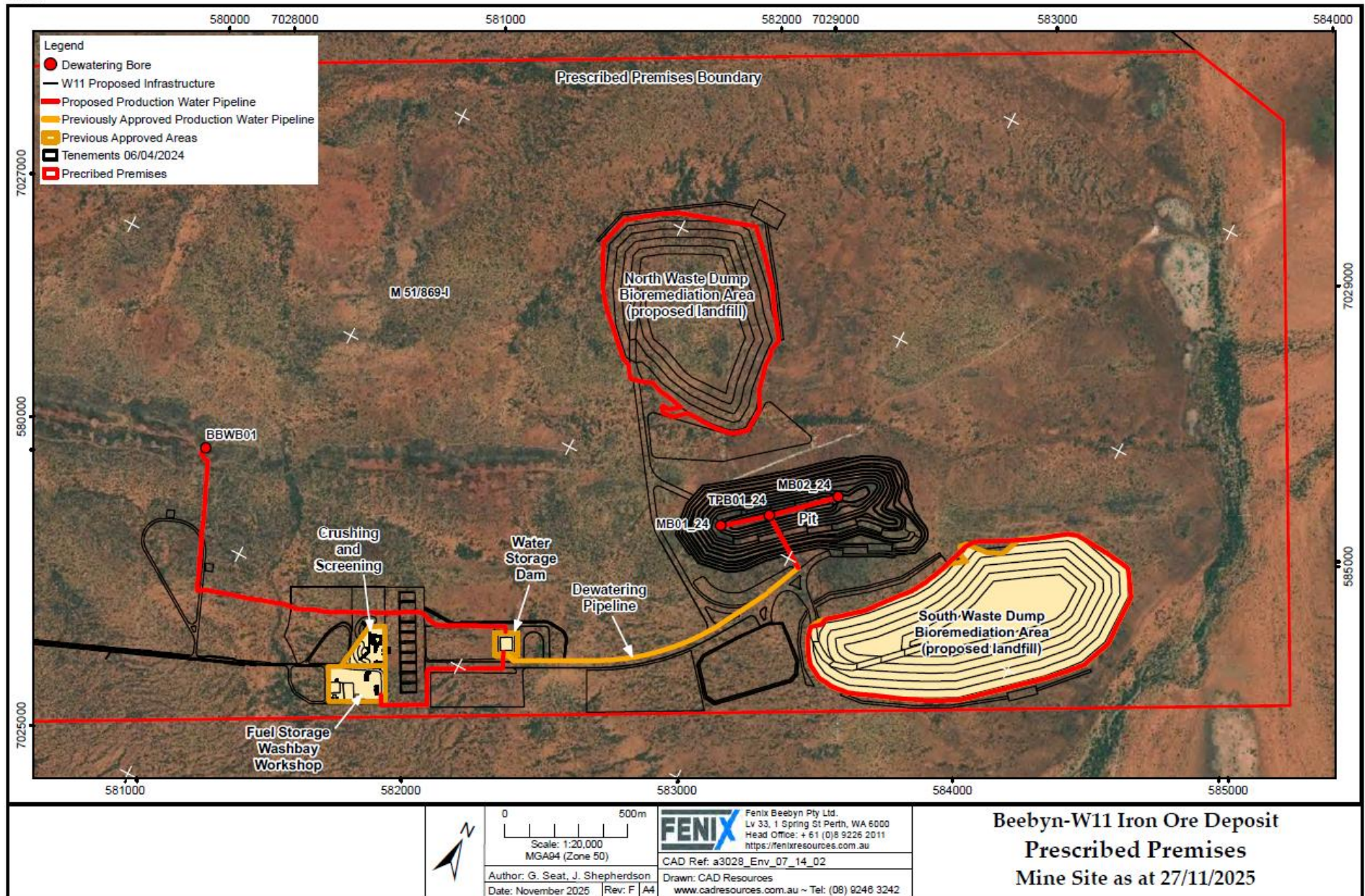


Figure 1.3: Proposed site layout and prescribed activity locations.

## **2.0 PRESCRIBED ACTIVITY DETAIL**

### **2.1 Crushing and screening**

The crushing and screening plant is a semi-mobile plant consisting of a number of modularised components linked with conveyor systems.

Throughput of the plant is proposed to increase to 3 Mtpa. The existing plant has been designed with sufficient capacity for this throughput and no modifications to the plant are required. The plant will operate on a double shift and produce two iron ore product specifications concurrently. Product 1 will be a lump product with a nominal sizing of between 8 mm and 40 mm. Product 2 will be a fines product with a nominal sizing of minus 8 mm. It is anticipated that the final product from the plant will have a nominal lump to fines ratio of 40:60.

Crushing will be via a two-stage process consisting of a primary crusher unit and a secondary crusher unit. The primary crusher (jaw crusher) will be fed with ROM ore by a front end loader and will crush the material to approximately 150 mm. A scalping screen may be installed ahead of the primary crusher to allow sized material from the mining operation to bypass it. Material from the primary crusher station will pass to the secondary crusher (cone crusher or impactor) and screening circuit. This will be a closed circuit operation where the screening and crushing configuration will be such that the iron ore can only exit the circuit once it has achieved either of the two product specifications. From there it will pass to an elevated stacker arrangement for deposition onto the product stockpiles. Each of the product streams will be sampled for confirmation of compliance with the specifications, and analysis of its chemical composition.

The plant will be operated on a 24 hour per day, 7 days per week basis with daily, weekly and monthly schedule maintenance breaks.

Dust suppression throughout the plant will continue to be managed with water misting sprays at suitable locations within the plant (generally conveyor belt loading and discharge points). Conveyor belt loading points will be fitted with skirting seals and dust box covers as required. Conveyor belt head pulleys will be fitted with head chutes as required. Dust suppression around the plant site in general will be managed with mobile water carts.

The plant will be designed to minimise noise and vibration.

Figure 2.1 shows the general arrangement of the crushing and screening plant.

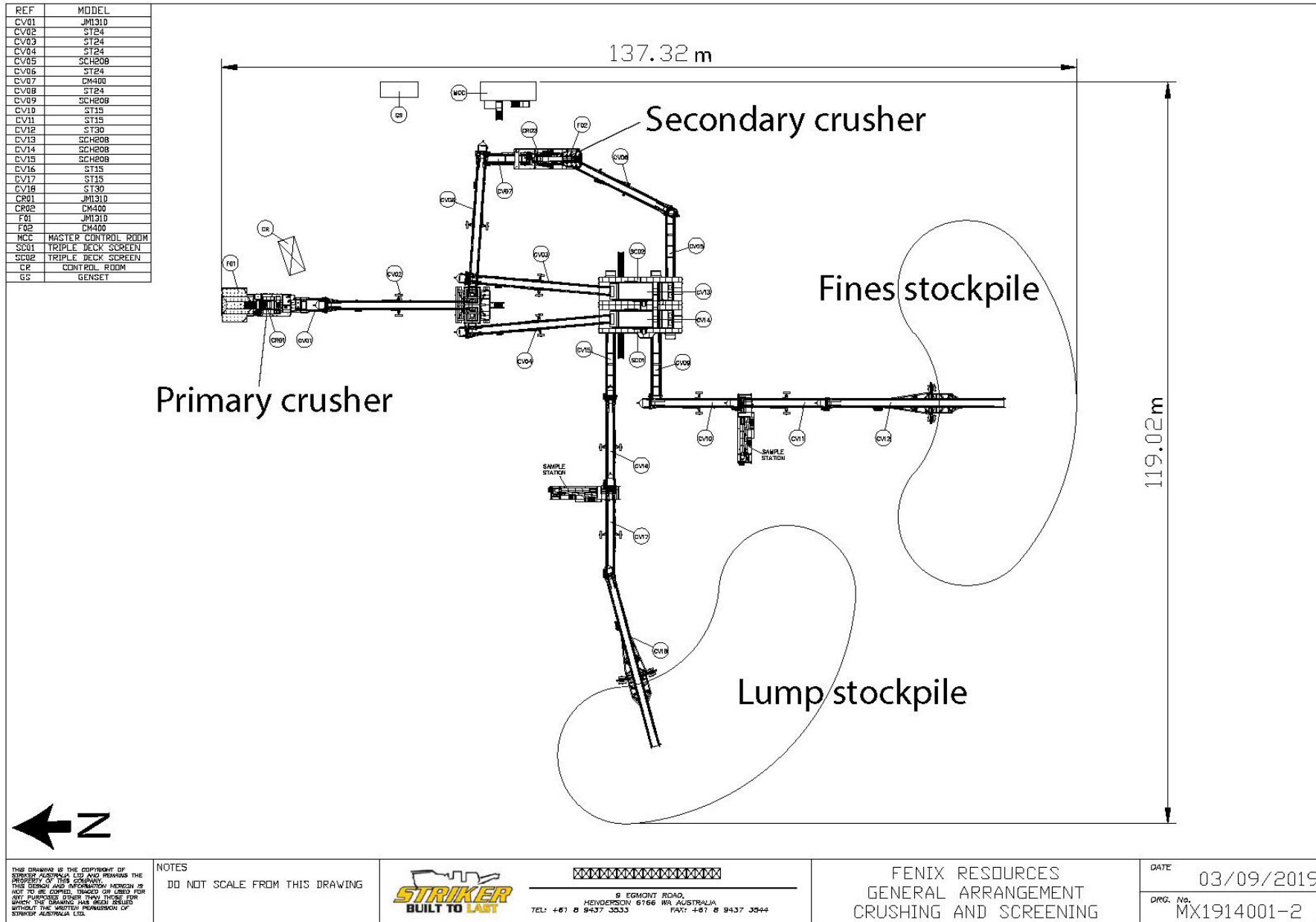


Figure 2.1: General arrangement of the semi-mobile crushing plant.

## 2.2 Mine Dewatering

Additional bores are proposed for inclusion in the Works Approval for water supply prior to construction of the pit dewatering bores. These will utilise the indicative pipe network shown in Figure 1.3. Abstracted water will be pumped to the “turkey’s nest” water storage dam included in the original Works Approval document. Water will primarily be used as dust suppression around the mine site and within the crushing and screening works.

It is proposed to reduce the fence height around the turkeys nest from 1.8 m as listed in the existing approved Works Approval, to 1.2 m as described in the original design. There are no other changes to the approved water dam design proposed within this Works Approval amendment.

A portion of the abstracted groundwater will be treated by reverse osmosis (RO) to produce potable water and diverted to the administration facilities for domestic use. A water monitoring program will be conducted to confirm the ongoing quality of the potable water. Brine waste from the RO treatment will be returned to the water storage dam.

The volume of dewatering is proposed to increase from 520,000 tpa to 0.75 GL (750,000 tpa), to align with the groundwater licence for the project. There is no change to the water quality from that approved under the existing Works Approval. Laboratory analysis results demonstrate that the groundwater is fresh to slightly brackish quality.

## 2.3 Landfill

A Class II landfill will be constructed at various locations within the waste dumps throughout the life of the mining operation. It will be operated as a trench that is progressively backfilled as waste is deposited.

Up to 8.5 tonnes per week will be deposited into the landfill (approximately 450 tonnes per annum).

Up to 50 used tyres per annum will be buried in a separate trench to other waste, in batches separated from each other by at least 100 mm of soil and each consisting of not more than 1,000 whole tyres.

The landfill will be constructed and managed in accordance with the *Environmental Protection (Rural Landfill) Regulations 2002*.

The landfill will be surrounded by an earthen bund created by the material excavated for the waste disposal trench. The bund will be at least 2 m tall on three sides to minimise wind-blown rubbish as well as prevent surface water runoff entering the trench. Weekly inspections will be undertaken of the landfill and any rubbish in the surrounding area will be collected at least on a monthly basis.

### **3.0 REFERENCES**

**DWER (2019).** *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)*. Department of Water and Environmental Regulation, December 2019.