

BHP

Yarnima Power Station Stage 4 (Gas Reciprocating Engines)

Proposal content document

2 April 2024

Document amendment record

Version	Version description	Key changes	Date
1	Original draft	N/A	18/09/2023
2	Final document	N/A	02/04/2024

Table 1: General proposal content description

Proposal title	Yarnima Power Station Stage 4 (Gas Reciprocating Engines)
Proponent name	BHP Iron Ore Pty Ltd
Short description	<p>The Proposal is to increase power generation at the existing Yarnima Power Station, located approximately 2 km north-west of Newman in the Pilbara region of Western Australia (Figure 1).</p> <p>The Proposal comprises an increase in installed firm power generation capacity at the Yarnima Power Station from 154 megawatts (MW) up to 239 MW¹ via installation and operation of gas reciprocating engines (GREs) and associated infrastructure. The GREs are likely to be installed in stages up to a maximum of 120MW (nominal). Associated infrastructure will include switchrooms, electrical connections, a new gas heater and extension of fuel piping and water supply systems, and other auxiliary equipment.</p>

¹ This number has been calculated with the Proposal displacing the existing 35 MW temporary diesel power station. See the ERD for more detail.

Table 2: Proposal content elements

Element	Location / description	Maximum extent, capacity or range
Physical elements		
Gas reciprocating engines and associated infrastructure	Figure 2	Development Envelope of 47 ha
Operational elements		
Power generation	Figure 2	120 MW
Greenhouse Gas Emissions		
Peak annual		
Scope 1	Power generation	Total: 480,030 tCO ₂ -e/yr
Scope 2	None	
Scope 3	Fuel supply	Total: 37,260 tCO ₂ -e/yr
Annual average life of proposal		
Scope 1	Power generation	Annual average: 454,649 tCO ₂ -e/yr
Scope 2	None	None
Scope 3	Fuel supply	Annual average ² : 35,290 tCO ₂ -e/yr
Total Scope 1 and Scope 2 emissions		11,820,870 tCO ₂ -e (Scope 1 only; there are no Scope 2 emissions associated with the Proposal)
Other elements which affect extent of effects on the environment		
Maximum project life		38 years (including construction, operation, decommissioning and closure)
Planned construction phase		3 years
Operations phase		26 years
BHP's closure strategies involve a sequenced decommissioning and demolition plan of power infrastructure. This will include removal of all surface infrastructure and services and footing to at least 0.6 m below ground level, management of any contamination, reshaping of the landform to manage drainage and erosion, rehabilitation of the area using regionally endemic vegetation followed by a post closure monitoring program.		

² Annual average emissions determined for the period 2027 to 2052, excluding the period that GRE's associated with the Proposal will not be operating 2024 to 2026.

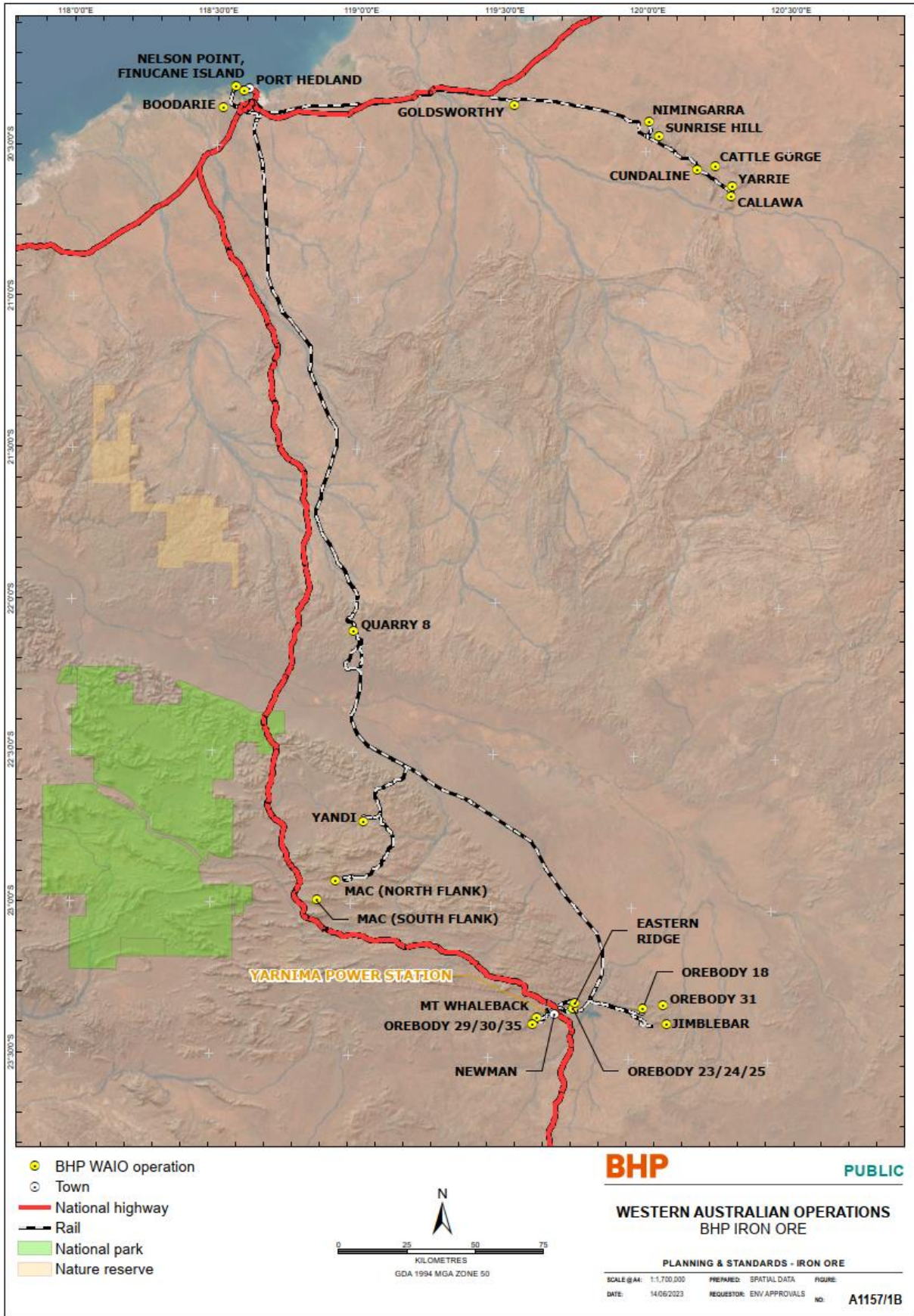


Figure 1: Regional location

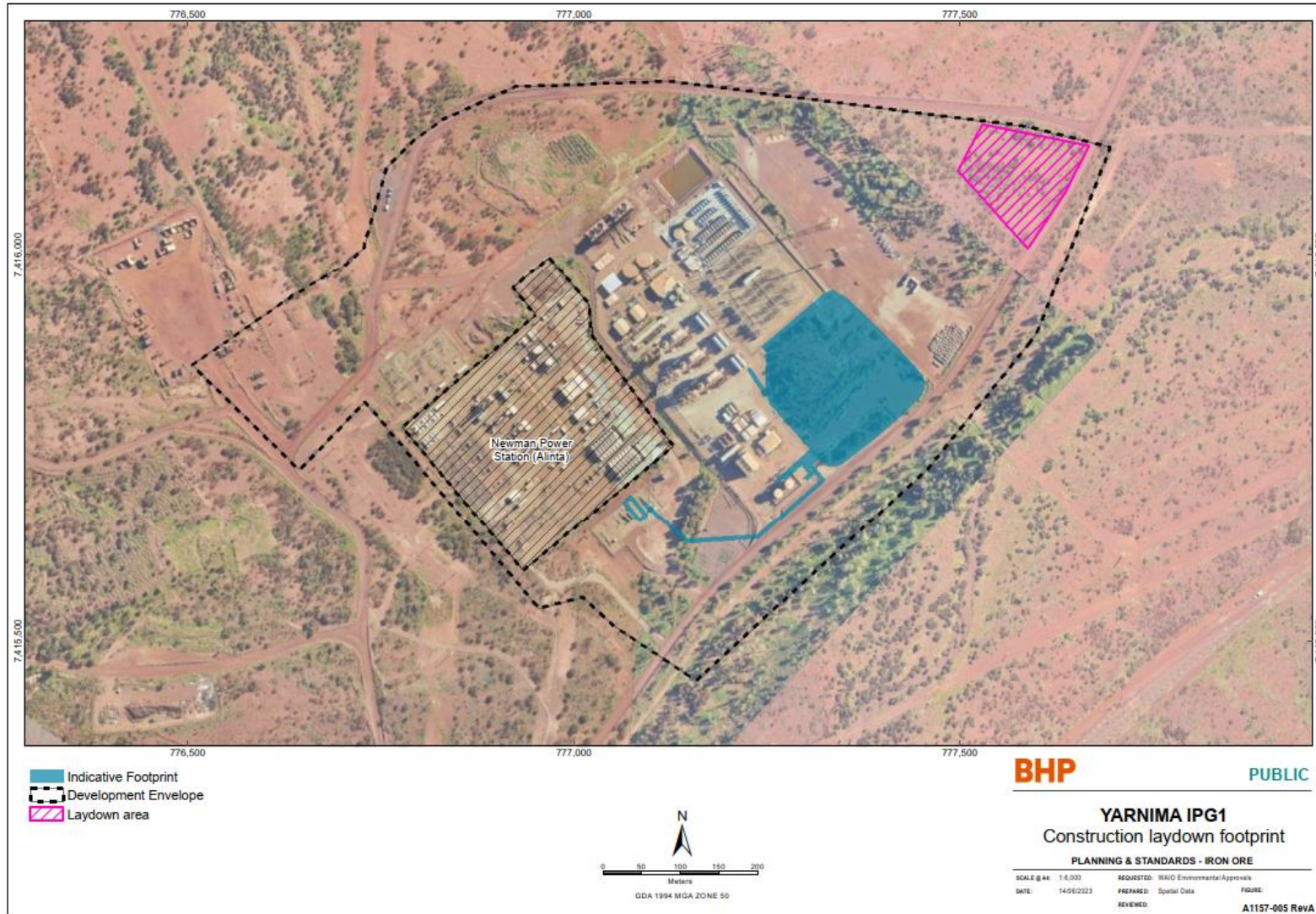


Figure 2: Development Envelope and indicative footprint