

East Hamersley Railway Project

Proposal Content Document

Table 1: General proposal content description

Proposal title	East Hamersley Railway Project
Proponent name	The Pilbara Infrastructure Pty Ltd
Short description	<p>The Proposal is to construct and operate a dedicated railway line approximately 106km in length linking the proposed Nyidinghu Iron Ore Mine (the subject of a separate referral) with the Fortescue main railway line to allow for the transport of ore to Port Hedland. The Proposal also includes a water pipeline corridor from the Nyidinghu Iron Ore Mine to the Chichester Operations. The proposed East Hamersley Railway may also be utilised for the transport of ore to Port Hedland from other future mining operations within Fortescue's Eastern Hamersley prospects.</p> <p>The Proposal includes:</p> <ul style="list-style-type: none">• The development of a railway line (approximately 106km) including rail maintenance track.• Key railway infrastructure includes rail loop, train loadout, crossing/passing loops, banker sidings, railway overpass, conveyor, roads, stockyards, laydowns.• Communications (including towers and fibre optic cables) and signalling infrastructure.• An ore loading facility.• Abstraction of groundwater from groundwater borefields, pipelines or turkey nests, for use during construction.• Development of borrow pits and ballast quarries to obtain suitable construction materials.• Infrastructure to manage surface water, including bridges, culverts and diversion drains, levees, flood response storage dams and associated water storage facilities and pump station.• Linear infrastructure (water pipelines, power transmission lines, access tracks, communications).• Temporary ancillary infrastructure to support construction (workshops, accommodation camps, laydowns, wastewater treatment plants, landfills, borrow pits, bulk storage of fuel, turkeys nest, pipelines).• Power generation requirements for the proposal will come from solar, hydrogen, ammonia, transmission lines and temporary diesel generators.• Pipelines crossing the RDE to connect Nyidinghu Iron Ore Mine pit dewatering to a reinjection borefield.• Pipelines and discharge points crossing the RDE or within the RDE to facilitate the discharge of surplus mine dewatering from the Nyidinghu Iron Ore Mine to creeks.

	The proposal is located within an 31,507 hectare Rail Development Envelope (RDE) and will require clearing of up to 4,837 hectares of native vegetation.
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Table 2: Proposal content elements

Proposal element	Location / description	Maximum extent, capacity or range
Physical elements		
Rail elements, including: <ul style="list-style-type: none"> • Rail line. • Train load-out. • Conveyor. • Stockyards, laydowns. • Rail crossing / passing loops. • Banker sidings. • Bridges. • Railway overpass. • Maintenance track. • Signals. • Access tracks. • Borrow Pits. • Topsoil stockpiles. 	Figure 2	Up to 4,837 ha of total disturbance, within a 31,507 ha Rail Development Envelope.
Infrastructure elements, including: <ul style="list-style-type: none"> • Ancillary buildings. • Communication towers. • Fibre optic cables. • Roads. • Surface water drainage infrastructure. • Bores and/or borefields. • Water pipelines and water pipeline to the Chichester operations, including water storage facilities, pump stations. 		

<ul style="list-style-type: none"> • Power transmission line and supporting electrical infrastructure (including transmission lines, substations, poles, pads, battery storage). • Tunnel for pipelines and cables. • Road bridge. • Pipelines crossing the RDE to connect Nyidinghu Iron Ore Mine pit dewatering to a reinjection borefield. • Pipelines and discharge points crossing the RDE or within the RDE to facilitate the discharge of surplus mine dewatering from the Nyidinghu Iron Ore Mine to creeks. 		
Construction elements		
Bulk Earthworks		2 million cubic metres of material will be required to construct the rail formation
Power Generation		Nominal 5 MW of temporary diesel-powered generators and power from solar, hydrogen, ammonia and other forms of renewable energy.
Borrow pits and ballast quarries	Figure 2	A number of borrow pits will be established to source borrow material for construction and ongoing operations. Stockpiles of quarried and/or borrow material may be temporarily located within borrow pits and/or laydowns.
Rail formation	Figure 2	Final landform will be no higher than 5 m above ground level.
Construction camp	Figure 2	Two construction camps (600 person total)
Groundwater Abstraction		Water supply from groundwater bore abstraction of up to 5 GL per annum for construction purposes.
Water pipelines		

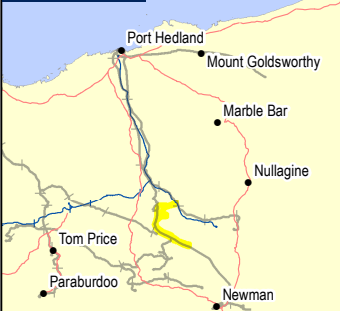
		Water pipelines, turkeys nests, pump stations will be required to support water supply.
Operational elements		
Power Generation		Nominal 3 MW for pumps along the water pipeline. Power source diesel, solar, hydrogen, ammonia and/or other forms of renewable energy.
Water pipelines		A water pipeline will transfer water from the Nyidinghu Iron Ore Mine site to the Chichester Hub (Christmas Creek and Cloudbreak). Associated infrastructure will include water storage facilities and pump stations.
Surplus water management		<p>Pipelines crossing the RDE to connect Nyidinghu Iron Ore Mine pit dewatering borefield to a reinjection borefield.</p> <p>Pipelines crossing the RDE and/or within the RDE to facilitate the discharge of surplus mine dewatering from the Nyidinghu Iron Ore Mine to creeks in the RDE (up to 50 GL/a).</p>
Transmission line		A transmission line will be constructed and operated to provide power to the Nyidinghu Iron Ore Mine from the existing Fortescue power transmission network.
Borrow pits	Figure 2	A number of borrow pits will be developed within the RDE to source material for the construction of the rail.
Water storage facilities	Figure 2	A number of water storage facilities along the rail corridor will be constructed to supply water for construction and operational purposes including but not limited to dust suppression and potable water.
Proposal elements with greenhouse gas emissions		
Construction elements:		
Scope 1	Land use change 16,905 t CO ₂ -e per annum Approximately 56,252 tCO ₂ -e per annum	
Scope 2	None	
Operation elements:		
Scope 1	86,835 t CO ₂ -e per annum	

Scope 2	826 t CO ₂ -e per annum	
Rehabilitation		
<p>All temporary works required to construct the East Hamersley Rail Spur will be rehabilitated at the conclusion of the construction phase. Temporary construction areas such as borrow pits will be progressively rehabilitated as the work front moves away from the area. The rail maintenance track, turkeys nests and piping may be required for operational activities and may be maintained for the life of the project.</p> <p>At the cessation of mining, the rail line will be managed consistent with the requirements of the <i>Railway and Port (The Pilbara Infrastructure Pty Ltd) Agreement Act 2004</i>.</p>		
Commissioning		
<p>Energising and commissioning of the East Hamersley Railway line integration with the Fortescue main railway line will be undertaken prior to its operation.</p> <p>Energising and commissioning of water infrastructure within the RDE from the Nyidinghu Iron Ore Mine to the Chichester Operations will be undertaken prior to its operation.</p> <p>Energising and commissioning of the transmission line within the RDE to the Nyidinghu Iron Ore Mine with the existing Fortescue power transmission network will be undertaken prior to its operation.</p>		
Decommissioning		
<p>Decommissioning of rail and supporting infrastructure will be in line with the requirements of the <i>Railway and Port (The Pilbara Infrastructure Pty Ltd) Agreement Act 2004</i>.</p>		
Other elements which affect extent of effects on the environment		
Proposal time*	Maximum project life	33 years
	Construction phase	Approximately 2 years
	Operations phase	26 years
	Decommissioning phase	5 years

* Proponents should only provide realistic timeframes to avoid unnecessary change to proposal applications at referral (section 38C), assessment (section 43A) or post assessment (section 45C).

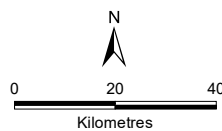


LOCATION MAP



LEGEND

- ★ Town
- Main Road
- 3rd Party Rail Alignment
- East Hamersley Railway Project
- FMG Rail Alignment Fortescue
- Marsh
- Citations



Data Sources:
 Topo, Landgate, 2022
 Development Envelope, FMG, 2022
 Basemap, ESRI World Topographic Map, 2022

Figure 1: East Hamersley Railway Location

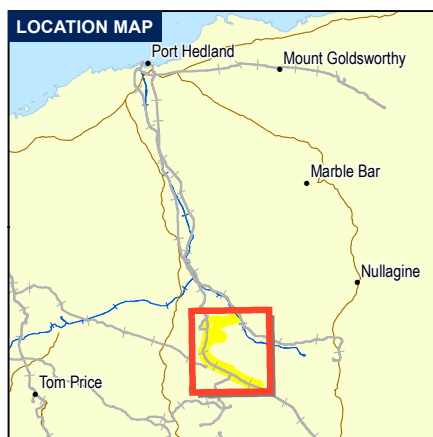
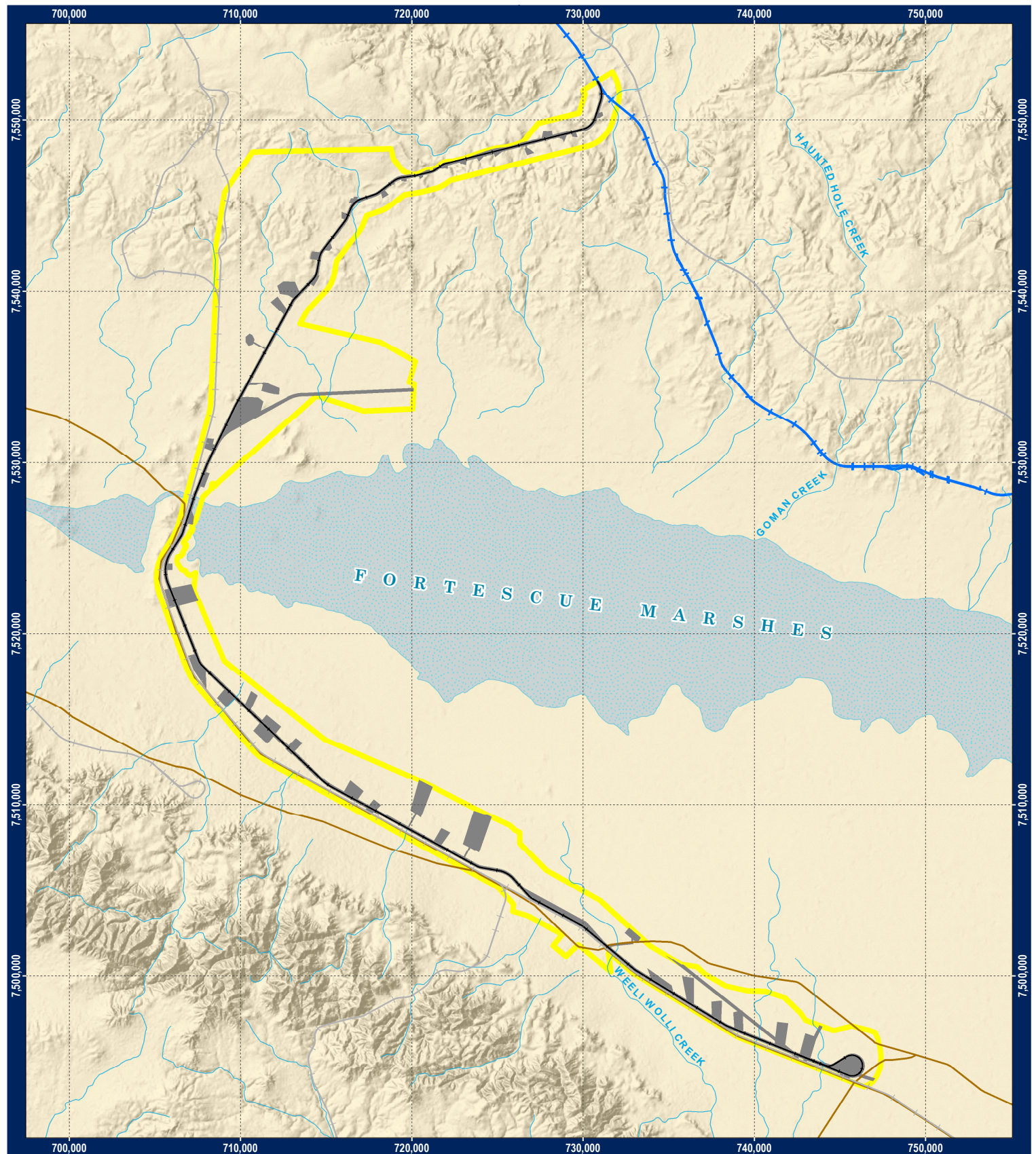
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Drawn By: T.O'Dea	Size: A4P
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Fortescue



LEGEND

- Proposed Rail Alignment
- Indicative Disturbance Footprint
- Rail Development Envelope
- 3rd Party Rail
- Existing FMG Rail
- Roads
- Water Course
- Fortescue Marsh

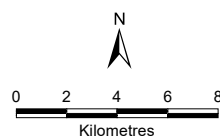


Figure 2: East Hamersley Railway
Development Envelope and Indicative
Disturbance Footprint

Requested By: Leon Sheridan
Drawn By: Tanya O'Dea
Revised By: todea
Approved By: todea
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Data Sources:
FMG, 2022
Topo, Geoscience Australia, 2003
Basemap, GOV STRM 30m Australia DEMS



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