



ASX ANNOUNCEMENT

Iron Road Limited (Iron Road, ASX:IRD)

OPTIMISATION STUDIES COMPLETE AT CENTRAL EYRE IRON PROJECT (CEIP)

Lower operating costs, improved efficiencies, reduced delivery risks

KEY OUTCOMES

- Specialist mine optimisation work has validated, improved and further de-risked the 2014 Definitive Feasibility Study (DFS) findings.
- Life of mine average Free On Board (FOB) OPEX (ex-state royalty, sustaining capital) reduced from US\$44.33/dmt (DFS) to US\$37.72/dmt at baseline AUD = 0.7634 USD (US\$35.42/dmt @ AUD = 0.70 USD).
- Highly competitive 62% Fe CFR China equivalent breakeven price assessment (pre-interest) of US\$40/dmt at baseline AUD (including 5% state royalty obligations and sustaining capital).
- Total CAPEX of US\$4.01Bn + US\$0.57Bn pre-strip works at baseline AUD (US\$3.78Bn + US\$0.52Bn @ AUD = 0.70 USD) – risk in constant currency terms weighted to downside due to unrealised EPC wrap efficiencies.
- Estimates based on optimised design production rate of 24Mtpa (dry basis) of premium quality iron concentrate (approximately 67% Fe with low impurities).
- Lower long-term power tariffs, more reflective of charges incurred by Australian energy intensive manufacturing industries, are being pursued to further reduce OPEX and breakeven assessments.
- Potential development funding partners continuing with due diligence despite the current soft iron ore price environment.

Iron Road Limited (Iron Road, ASX: IRD) is pleased to announce that it has completed a Class 3 mine optimisation programme at its 100% owned Central Eyre Iron Project (CEIP) in South Australia. The studies have lowered costs, improved efficiencies and further reduced technical and development profile risk. Iron Road has been focused on advancing the CEIP, which includes a proposed long-life mine, processing plant as well as regionally supportive rail and port infrastructure.

A major component of the mine optimisation work has been the detailed assessment of In-Pit Crushing and Conveying (IPCC), embedding the most efficient method of material movement (waste rock, ore and tailings) over the life of the operation. As a result, a highly competitive industry operating cost profile has been delivered, particularly when evaluating margins driven by the premium quality of the iron concentrate produced.

Iron Road Managing Director Andrew Stocks said: “The optimisation work has achieved its aim of reducing delivery risk and operating costs estimates through detailed planning and improved flexibility, especially in the new mine design. Significantly, our mine optimisation work has delivered superior outcomes to the earlier DFS by addressing in detail both the mine plan and full suite of associated plant required over the life of the operation. We have continued to fine-tune the process plant layout and modularisation strategy and we are now updating our reserve estimate accordingly.

“Importantly, the rail and port facilities will have sufficient capacity for an expansion of operations as well as third party use and is particularly well placed to service grain producers.”

Despite sector conditions remaining soft this year, Iron Road continues to build CEIP’s development case with potential steel mill customers, engineering partners and other potential project funding participants currently undertaking due diligence. High quality CEIP concentrate is well positioned to actively displace other ores as market evolution continues, which has clear positive implications for the funding and development of CEIP. A positive Final Investment Decision and financial close is targeted for the end of 2016.

Project Summary

As a second generation and coarse-grained magnetite development in Australia, the CEIP has a globally competitive position with respect to:

- Orebody – Mine plan structured to deliver well over half a billion tonnes of high quality iron concentrate over the life of mine, with the tenement providing additional resource potential.
- Material Movement – Mining of large scale open pit, utilising In-Pit Crushing and Conveying (IPCC), resulting in significant efficiencies and reduced diesel consumption in comparison to conventional truck and shovel, load and haul mining.
- Flowsheet Design – Simple plant layout, smaller footprint with overall lower power demand compared with existing magnetite operations. Significant advantages of using semi-autogenous grinding technology and progressively separating and removing waste between grinding and recovery stages to reduce material flows and simplify material handling through the system.
- Modularisation – Fabrication, pre-assembly and offsite commissioning of process modules occurring in the fabrication yard.
- Water Efficiency – Water recycling and tailings treatment to reduce overall water demand.
- Waste Management – Mine waste rock and tails co-located in an integrated waste landform (IWL) to form a stable mass with reduced footprint.

The 2014 DFS and optimisation studies have established that the CEIP can credibly deliver both consistent and premium quality iron concentrate at a highly competitive life of mine cost profile. Despite current softness in the iron ore sector associated with weakness in global steel demand, there remains strong demand growth across Asia for high quality, low impurity blast furnace feedstocks as pollution control and energy efficiency standards and regulations continue to tighten.

Revised Project OPEX and CAPEX Estimates

In addition to the detailed IPCC assessment and improved mining cost estimates, further pit to port OPEX efficiencies have been realised compared with the 2014 DFS outcome, aided by the weakening Australian dollar and lower diesel prices during 2015. OPEX is presented in US\$/dmt (rather than US\$/wmt) so that costs can be transparently benchmarked with prices and premiums that are similarly referenced in US\$/dmt terms.

- The Australian dollar denominated weighting in the OPEX estimate is approximately 75% – dominated by labour, power and to a lesser extent maintenance materials and contracts. For a bulk commodity operation, this is higher than a typical 50-60% weighting, primarily due to electrical power substituting for otherwise significant diesel requirements. IPCC reduces long term OPEX exposure to global oil price volatility.
- The United States dollar denominated weighting in the OPEX estimate is approximately 25% – greatest exposure arising from maintenance materials and contracts (mobile fleet and IPCC equipment), operating consumables (mainly SAG mill, ball mill and regrind mill media and liners), diesel and to a lesser extent tyres and lubricants.
- A multi-month internal review followed the base date of revised vendor estimates, at 31 March 2015, mainly involving the Thiess – RWE Joint Venture.

Table 1: FOB OPEX Estimate by Area (Real \$2015 Terms)

FOB Operating Cost By Area	At 31 March 2015 (AUD = 0.7634 USD)		At 30 September 2015 (AUD = 0.7010 USD)	
	Life of Mine US\$M	Life of Mine Average US\$/dmt	Life of Mine US\$M	Life of Mine Average US\$/dmt
Mine	13,678.26	23.65	12,851.38	22.22
Mine Waste Rock and Tailings Management	224.90	0.39	206.52	0.36
Process Plant	5,746.59	9.93	5,420.69	9.37
Mine Concentrate Handling	237.79	0.41	218.35	0.38
Water Treatment and Supply	67.21	0.12	61.72	0.11
Rail	521.94	0.90	496.77	0.86
Port	593.78	1.03	545.25	0.94
Operations Support / Corporate	749.05	1.29	687.82	1.19
Total	21,819.52	37.72	20,488.5	35.42

Note- LOM represents 29 year ore mining schedule and 578.46Mt of dry iron concentrate produced.

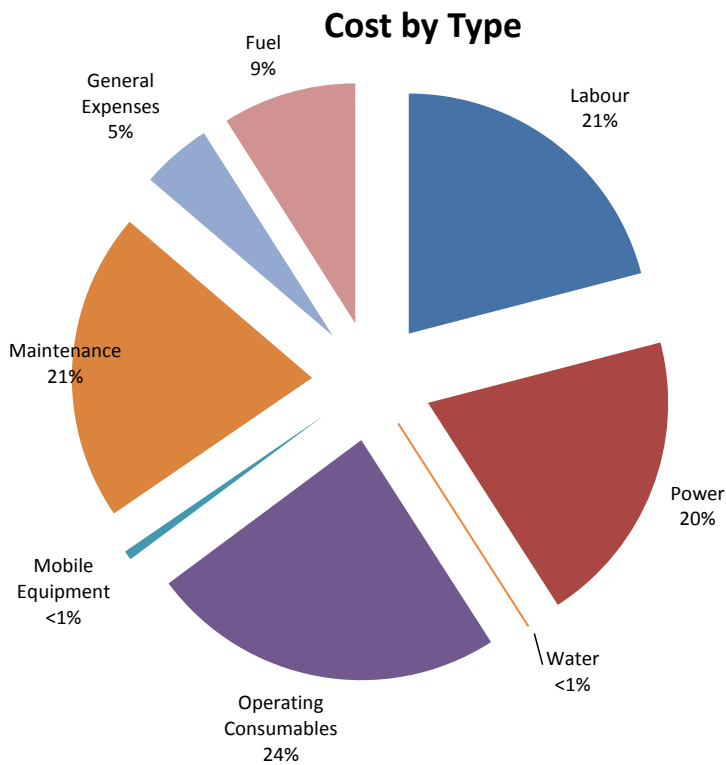


Chart 1: Operating Cost by Type

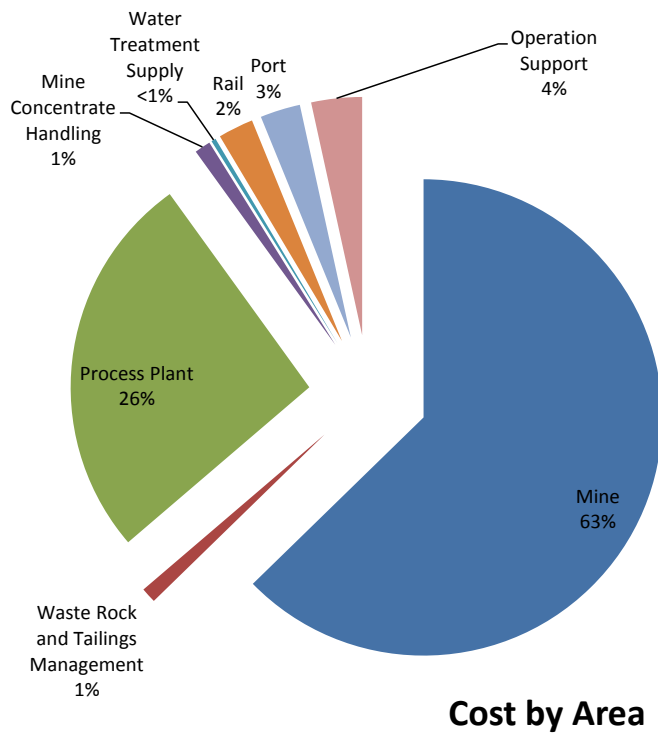
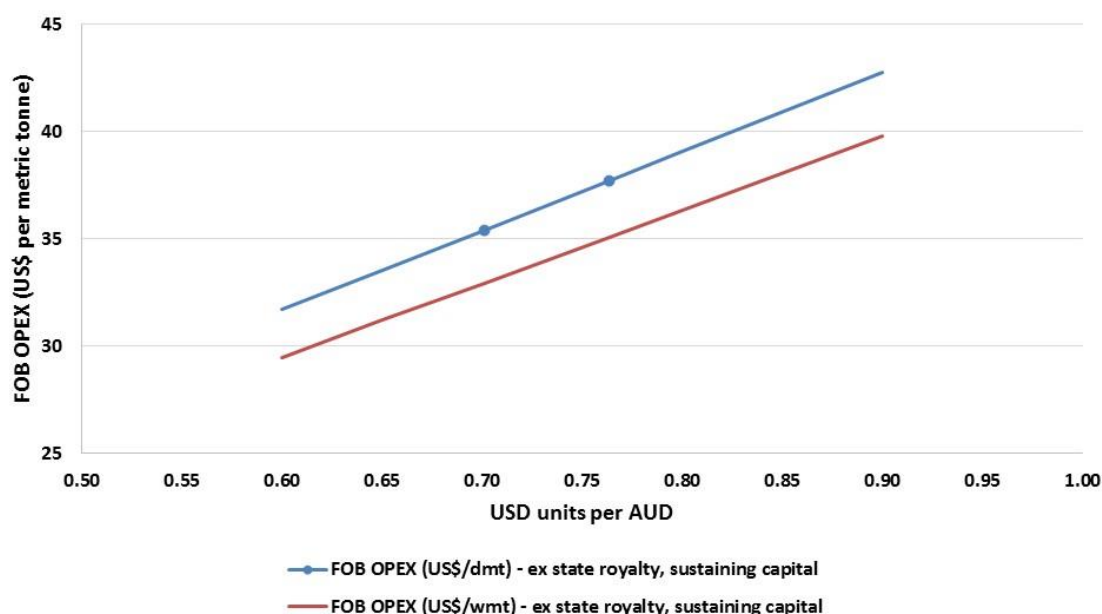


Chart 2: Operating Cost by Area

The port and rail operating costs included in the figures above reflect the ownership and operation of these facilities by Iron Road. Comparative unit costs are lower than the Pilbara due to shorter haulage distance, flatter topography, efficient loading and unloading, no dredging requirement and several other factors.

FOB operating cost sensitivity to movements in foreign exchange (AUD = 0.60 – 0.90 USD) is shown in the following chart – USD per dry metric tonne (as quoted) and USD per wet metric tonne (based on forecast average 7% moisture content):

Chart 3: FOB Operating Cost Sensitivity to Foreign Exchange Movements



FOB operating cost sensitivity to real \$2015 terms power tariffs and delivered diesel price assumptions (post excise rebate) is highlighted in the following table.

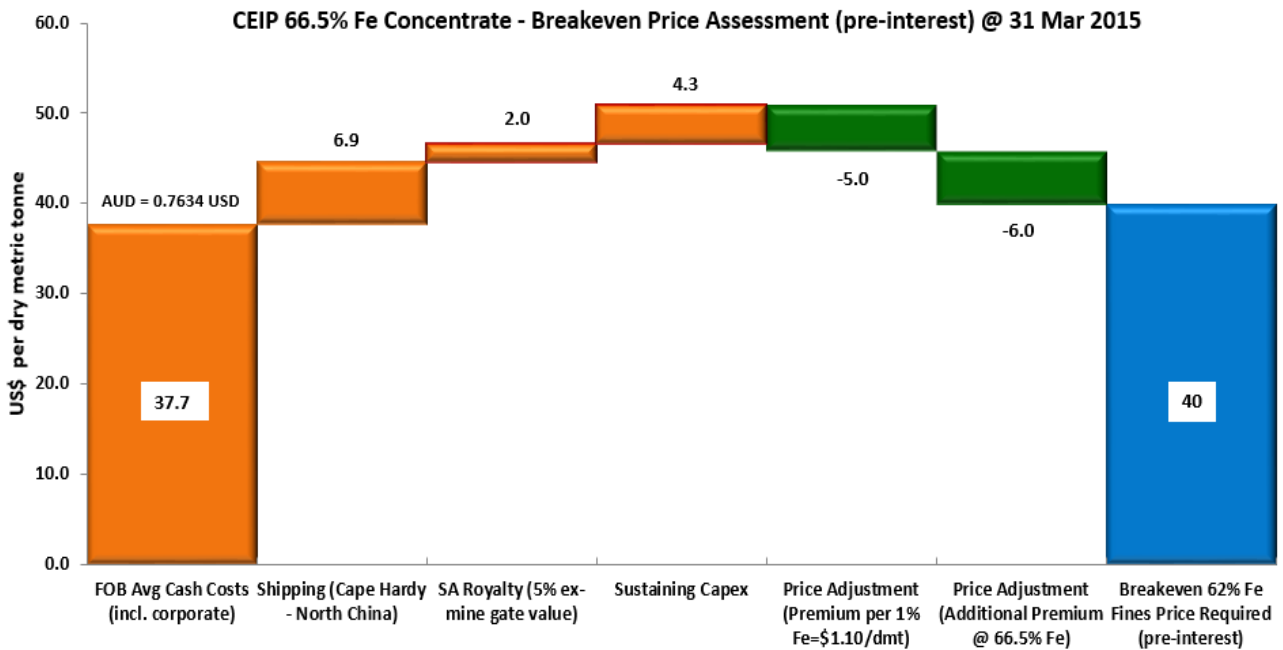
Table 2: FOB Operating Cost Sensitivity to Power Tariffs and Delivered Diesel Price

		Power (A\$/MWh)		
		40	50	64.8
Delivered Diesel (A\$/L)	\$0.73	32.9	33.9	35.4
	\$0.89	33.7	34.7	36.2
	\$1.00	34.2	35.2	36.7

Note: Matrix values represent FOB Cape Hardy OPEX in US\$/dmt (ex-state royalty, sustaining capital) @ AUD = 0.7010 USD

The CEIP 62% Fe equivalent CFR China breakeven price assessment (pre-interest), shown overleaf, illustrates average sustaining, life of mine cash costs (on a delivered China basis, excluding financing costs). It also shows the revenue offsets (green bars) generated from the sale of a premium product attracting above benchmark prices. As is the case for all iron ore producers and project proponents, this analysis (like industry cost or margin curve benchmarking) is a constantly evolving process given the number of independent and dynamic inputs. For consistency, this analysis is aligned with the baseline date of the vendor estimates, of 31 March 2015.

Chart 4: Breakeven Price Assessment (31 March 2015)



Notes:

- 1) Shipping assessment referenced off Capesize (Pilbara – North China) rate of US\$4.45/wmt (Platts IODEX as at 31 Mar 2015) with a US\$2/wmt additional loading from South Australia and adjusted for 7% targeted moisture.
- 2) South Australia royalty interpolated from derived breakeven price and price adjustments (5% ad-valorem rate on ex-mine gate value / permissible deductions).
- 3) Sustaining capital requirements all-inclusive of mine, process plant, rail and port.
- 4) Price Adjustment (Premium per 1% Fe = US\$1.10/dmt ie. 4.5 x \$1.10/dmt = US\$4.95/dmt for 66.5% Fe concentrate as at 31 Mar 2015).
- 5) Price Adjustment (Additional Premium at 66.5% Fe = US\$6/dmt based on Canadian, Russian and Ukrainian quotations as at 31 Mar 2015).

CAPEX components were submitted by vendors in respective native currencies then converted into US dollar terms as per the exchange rates as shown in Table 3. Although the revised CAPEX estimates are in line with the 2014 DFS estimate, capital intensity has been reduced due to the optimised design production rate of 24Mtpa – dry basis (previously 21.5Mtpa). Moreover, due to the preliminary nature of IPCC studies undertaken for the DFS, confidence levels around the estimate have now increased significantly as a result of the detailed optimisation studies. Risk to the estimates, in Table 4 on a constant currency basis, are now weighted to the downside with EPC wrap efficiencies likely to materialise upon appointment of an EPC Contractor.

Iron Road engaged various industry experts to assist with the optimisation studies, including one of Australia’s largest contract miners – Thiess, German mining systems operator – RWE, IPCC equipment manufacturer – MMD, and numerous others.

The positive optimisation results come on the back of significant recent progress for the Company in signing agreements with five globally significant Chinese steel mills to evaluate both the commercial and technical benefits of using high quality CEIP product.

Table 3: CAPEX Relevant Foreign Currency Exchange Rates

Currency Code	Currency	At 31 March 2015		At 30 September 2015	
		AUD/Unit	Units/AUD	AUD/Unit	Units/AUD
USD	United States Dollar	1.310	0.7634	1.4265	0.7010
CNY	Chinese Renminbi	0.211	4.7346	0.2245	4.4552
EUR	European Euro	1.414	0.707	1.6036	0.6236
GBP	United Kingdom Pound Sterling	1.936	0.5164	2.1631	0.4623

Source: Reserve Bank of Australia

Table 4: Capital Cost Estimate by Area (Real \$2015 Terms)

WBS Item	Description	CAPEX Total 31 March 2015 US\$M	CAPEX Total 30 September 2015 US\$M
	Total CAPEX	4,575.64	4,305.38
2000	Surface Mine Establishment (incl. pre-strip)	1,621.51	1,547.87
3000	Site Wide Development	35.46	32.56
4000	Ore Treatment Facilities	986.26	936.48
5000	Mine Site Facilities (incl. electrical infrastructure)	281.38	260.23
6000	Off-Site Facilities (incl. water supply)	203.13	186.66
6400	Rail System	523.59	483.92
6500	Port and Marine	366.01	344.77
8000	Owners Business Management	262.29	241.09
9000	Contingency	295.99	271.80

Iron Road has also recently signed a MoU to progress funding for the infrastructure components of the CEIP with AIXI Investments, which has established relationships with a number of the world's most experienced infrastructure investors.

Project Risks

Iron Road adopted a standardised approach for identifying, assessing and mitigating risks during the DFS in accordance with AS/NZS ISO 31000 Risk Management. The improvements and scope modifications arising from facility changes as part of the optimisation study have decreased risk uncertainty. This was clearly demonstrated in an updated risk assessment that was undertaken subsequent to the completion of the Optimisation Study.

Mine

The mine is designed for IPCC with fully mobile and semi mobile crushers, as the characteristics and size of the orebody are ideally suited to this mining method. IPCC has many benefits, including significant safety and environmental advantages and cost savings.

Mobile in-pit crushers will be connected to the main pit conveying system by smaller dedicated fully mobile conveyors. Each component is relocatable by means of transport crawlers allowing for ease of relocation during pit advance. Semi mobile crushers will complement mobile crushers and be used as appropriate.

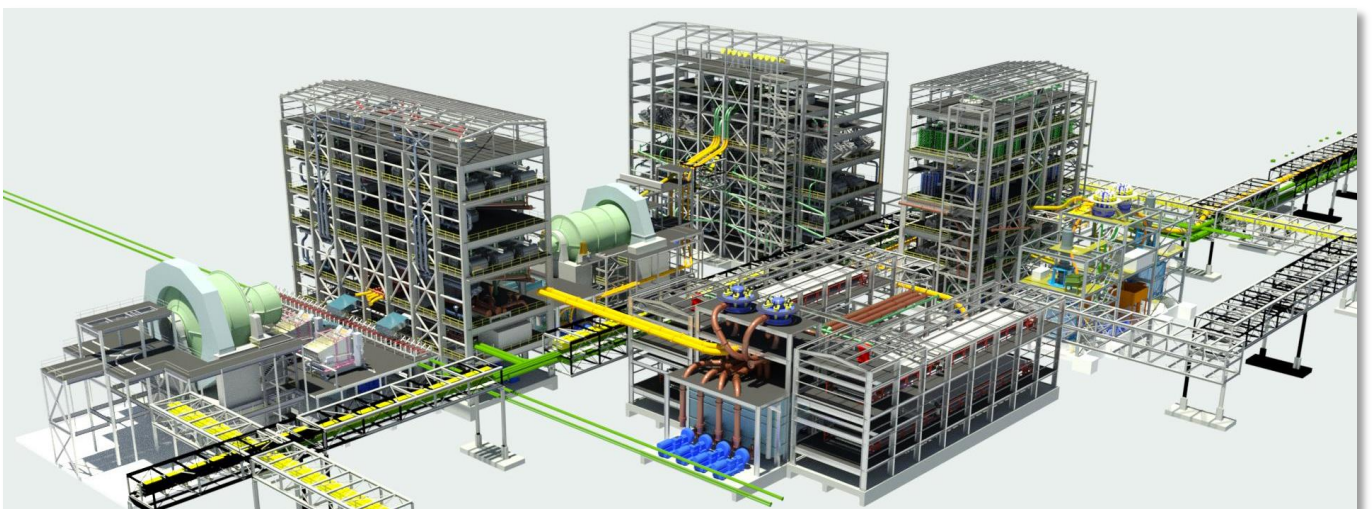


Ore Processing Facility

A modularised Ore Processing Facility (OPF) will be constructed on the southeast edge of the proposed pit. The facility has three discrete processing trains to provide a high level of plant availability and to minimise operational downtime. The OPF will process up to 175 Mtpa (dry) of feed material at an overall average head grade of ~16% Fe, producing 24 Mtpa of iron concentrate (dry basis) at ~67% Fe.

To minimise construction hours on site, the OPF modules will be constructed at established off-site engineering fabrication facilities and then transported to site. Each of the three processing trains of the OPF incorporates seven main modules:

- Semi-Autogenous Grinding (SAG) Mill
- Rougher Magnetic Separator (RMS)
- Gravity Beneficiation Circuit
- Regrind Mill (Verti-mill)
- Ball Mill
- Cleaner Magnetic Separator (CMS)
- Tailings Filter Building



Waste Rock and Water Management

Dewatered coarse tailings from each process train discharge onto the tailings transfer conveyor and the filtered moist fine tailings are then transferred to the waste rock conveyor originating from the mine. The combined tails and waste rock are stacked on the integrated waste landform (IWL) by a mobile spreader.

This cost-efficient tails and waste rock handling method minimises water use and reduces the waste storage footprint. The IWL is adjacent to the eastern side of the Ore Processing Facility during the initial years of operation, and over the life of mine will be expanded south and west, with an ultimate crest height of 135 m.



Bore water will be used as the process water, which will be recycled in the process. Potable water will be produced from bore water passed through a reverse osmosis (RO) water plant located in the ore processing facility area.

Power

The CEIP is based on continuous operations and it is critical that the electrical power source is reliable. The power supply will be sourced from a major base load power station via the high voltage (HV) power transmission network. The port site will be connected with a 132 kV transmission line via the Yadnarie to Port Lincoln transmission line. Power will be supplied to the borefield from an existing 66 kV line.

Product Delivery to Port

The iron concentrate from the mine site will be transported via a standard gauge, heavy haul rail system along the infrastructure corridor to a new port facility at Cape Hardy.

The single track rail system provides two-way passage by incorporating two passing sidings on the mainline. Passing is also possible through the marshalling yard at the mine site. The rail system will be available to third parties and is particularly well placed geographically to service grain producers for efficient and cost effective export.



Port

The bulk commodities port facilities are sited at Cape Hardy, 7 km southwest of Port Neill.

The Cape Hardy port is planned to have an initial capacity of 70 Mtpa with the main export wharf capable of handling Panamax and Capesize vessels. Two shipping berths for bulk iron ore carriers will be serviced by a slewing, luffing, travelling shiploader. Heavy-lift ships and geared Handymax vessels will be accommodated at the marine offloading facility wharf.

The port precinct includes 1,100 hectares of land to enable future expansion and to offer export solutions to third parties for a range of commodities. The inner harbour may be used for the import and export of low-volume high-value cargoes, including the import of machinery, cement and fertiliser, and the export of mineral concentrates, grain, hay and containerised cargoes.



The port site receival circuit is designed to receive iron concentrate from the rail system via the rail unloading facility, and then transport the concentrate via conveyors to a slewing, travelling stacker to be stacked in the stockyard. The minimum capacity of the stockpile is 660,000 t being approximately three to four shiploads of material. The concentrate is recovered from the stockpile by a bi-directional bridge bucket wheel reclaimer and transferred via conveyor along the main jetty to the telescopic shiploader on the wharf.

Approximately 145 shipments of iron concentrate are scheduled per annum, utilising a combination of Capesize and Panamax vessels. The 10,000 tonnes per hour shiploader has sufficient capacity for an expansion of operations as well as third party use.

Iron Ore Marketing

While Iron Road has primarily targeted the sinter market, the CEIP product is also suitable for use in pelletising plants. Preliminary analysis indicates the availability of suitable ore milling capacity in China to size the CEIP concentrate. This provides the CEIP with important diversification benefits and the ability to respond to customer requirements as their feedstock demands evolve during the 29 years of CEIP concentrate production.

The impact of China's revised Environmental Protection Laws, which came into effect in January 2015, is expected to accelerate China's preference towards the future use of higher quality, low impurity iron ore feedstocks, such as that from the CEIP. These new pollution control standards and associated regulations relating to energy consumption, impact on sinter, pellet and iron production. Chinese steel mills are facing significant environmental protection pressures and in response are adopting a range of measures to deal with this challenge, including the use of higher quality iron ore feedstocks.

Approvals

The Environmental Impact Statement (EIS) and Mining Lease Proposal (MLP), under the Development Act 1993 and Mining Act 1971 respectively, are nearing readiness for submission to the State Government. The completion of these documents follows extensive community engagement, especially around the findings of the impact and benefit assessments and outcomes expected from stakeholders.

On submission to Government, public consultation will be jointly organised by the two lead agencies, the Department for State Development (DSD) for the proposed mining lease and the Department of Planning, Transport and Infrastructure (DPTI) for the proposed infrastructure components.

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