

**ASX ANNOUNCEMENT**

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**Lincoln unveils 1.2 billion tonne Eyre Peninsula Green Iron Project and commences partnering process**

- **Portfolio review by new management team validates significant scale of Lincoln's Green Iron Project on South Australia's Eyre Peninsula, underpinned by 1.2 billion tonne magnetite resource<sup>1</sup>.**
- **Previously completed studies contemplated production scenarios of 3 – 10 million tonnes per annum of magnetite concentrate analysing all aspects of project development, including mining, processing, logistics, port, power and water.**
- **Previous incomplete feasibility studies demonstrated the project's favourable metallurgical properties, including high recoveries, high resultant iron ore grades and favourable grind size characteristics.**
- **The commencement of a partnering process for Lincoln's Green Iron Project is the first step towards unlocking shareholder and regional value from its magnetite resource. The Company understands the local Eyre Peninsula community has an interest in our projects and Lincoln looks forward to working constructively with the community to develop this important Green Iron Project.**
- **Recent initiatives aimed at decarbonising Australia's steel industry are expected to support third party project interest, noting plans by the SA Government to update its magnetite strategy, in which Lincoln has been requested to participate.**
- **Project partnering process aimed at advancing the project to Definitive Feasibility Study (DFS) status and complete approval documents to commence imminently, overseen by Lincoln Director Julian Babarczy.**
- **Value realised from Lincoln's Green Iron Project will fund and fast-track development of the Kookaburra Graphite Project, the Company's core asset and primary focus.**

**Lincoln Minerals (ASX: LML)** is pleased to announce it will commence a partnering process for its large-scale Green Iron Project on the Eyre Peninsula in South Australia, which is underpinned by the recently announced 1.2 billion tonne (Bt) magnetite resource<sup>1</sup>. A review by Lincoln's new Board and management team has highlighted the development potential of this large-scale multi deposit magnetite project, known as the "Green Iron Project", which Lincoln has held since 2018<sup>2</sup>.

The Green Iron Project partnership process, which Lincoln is launching today, seeks to identify a funding and project partner for advancing the Green Iron Project to operational status. The initial phase involves progressing the project to Definitive Feasibility Study (DFS) status and completing necessary approval documents. It is important to note that previous DFS-level studies and regulatory approvals were not finalized, although were well advanced. The goal of the partnering process is to realise value for shareholders and potentially secure funding for the Kookaburra Graphite Project (KGP) while minimizing equity dilution for Lincoln shareholders.

<sup>1</sup> See Lincoln Minerals ASX announcement dated 21 March 2024, titled "1.2Bt Eyre Peninsula Green Iron Project Partnering Commences".

<sup>2</sup> See Lincoln Minerals ASX announcement dated 21 December 2018, titled "Lincoln secured 100% mineral rights".

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**Lincoln Director Julian Babarczy said,** “We believe there is substantial potential value in Lincoln’s 100%-owned Green Iron Project, which in our view is currently not reflected in Lincoln’s share price, due to a lack of awareness by the market of the scale and attractiveness of previous study outcomes. During the strong iron ore pricing environment of 2010-2012, the project attracted significant funding as well as strong engagement from major steel companies, however project advancement halted due to the retracement of iron ore prices in subsequent years.

Following our review of the project, it is clear it has a compelling and significant scale, with detailed yet incomplete, advanced stage feasibility studies undertaken on all aspects of the project showing the potential to produce a very high-quality magnetite end-product with favourable metallurgical characteristics, ideal for the production of green steel in the region. I look forward to overseeing this important partnering process for the Company in the months ahead.”

**Lincoln CEO Jonathon Trewartha said,** “Magnetite, with its environmental advantages, has emerged as an appealing option for sustainable, low carbon steel production. Lincoln’s Green Iron Project, focused on producing a coarse-grind, high-grade iron ore concentrate, is expected to attract interest from potential steel producers, as has been the case with other peers in the region. The project’s unique properties, positive environmental impact, and proximity to established infrastructure and workforce contribute significantly to the project’s attractiveness.”

“Lincoln Minerals has recently unearthed a wealth of assets during an extensive review of the company’s overall portfolio. Among these are the iron ore assets, which represent just one facet of Lincoln’s underlying value and potential. Additionally, we are in the final stages of evaluating Lincoln’s Uranium assets, which we look forward to updating shareholders on shortly.”

“While we remain focused on development of our Kookaburra Graphite Project, our aim is to deliver maximum value to our shareholders and realise value from assets within our broad portfolio in the best interests of shareholders.”

## Overview of Lincoln’s Green Iron Project

Lincoln’s Green Iron Project encompasses iron ore rights for a large-scale magnetite project on the Eyre Peninsula in South Australia, with a JORC Mineral Resource estimate of >1.2 Bt of magnetite iron ore, which has demonstrated strong metallurgical recoveries and a high-quality end product (as displayed in Table 1).

**Table 1: Combined Total Mineral Resources by Resource classification<sup>#</sup>**

	JORC Classification	Tonnage (Mt)	Head Grade		DTR	Concentrate Grade	
			Fe (%)	SiO <sub>2</sub> (%)		Fe (%)	SiO <sub>2</sub> (%)
Combined	Measured	10.8	22.7	52.3	18.0	68.2	4.1
	Indicated	385.6	25.5	48.0	22.7	68.3	3.8
	Inferred	847.9	25.8	46.7	22.5	65.5	5.6
	<b>Total Resources</b>	<b>1244.3</b>	<b>25.7</b>	<b>47.1</b>	<b>22.5</b>	<b>66.4</b>	<b>5.0</b>

<sup>#</sup>For further details relating to Lincoln’s magnetite resource, please refer to ASX release dated 21 March 2024, titled “1.2Bt Eyre Peninsula Green Iron Project Partnering Commences”.

## Mineral Resources & Metallurgy<sup>1</sup>

Underpinning Lincoln’s Green Iron Project is a magnetite Total Mineral Resource of 1.2 Bt at a head grade of 25.7% Fe, which is considered significant due to the optimal location of the resource, the strongly supportive metallurgical characteristics, the overall potential scale of the project as well as the recently emerged preference for high quality magnetite feedstock for green steel production.

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Lincoln's Green Iron Project Mineral Resources exhibit strong beneficiation properties with previously undertaken preliminary metallurgical test work showing concentrate grades close to 66.5% Fe and 5% SiO<sub>2</sub> (as shown in Table 1), could be produced using conventional magnetic separation at a relatively coarse grind size of 75µm. The recoverable grades were designed around the joint venture partner's specific requirements at the time, however, it is believed that higher magnetite recovery and lower silica may be achieved using optimisation methods, including a finer grind.

## Background to Lincoln's Green Iron Project

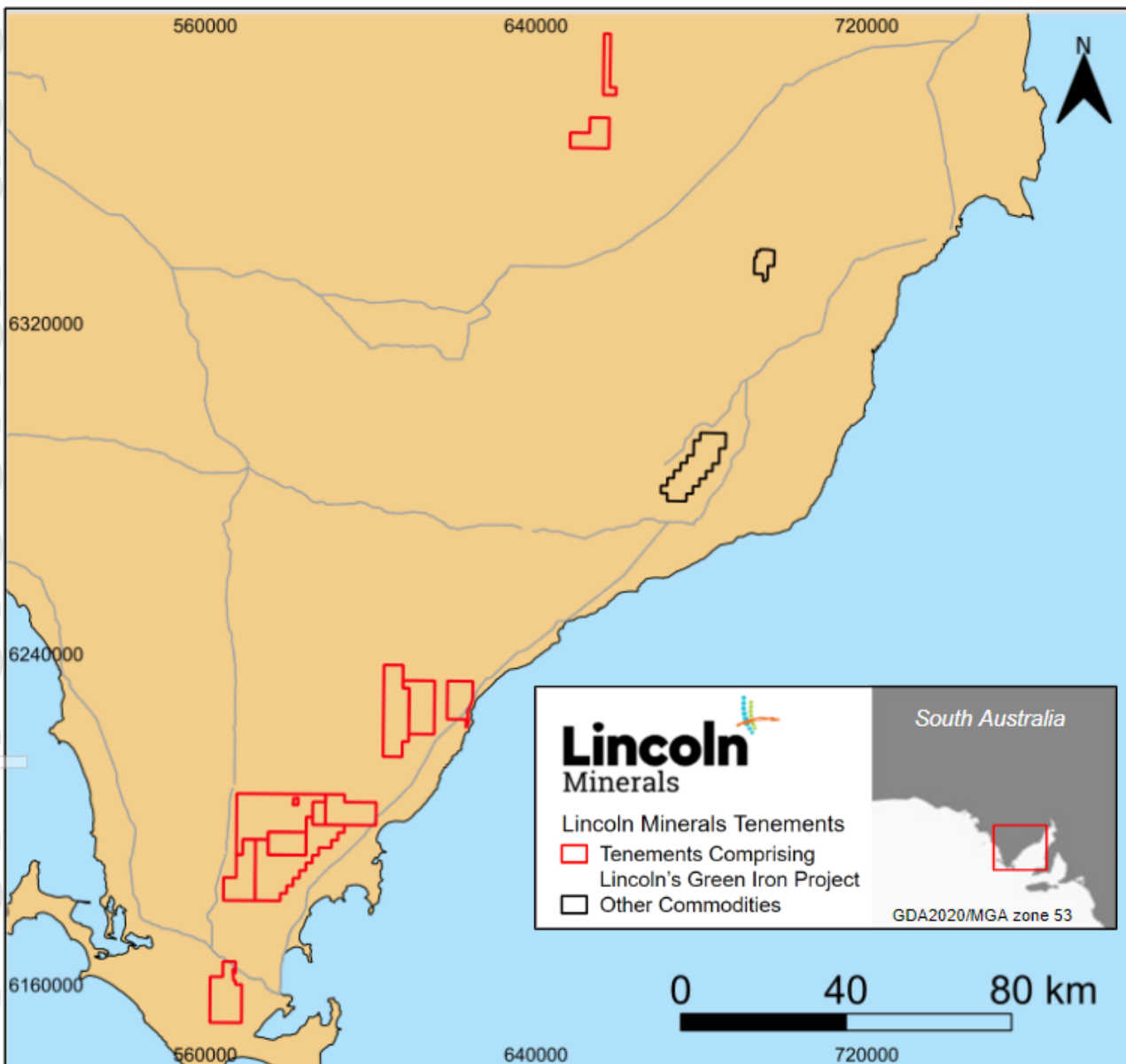


Figure 1: Overview of Lincoln's Green Iron Project tenements on the Eyre Peninsula, South Australia.

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Lincoln Minerals has been an active explorer on South Australia's Eyre Peninsula since its Initial Public Offering (IPO) in 2007. Exploration Licences (EL's), which predominantly comprise Lincoln's Green Iron Project, were originally owned by ASX-listed Centrex Metals (now "Centrex Limited"), with Lincoln securing 100% of all mineral rights to these tenements in 2018<sup>2</sup>.

This 2018 acquisition included the EL's and mineral rights that were previously the subject of significant joint venture agreements and memorandums of understanding with major steel companies based in Asia, including Wuhan Iron and Steel Limited.

As a result of the iron ore price retracement that lasted until 2016, joint ventures and agreements lapsed, with all rights to the mineralisation, related studies, and intellectual property transferring to Lincoln in 2018.

However, as Lincoln focused on the development of its KGP, also on SA's Eyre Peninsula, work on these magnetite assets has been minimal since acquisition. A recent review by Lincoln's new management team, including Chief Executive Officer Jonathon Trewartha, highlighted the potential of entering a partnership to develop this large-scale project, which is expected to have additional recent interest due to the growing acceptance of high-quality magnetite concentrate as a feedstock for green steel production.

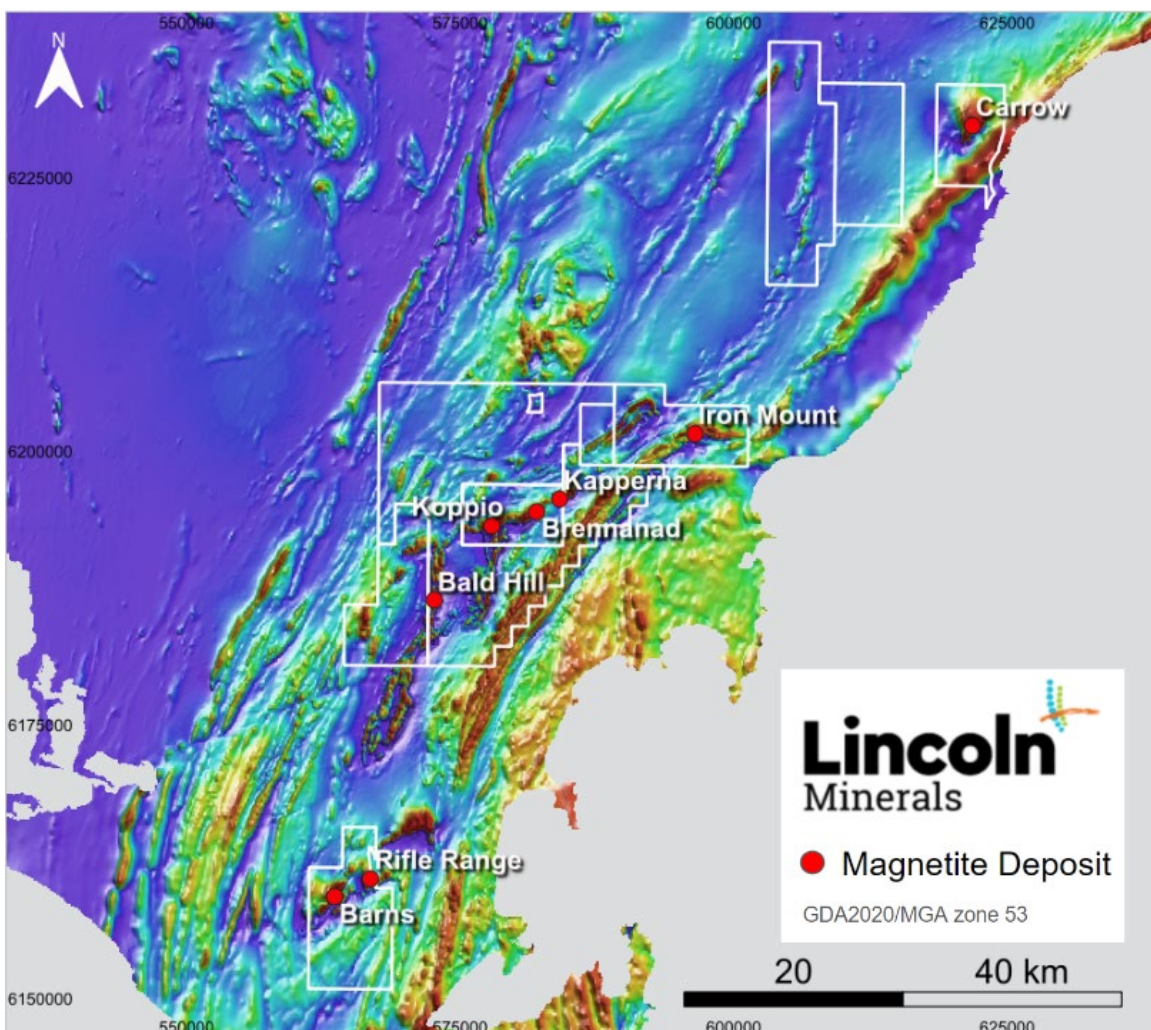


Figure 2: Location of Lincoln's southern magnetite deposits coincident with regional magnetic trend.

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## Previous Studies

These magnetite iron ore assets previously saw significant investment and study by major offshore joint venture partners, including large traditional Asian-based steel manufacturing groups interested in the project's potential high-quality offtake. A significant amount (approximately \$75 million) has been invested in drilling, joint venture equity, detailed studies, product quality test work, and approvals by previous owners and JV partners, studying all aspects of mine development, stakeholder engagement, environmental studies, related project infrastructure (power, water, port) and detailed economic modelling contemplating potential production scenarios of 3 million tonnes per annum (Mtpa) and up to 10Mtpa<sup>3</sup>.

A detailed study on the project (excluding Lincoln's Mineral Resources) was completed in 2012<sup>4</sup> with project proponents subsequently well advanced on a feasibility study, which was halted in 2015 and not finalised due to the retracement in iron ore prices which led to project proponents withdrawing.

The completed detailed study referred to above contemplated a range of concentrate output scenarios, ultimately suggesting that scenarios of 5 Mtpa up to 10 Mtpa of magnetite concentrate were likely to yield optimal results<sup>3</sup>.

The magnetite test work undertaken was conducted by ALS AMMTEC in their Perth laboratory under the supervision of Worley Parsons process engineers. The primary objective of the test work was to generate relevant data for the development of the design criteria used to define the process plant flow sheet.

Ultimate DTR grades vary by deposit<sup>1</sup>, yet all demonstrate the potential for high-quality magnetite concentrates. Increasing demand as a feed stock for green steel production, magnetite concentrates aim to decarbonise steel manufacturing through modified steel production processes and through the utilisation of non (or lower) carbon-bearing inputs.

While significant additional work will be required to update technical studies to reflect current capital and operating cost estimates, Lincoln believes that current industry trends and increases in demand for high-quality magnetite concentrates to support steel industry decarbonisation, suggest that interest for a project of this scale and product quality may be renewed.

The process flow sheet previously studied is considered standard for a project of this type, involving commonly used crushing, grinding, milling, and gravity separation techniques as shown in the process flow sheet in Figure 3.

<sup>3</sup> Lincoln Minerals notes that these are not production targets, but instead are a statement of the production scenarios previously contemplated by prior joint venture studies and analysis.

<sup>4</sup> See Centrex Metals ASX Announcement dated 3 May 2012 -

<https://announcements.asx.com.au/asxpdf/20120503/pdf/4261m37qfyzggb.pdf>

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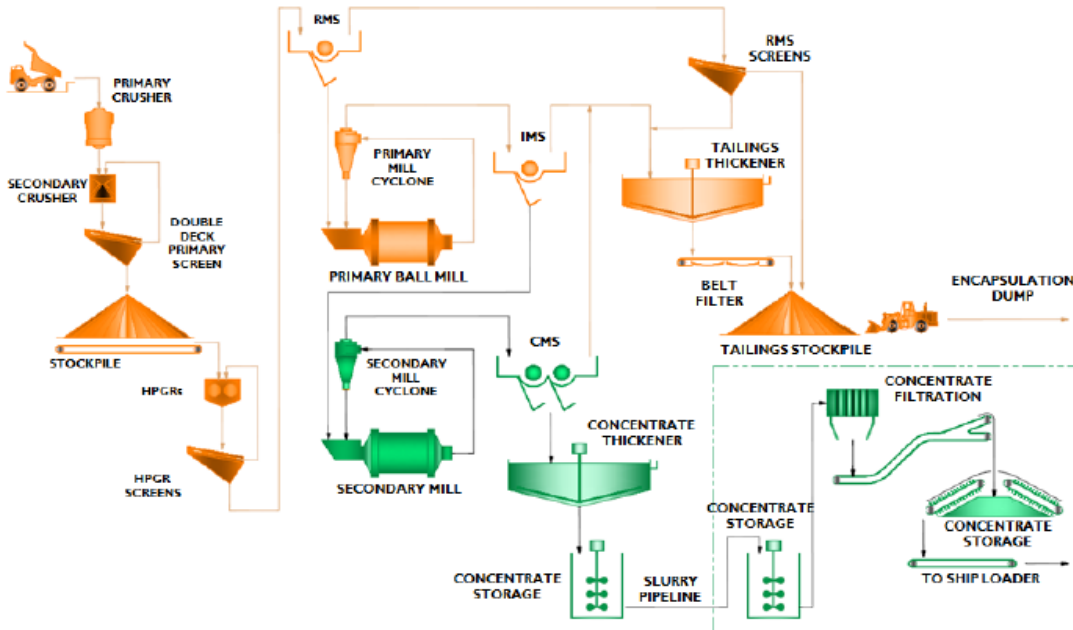


Figure 3: Simplified overall circuit process flow diagram

## Favourable Regional and Project Specific Developments

Since project-related work was halted, several key developments have occurred regarding key regional infrastructure advancements as displayed in Figure 4, which should provide significant additional support for potential project development and subsequent partnership discussions.

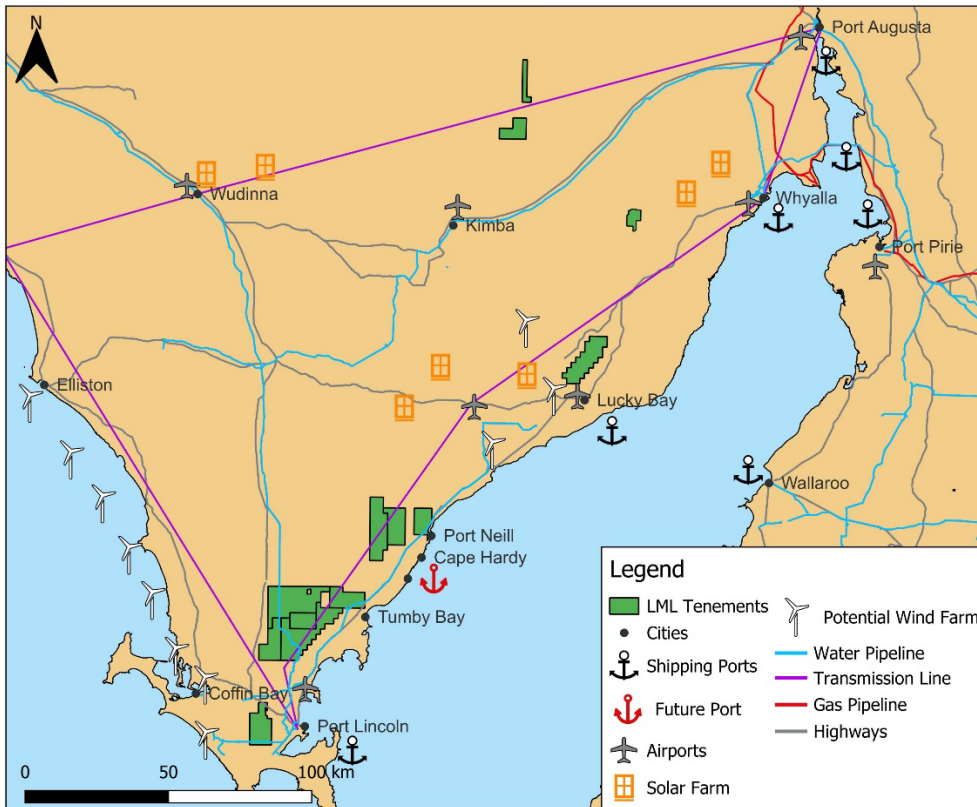


Figure 4: Regional Eyre Peninsula map showing key infrastructure.

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The status of Eyre Peninsula and surrounding regions with regard to key infrastructure assets, noting significant upgrades have already occurred since project development work was halted (high voltage transmission line upgrades, installed renewable energy generation, main road development and upgrade), while water infrastructure upgrade has either occurred or is at advanced project approvals status (Table 4).

Likewise, a range of additional potential port initiatives and planning work has also been undertaken which show strong potential to enhance Lincoln's Green Iron Project.

**Table 4: Summary of favourable Green Iron Project developments since acquisition by Lincoln.**

<u>Attribute</u>		<u>2018</u>	<u>2024</u>
	Iron ore price	US\$73 / t	US\$100-110 / t
	Magnetite "Green" Premium	n/a	Growing acceptance
	Magnetite uses in Green Steel	Not contemplated	Magnetite seen as an ideal feedstock for low carbon "green steel" production
<b>Eyre Peninsula Infrastructure</b>	<b>Power</b>	Requiring upgrade	Upgraded Powerlines and Renewables (see below).
	<b>Water</b>	Limited Availability	Reverse osmosis plant to supply Eyre Peninsula in final stages of planning; dry processing technology significantly advanced (see below).
	<b>Port</b>	Limited options	Significant increase in development ready options (see below).

Source: Data sourced from publicly available information and Lincoln assessment.

Importantly, many of these upgrades and enhancements are either coincident with, adjacent to or proximal to Lincoln's key magnetite iron ore tenements.

## Port

The previous studies undertaken assumed all magnetite concentrate would be exported via Port Spencer, which was the subject of a separate study at the time. While Port Spencer remains an option, recent studies at Port Spencer have focussed on a modified design for grain export.

Since the authoring of the previous project studies, other potential port sites have also emerged and have been studied in detail by independent groups. The potential for these port solutions to benefit the development of Lincoln's Green Iron Project will be explored. These additional potential port sites include;

- Cape Hardy: a potential deep seaport for the export of bulk commodities,
- Whyalla Port: currently an operating export port for a range of bulk commodities.

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### *Water*

A water options study was undertaken as part of previous study efforts and determined that additional water sources were required to provide suitable water quantities for potential project development and production. SA Water is currently undertaking early contractor involvement in the investigation of a proposed desalination plant at Billy Lights Point near Port Lincoln, with a Development Application expected to be lodged imminently with the State Commission Assessment Panel ahead of community engagement in coming months. Output from this desalination plant will likely be sought after by other mining and nearby community projects, although the plant has potential to provide some or all of the water requirements necessary for a development of Lincoln's Green Iron Project.

In addition, Lincoln expects that any project development would thoroughly evaluate the ability to reduce overall water consumption in the magnetic concentration process, for example by exploring the use of dry magnetic separation techniques.

### *Power*

Previous studies undertaken identified the requirement to upgrade the Eyre Peninsula electricity network, which would provide the required power supply of the potential project. Since these studies were completed, ElectraNet, which operates the high voltage electricity infrastructure on Eyre Peninsula, upgrades have been completed which will assist with ensuring a viable power solution for Lincoln's Green Iron Project.

### *Additional recent updates to Eyre Peninsula infrastructure*

In addition to the updates and upgrades referred to above and subsequent to the various studies undertaken on Lincoln's Green Iron Project, there have been a number of additional upgrades to regional infrastructure which the Company believes will further enhance the potential ultimate economic case for development of Lincoln's Magnetite Project

These upgrades include:

- **Port upgrades**
  - A\$66 million upgrade to the Port Lincoln Wharf (completed 2019)
- **Roadworks**
  - Joy Baldock Highway duplication (Port Lincoln - Cowell) (completed 2013)
  - Lincoln Highway safety improvements (Port Lincoln - Whyalla) (various stages)
- **Airport**
  - Port Lincoln Airport terminal upgrade (completed 2016)
- **Energy**
  - Construction of the Lincoln Gap Wind Farm (Stage 1: 2016, Stage 2: 2019)
  - Upgrades to ElectraNet's transmission network
- **Water**
  - A\$26 million upgrade to the Whyalla desalination plant (completed 2014)



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- Construction of the Kimba to Whyalla water pipeline (completed 2015)
- **Communications**
  - NBN (National Broadband Network) rollout across Eyre Peninsula (various stages).

### Capital and Operating Cost Estimates

The capital and operating costs of the Green Iron Project were studied in detail in the previous Scoping Study and subsequent (incomplete) Definitive Feasibility Study.

Lincoln believes that additional work is required to update project metrics, work which is planned to be undertaken once the partnering process has been commenced and/or completed and project activities reinitiated.

### Green Iron Overview

In addition, there is increasing acceptance of high-quality magnetite as a feedstock into direct-reduced iron (DRI) for “green steel” production, which has potential to substantially decarbonise the steel manufacturing process. DRI steelmaking, which does not use coal and has potential to be based on green hydrogen, requires a significant supply of high-grade iron ore, for which the commonly known hematite-goethite iron ores as found in the Pilbara, Western Australia are generally unsuitable. The potential demand for high-quality magnetite feedstock is therefore expected to increase substantially over the medium to longer term.

In addition to the benefits listed above, magnetite also exhibits other benefits over haematite for steel decarbonisation, including:

1. **Higher iron content:** delivers greater efficiency and cost effectiveness due to less magnetite required to produce the same amount of steel.
2. **Lower impurities:** results in cleaner steel production and reduced emissions, ideal for DRI and electric arc furnace (EAF) processes.

The development of Lincoln’s globally significant Green Iron Project on the Eyre Peninsula is seen as assisting in the potential for a steel technology transition in South Australia, with the announcement by Liberty Steel of the phase out of existing blast furnace technology at Whyalla Steelworks in favour of DRI EAF<sup>5</sup>, likely a first of many steps taken. The South Australian Government is also soon to announce its Green Iron & Steel Strategy, which has potential to further support interest in Lincoln’s Green Iron Project.

### **Stakeholder Engagement**

Lincoln will always work to ensure that any potential project development is undertaken with the benefit of regional stakeholders as a significant consideration.

Any parties interested in the project are invited to visit Lincoln’s website to download a fact sheet. For additional information, updates or further queries, interested parties are encouraged to contact

<sup>5</sup> [GFG to phase out coal-based steelmaking at Whyalla with \\$485 million investment | Energy & Mining \(energymining.sa.gov.au\)](https://www.energymining.sa.gov.au)

21<sup>ST</sup> MARCH 2024

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Lincoln, either by reference to the information contained on Lincoln's corporate website or via email (contact information shown below).

Website: [www.lincolnminerals.com.au](http://www.lincolnminerals.com.au)

Email: [enquiries@lincolnminerals.com.au](mailto:enquiries@lincolnminerals.com.au)

Lincoln looks forward to working constructively with the Eyre Peninsula community to develop this important green steel project.

<ENDS>

**Jonathon Trewartha**  
Chief Executive Officer

E: [Jonathon.Trewartha@lincolnminerals.com.au](mailto:Jonathon.Trewartha@lincolnminerals.com.au)

P: 1300 137 116

This announcement has been approved for release by the Board of Lincoln Minerals Limited

No new information or data has been acquired that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed and have not been materially modified from the original market announcements.