



ASX: LML

## Developing Australian Graphite, Uranium and Green Iron

Green Iron Project
South Australia's Best
Undeveloped Magnetite Project

30 September 2024



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forward-looking future performance and actual results or developments may differ materially from those in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include market prices, continued availability of capital and financing, and general economic, market or business conditions. Investors are cautioned that any such statements are not guarantees of future performance and that actual results or developments may differ materially from those projected in forward-looking statements.

- The information in this document that relates to Mineral Resources for the Green Iron Project is based upon information compiled by Mr S. O'Connell who is a Member of the Australasian Institute of Mining and Metallurgy. Mr O'Connell is a consultant and advisor to Lincoln Resources Limited and has sufficient experience relevant to the style of mineralisation, the type of deposit under consideration and to the activity undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mr O'Connell consents to the release of the information compiled in this report in the form and context in which it appears.
- The Mineral Resource information in this document related to the Green Iron Project, is extracted from the Centrex Limited ASX announcement titled "Revised Eyre Iron Joint Venture Resource Update", released on 18 September 2015 and is available to view on
- https://www.asx.com.au/asx/statistics/displayAnnouncement.do?display=pdf&idsId=01663173 . The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.
- Metallurgical data for the Green Iron Project compiled by S. Klose (FAusIMM) who is a consultant to Lincoln Minerals
  and has the required qualifications and experience to qualify as Competent Person for metallurgical testwork on
  magnetite under the 2012 edition of the JORC Code. The compiler verify that this presentation is based on and fairly
  reflects the metallurgical testwork information in the supporting documentation and agrees with the form and context of
  the information presented.
- The Board has authorised the release of these presentation materials.
- Precautionary Statement: The announcement contains information regarding the project having an aspirational goal of
  producing up to 6Mtpa of magnetite concentrate. Until the previous studies are refreshed to reflect any changes in the
  project in relations to ESG and costs, this aspiration is speculative.



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#### Why Green Steel? Why Now?



#### What is Green Steel

 Green Steel refers to steel production that reduces or eliminates greenhouse gas emissions and other harmful environmental impacts

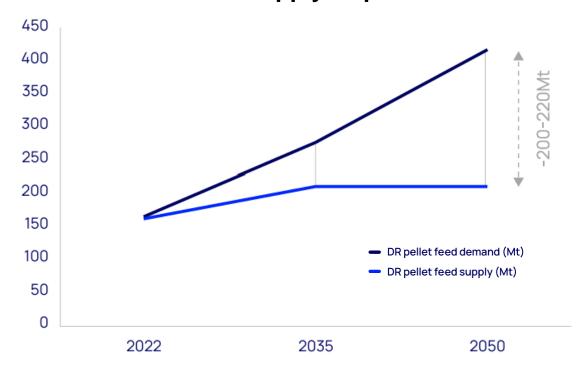
#### Why is Green Steel Important?

- The shift to green steel is essential for mitigating the impacts of climate change.
  - Global steel industry produces 7-9% of total global
     CO<sub>2</sub> emissions approx. 3.3 billion metric tons of
     CO<sub>2</sub> equivalent annually.

Magnetite plays a crucial role in Green Steel production

- Higher iron content reduces the need for iron ore quantities
- Lower impurities means less energy intensive beneficiation
- Hydrogen reduction possible due to magnetite's crystal structure
- Direct reduction possible at lower temperatures

#### Forecast Magnetite Iron Ore Demand-Supply Gap



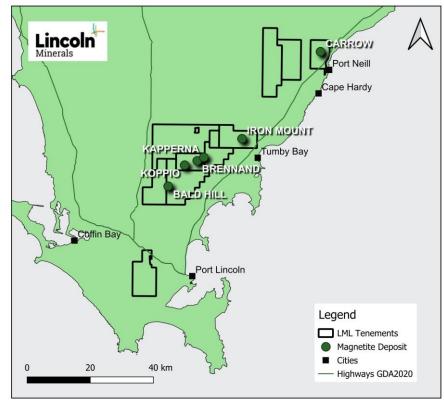
Source: Wood Mackenzie "Metalmorphosis": How decarbonisation is transforming the iron and steel industry



#### Lincoln Minerals' Green Iron Project, SA



- 1.1 billion tonne magnetite JORC Mineral Resource\* on SA's Eyre Peninsula
- Same geology as existing SIMEC magnetite concentrate operations nearby
- Lincoln inherited the project during an iron ore price decline, via the wind up of Chinese-backed steel mill joint venture
- With recovered iron ore prices and growing global green steel demand, Lincoln plans to optimise the project to produce high purity magnetite for Green Iron
- Lincoln can build on previous studies completed by \$75M joint venture
- Coarse grind size allows significant optimisation targeting ultra-high iron grade direct reduction concentrate (DRI), without the need for flotation
- Ideally located proximal to multiple port solutions
- Major existing transmission line directly through the project connecting to the high-renewable South Australian Grid
- Strong SA Government support as part of its Green Iron & Steel Strategy
- Aspiration of producing over 6 Mtpa concentrate in a phased development approach within ten years.



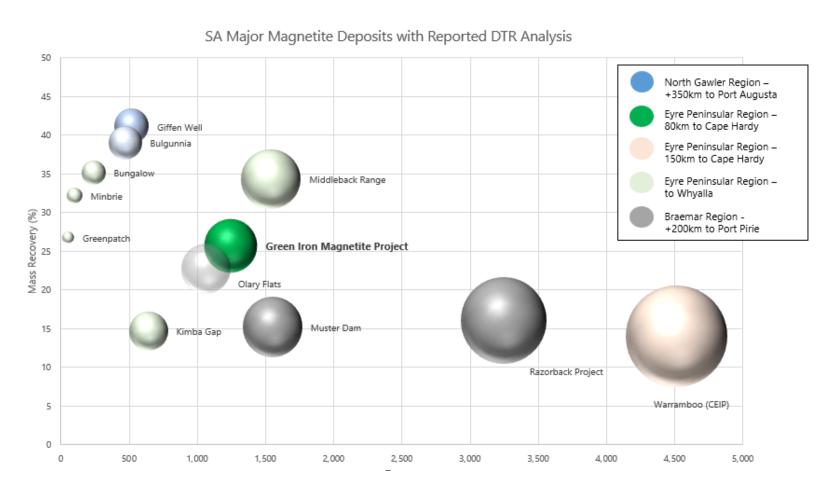
Overview of Lincoln's Green Iron Project tenements on the Eyre Peninsula, SA.

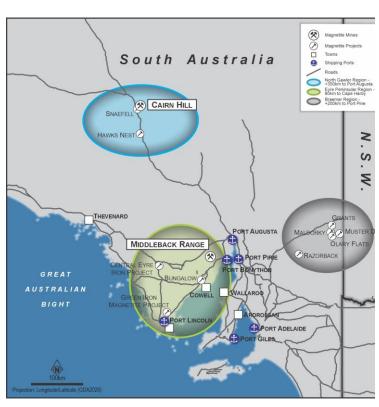


### SA's best undeveloped magnetite asset by grade, size and closeness to major infrastructure



#### Lincoln's Green Iron Project has clear advantages due to scale, grade and proximity to port





Groupings of magnetite resources in South Australia. The Middleback Range area (which hosts Lincoln's Green Iron Project) is considered the superior location for magnetite development.

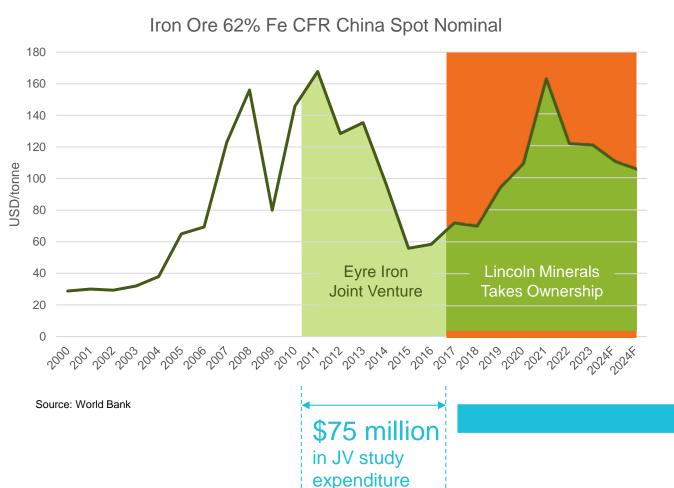


4 Source: Davies, M. and Twining, M. 2018. Magnetite: South Australia's resource potential, MESA Journal 86 2018 – Issue 1. The Mineral Resource information for Green Iron Magnetite Project on this slide is extracted from the report entitled" Magnetite: South Australia's resource potential, MESA Journal 86 2018 – Issue 1". Company data, as at May 2024. Note that deposits without reported mass recovery data, have not been included. The report can be viewed at https://www.energymining.sa.gov.au/\_\_data/assets/pdf\_file/0010/1017829/South-Australias-Green-iron-and-steel-strategy.pdf

#### **Green Iron Project History**



#### Reframing for a New Era & New Markets



- Centrex Metals Limited and Wuhan Iron and Steel Corp. (WISCO) signed Joint Venture in 2010
- Approximately \$75 million spent on development studies\*\* to produce standard magnetite pellet feed for WISCO's Chinese steel mills
- Funding advanced work until 2015, when iron ore price decline put the projects on hold
- Lincoln held non-ferrous mineral rights on the JV tenements and inherited magnetite rights when JV wound up in 2016
- With iron ore prices recovering, and a new global drive for magnetite to feed Green Iron demand, Lincoln has a new strategy to advance the project.

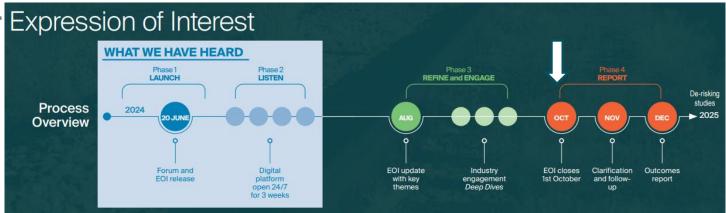


#### **Strong Government Support**



#### **South Australian Green Iron & Steel Strategy**

- South Australian Government aims to develop a local Green Iron & Steel industry, based on SA's unique competitive advantages:
  - Abundant and high-grade magnetite resources
  - Access to renewable energy
- Strategy aims to position South Australia as the partner of choice for decarbonised steelmaking and key contributor of minerals, Green Iron and Green Steel for the global energy transition with aims to:
  - Enhance South Australia's comparative advantage
  - Establish local green steel industry
  - Ensure a sustainable, long-term industry and shared prosperity
- SA Government EOI process at Phase 4; De-risking studies to commence shortly.



Strong Government backing aims to create a compelling investment environment for a SA Green Iron and Steel supply chain.

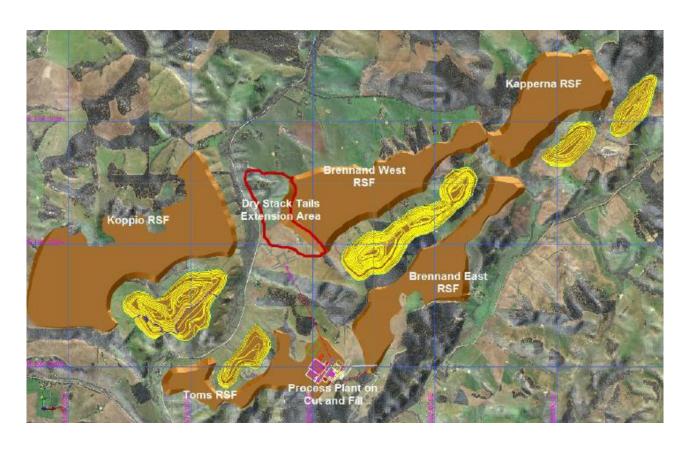
With supportive regulatory policy, funding assistance and fiscal support.



#### **Starting From an Advanced Base**



- Previous advanced studies on two projects, collectively known as the Fusion Project.
- Fusion Project Scoping Study competed in 2013, and significant advancement of Definitive Feasibility Studies (DFS)
- Trade-off studies completed for utilities, grinding, beneficiation, layout and overland haulage
- Bulk testwork underpinning design
- Carrow Project Prefeasibility Study completed in 2012
- Environmental Baselines undertaken on both projects
- All studies supported by respected consulting firms











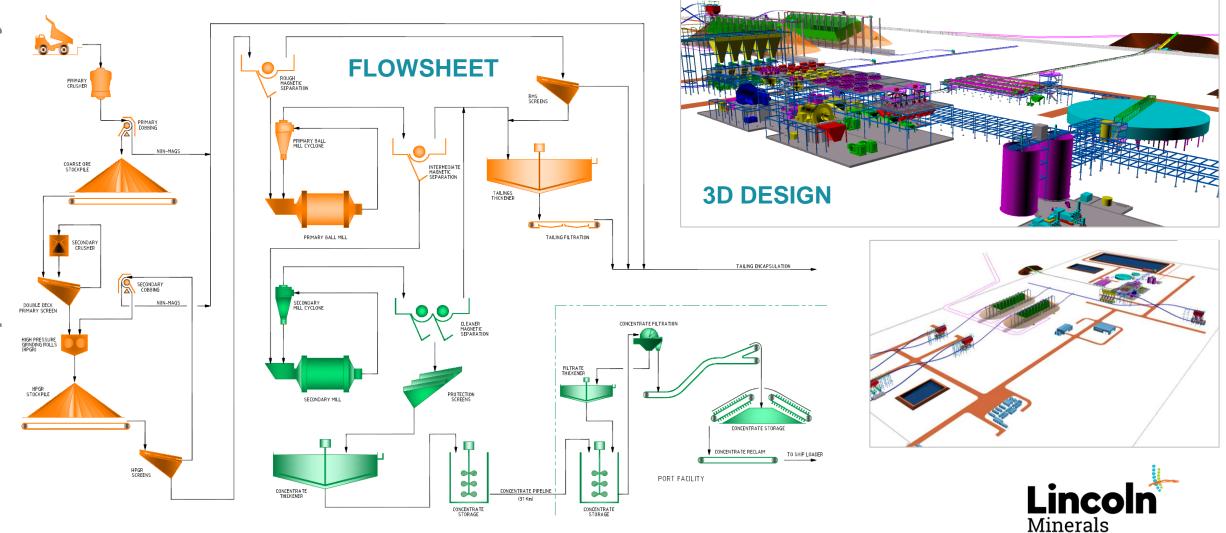






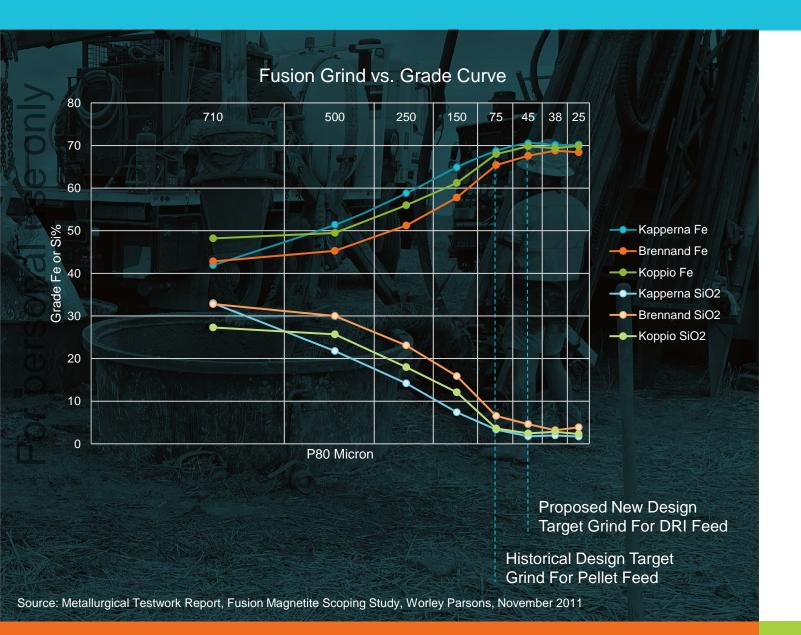


#### **Previous Concentrator Design**



#### Repositioned for a Green Iron market





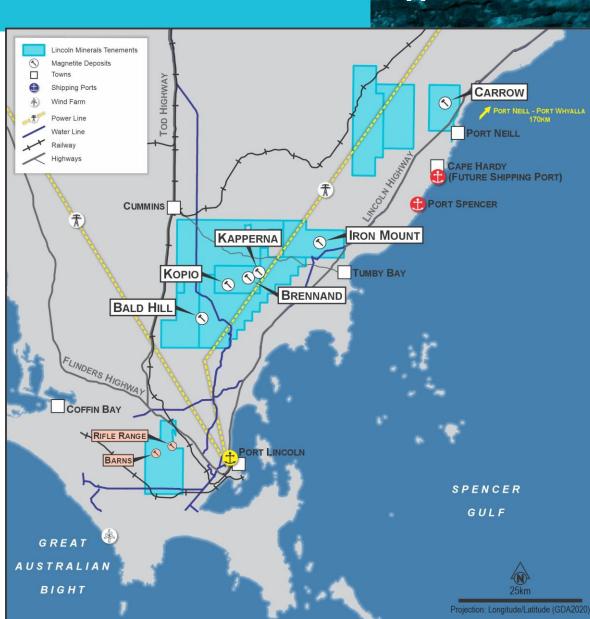
- Historical relatively coarse P80 grind of 75µm chosen to suit WISCO pellet feed needs
- Substantial optimisation potential exists to target a lower impurity Green Iron output
- Fusion test work indicates at a relatively standard grind of P80 45µm, a >69% Fe direct reduction iron (DRI) concentrate can be produced without flotation
- Low phosphorous (P) feed source a key feature for Green Iron production
- Various optimisation benefits possible at the proposed new target grind size
- Flotation can be considered for ultra high purity if required
- Positive results from dry magnetic cobbing testing prior to joint venture closure providing early rejection upside, reducing milling costs



#### **Infrastructure Advantages**

- Major logistics advantages over many regional iron ore projects
- Proximal to existing Port Lincoln bulk port plus two proposed bulk port developments
- Low-cost slurry pipeline ore transport, mirroring a proven solution already in place at SIMEC magnetite operations to the north
- Alternative existing rail connections linking into Port Lincoln
- New desalination plant being constructed at Port Lincoln, paving way for future coastal plants for project water supply
- Recently upgraded 132 Kv transmission line runs directly through the project, connecting to renewables-backed SA grid
- Access to "green" power for processing and reduced carbon footprint electrified mining solution
- Green Iron Project can produce a product suitable for Green Iron and Steel electric furnaces, meaning a low carbon solution throughout the supply chain is possible.





#### **A Conceptual Phased Development Approach**

1	ear ear	1	2	3	4	5	6	7
S	ecure Investment Partner							
F	usion Phase 1 (3Mtpa)							
	Gap Analysis & Scoping Study Update							
	Rapid PFS & Mining Lease							
	DFS							
	PEPR (Secondary Approvals)							
	Detailed Design							
	Construction							
	Commissioning							
F	usion Phase 2 Expansion (6 Mtpa)							
	PFS							
	DFS							
	Approvals Modification							
	Detailed Design							
	Construction							
	Commissioning							
-	Plus Carrow - Cape Hardy Option (3 Mtpa)							
Ľ	Gap Analysis and Scoping Study Update							
	Rapid PFS & Mining Lease							
	DFS							
	PEPR (Secondary Approvals)							
	Detailed Design							
	Construction							
	Commissioning							
	Commissioning							

- Phased development approach to optimise capital spend profile
- Ability to accelerate study phases given the extensive previous work on the projects
- Focus on Fusion, the largest of the Green Iron Project resource centers
- Initial Fusion Phase 1 aspirational target of 3 million tonnes per annum of DRI grade concentrate
- Fusion Phase 2 aims to nominally double the aspirational target output to 6mtpa
- Further upside potential development of Carrow to supply DRI feedstock to proposed 3<sup>rd</sup> party green furnace via Cape Hardy, which is located right next to the deposit.

#### **Precautionary Statement**

The announcement contains information regarding the project having an aspirational goal of producing up to 6Mtpa of magnetite concentrate. Until the previous studies are refreshed to reflect any changes in the project in relations to ESG and costs, this aspiration is speculative.



#### **Lincoln's Partnering Process**

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Lincoln has commenced its own Expressions of Interest (EOI) process to identify interested parties to advance its Green Iron Project through to production.

#### EOI process aims to:

- 1. Identify interest parties seeking to explore the development of Lincoln's Green Iron Project
- Identify the critical parameters that potential partners require to progress the project

- Lincoln is requesting potential EOI respondents prepare a written submission covering:
  - 1. Company information
  - Details of domestic or regional steel or green steel supply chain activities
  - 3. Plans for Australian green steel and iron supply chain investments and how Lincoln's Green Iron Project would align with those plans
  - 4. Indicative investment structure and amount
  - 5. Key areas of identified risks





#### **Fusion and Carrow Project – Appendix Mineral Resources Summary**



Deposit Name	JORC Classification	Tonnage (Mt)	Head Grade			Concentrate Grade	
			Fe (%)	SiO <sub>2</sub> (%)	DTR	Fe (%)	SiO <sub>2</sub> (%)
Bald Hills (JORC 2012)	Inferred	289.4	26.8	51.0	21.9	67.4	5.2
	Total Resources	289.4	26.8	51.0	21.9	67.4	5.2
Koppio (JORC 2004)	Measured	10.8	22.7	52.3	18.0	68.2	4.1
	Indicated	106.6	24.3	52.0	19.9	68.6	3.6
	Inferred	99.6	24.5	52.3	21.1	68.8	3.4
	Total Resources	217.0	24.3	52.1	20.4	68.7	3.5
Brennand (JORC 2004)	Indicated	155.8	24.2	50.8	18.8	67.8	4.5
	Inferred	110.4	24.6	50.2	18.0	67.2	4.9
	Total Resources	266.2	24.4	50.6	18.5	67.6	4.7
Kapperna (JORC 2004)	Indicated	38.5	29.7	43.1	35.1	69.9	2.2
	Inferred	23.3	29.7	43.8	32.8	68.9	3.3
	Total Resources	61.8	29.7	43.3	34.3	69.5	2.6
Iron Mount (JORC 2004)	Inferred	135.0	25.5	36.7	29.3	62.1	9.1
	Total Resources	135.0	25.5	36.7	29.3	62.1	9.1
Carrow (JORC 2004)	Indicated	72.4	27.3	40.1	28.7	68.5	3.3
	Inferred	86.8	27.2	41.6	27.0	65.4	6.7
	Total Resources	159.2	27.2	41.0	27.8	66.9	5.2
Combined	Total Resources	1128.6	25.8	47.6	23.2	67.1	5.1

#### Large, high-quality resource

- Lincoln's Green Iron Project boasts a large, high quality magnetite resource
- In-situ grades compare favourably with global magnetite resources

#### **Concentrate Grades**

- Concentrate grades demonstrate very good upgradeability
- Previous studies optimised for blast furnace feed based on specific customer requirement at the time
- Trade-off studies show the ability to either do a coarse grind size for blast smelter or a finer grind for DRI to further reduce silica

#### **Drill spacing supporting classification**

Measured: 75m x 75m
 Indicated: 75m x 150m
 Inferred: 75m x 350m



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