



IRON ORE LIMITED

An NMDC Company

ASX Announcement  
6 September 2021

## About Legacy Iron Ore

Legacy Iron Ore Limited ("Legacy Iron" or the "Company") is a Western Australian based Company, focused on iron ore, base metals, tungsten and gold development and mineral discovery.

Legacy Iron's mission is to increase shareholder wealth through capital growth, created via the discovery, development and operation of profitable mining assets.

The Company was listed on the Australian Securities Exchange on 8 July 2008. Since then, Legacy Iron has had a number of iron ore and gold discoveries which are now undergoing drilling and resource definition.

### Board

**Mr Sumit Deb**, Non-Executive Chairman  
**Mr Rakesh Gupta**, Chief Executive Officer and board member  
**Mr Devanathan Ramachandran**, Non-Executive Director  
**Mr Amitava Mukherjee**, Non-Executive Director  
**Mr Alok Kumar Mehta**, Non-Executive Director

**Ben Donovan**, Company Secretary

### Key Projects

Mt Bevan Iron Ore Project  
South Laverton Gold Project  
East Kimberley Gold, Base Metals and REE Project

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ASX Market Announcements  
ASX Limited  
Via E Lodgement

## POSITIVE OUTCOME FROM ONGOING STUDIES AT MT CELIA

### Highlights include:

- Mt Celia Mining Study concludes positive cashflow model for a 0.3 Mtpa (3-year schedule) toll treating arrangement.
- Mt Celia project's current total 2012 JORC Mineral Resource, of 6.96 Mt @ 1.38 g/t Au, (309,200 oz contained Au metal)\* was optimised at the gold price of AUD A\$2,300/oz.
- The Mt Celia Mining Study carried out by AMC Consultants Pty Ltd (AMC) confirms that the Mt Celia project has potential to be a technically and economically viable project through a toll treating option.
- Additional work will be undertaken to confirm the findings of the Mt Celia Mining Study, such as detailed CAPEX and OPEX estimates and firming up toll treating arrangements.
- A pre-feasibility study (PFS) is currently underway and will be completed by November 2021.
- The Company is working towards obtaining statutory approvals to commence mining operation.
- Discussions have commenced with processing plant operators in the area for toll treatment arrangements.

\* See ASX announcement dated 28th July 2021

Legacy Iron Ore Limited (Legacy Iron or the Company) is pleased to announce that it has taken the next step in its aspiration to be a gold producer following encouraging results from Mining Studies completed at the Mt Celia project (Figure 1).

The Company has a current 2012 JORC Mineral Resource estimate, at the Mt Celia Project (Kangaroo Bore and Blue Peter deposits) as shown in Table 1 and Figure 1:

Table1: Current Mineral Resource at Mt Celia as of July 2021 \*

Classification	Tonnage (Mt)	Grade (g/t Au)	Metal (oz)
Indicated	3.344	1.44	155,300
Inferred	3.616	1.32	153,900
Total	6.960	1.38	309,200

(\* See ASX announcement dated 28th July 2021 for full details)

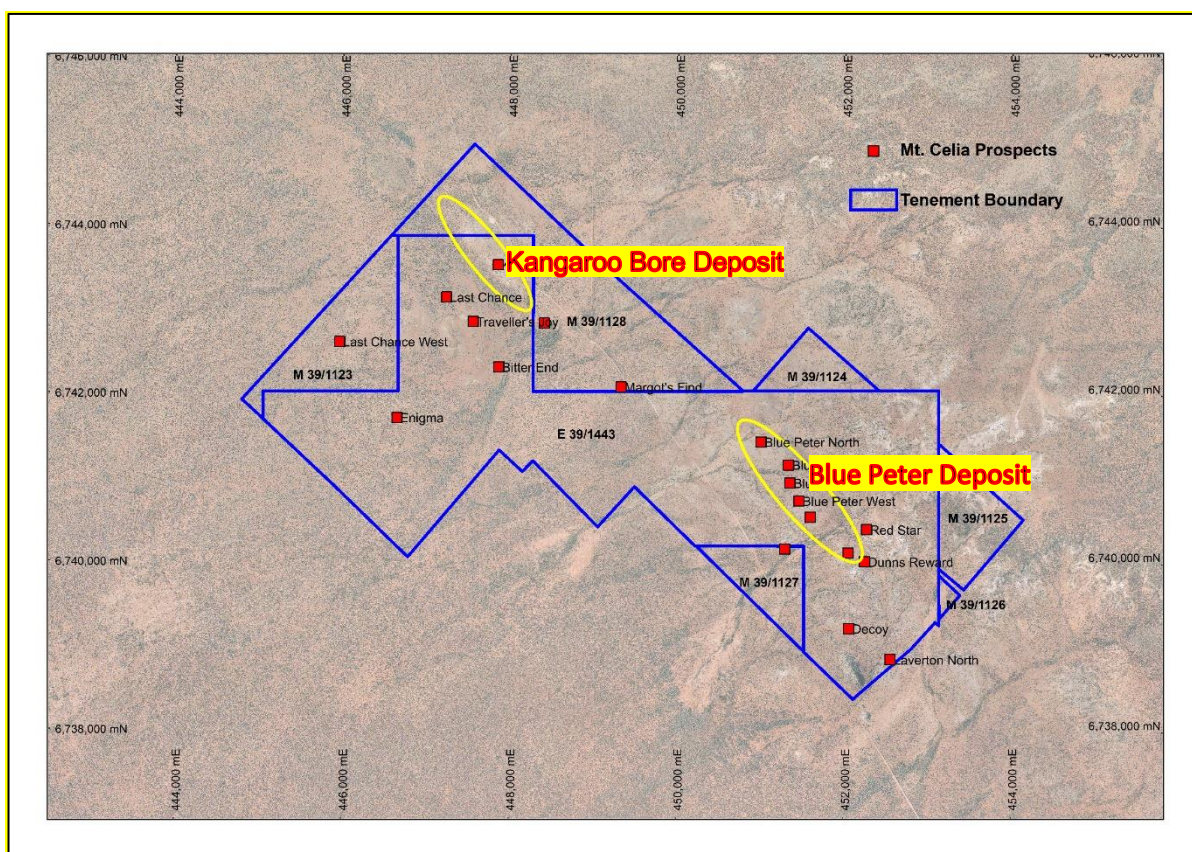


Figure 1: Mt Celia Project- Aerial image showing various prospect locations including Kangaroo Bore and Blue Peter

Using the current Mineral Resources, AMC carried out geotechnical and hydrogeological analysis, dilution modelling, pit optimization, mine design, mine scheduling and economic evaluation\*\* to investigate the mining potential at the Mt Celia Project and the potential for economic cashflow. (\*\* see assumptions in Table 2)

### **Pit Optimisation**

The Mining Study undertaken by AMC used Whittle Four-X software and was completed using the Total Mineral Resource (see Table 1) and a base case gold price of A\$2300/oz.

AMC prepared models by adding cost, recovery, royalty and revenue drivers to individual blocks within the models using Datamine macros. The resource model was regularized to account for dilution and ore loss expected during mining operations. Royalties, administration charges, ore processing costs and other ore related costs were all aggregated to create a total ore related cost which was assigned to ore blocks. Mining costs common to all material types were assigned to all model blocks.

AMC applied mining cost parameters based on similar sized operations in the region from AMC's database. See Annexure 1 for assumptions.

All parameters used were in the normally acceptable range of costs of similar mining operations. Whittle Four-X pit optimization software was used to determine economic limits for open pit mining from the resource model, geotechnical model, operating costs, metal price and metal recovery.

A family of pit shells is generated using different metal prices, as a revenue factor (RF) of input metal price, to determine the ore and waste tonnes to achieve the maximum undiscounted operating cost surplus for that metal price.

### **Study Results**

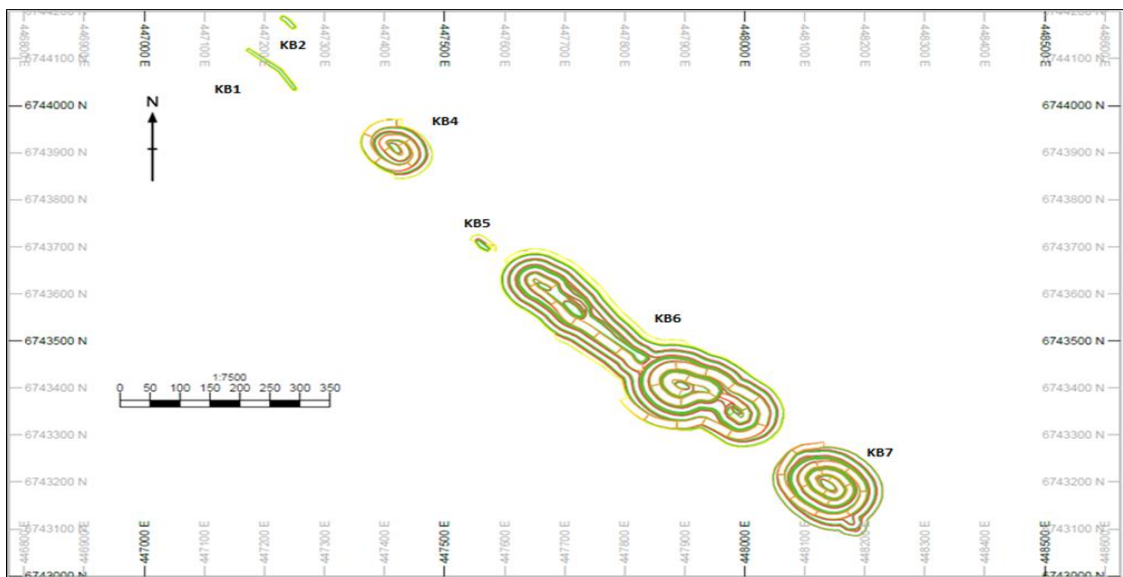
The results from the Mt Celia Mining Study are encouraging, for both the Kangaroo Bore and Blue Peter deposits and provide the Company with confidence of project economics moving forward.

Nested pit shells were generated at varying metal prices and evaluated at the base case metal price. Pit shells that provided a reasonable balance between value and mine life were selected as the basis for pit design for both the Blue Peter and the Kangaroo Bore deposits. Legacy Iron notes that there is potential for a smaller pit shell to provide a stronger positive

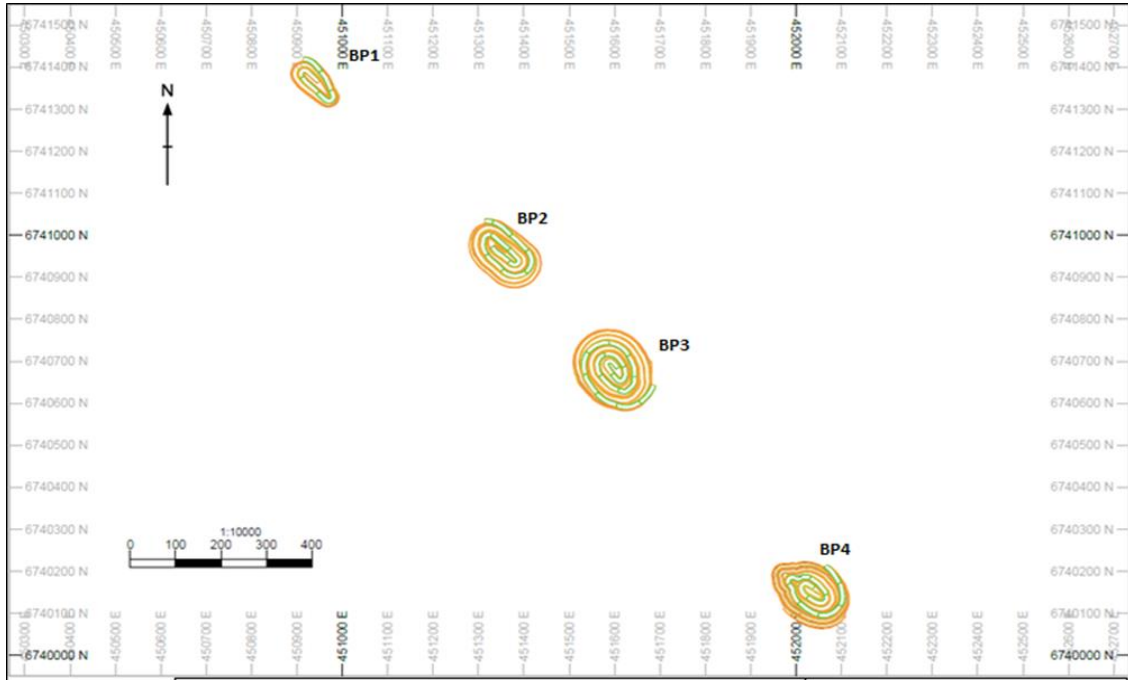
outcome. The study concluded that Mt Celia is cash flow positive for a 0.3 Mtpa (3 years schedule) toll treatment operation.

A number of open pit design options were undertaken, assuming either toll treatment or a new mill arrangement, as a basis for mine schedule optimization and evaluation. A toll treatment arrangement is the Company's preferred strategy from the schedule optimization and evaluation. The Company is currently in discussions with mill owners in the area.

A plan view of the designed pits for the toll treatment option is shown in Figure 2 and 3 below.



**Figure 2: Mt Celia Gold Project – Plan View of the Kangaroo Bore toll treatment pit.**



**Figure 3: Mt Celia Gold Project – Plan View of the Blue Peter toll treatment pit.**

### **Next Steps**

The Company has already taken steps to convert the Exploration Licence associated with the Mt Celia project into a mining lease and aims to progress towards mine development.

Other major steps for the development of the project are:

- Incorporate new drilling in the current resource model to identify higher grade near surface zones.
- Additional metallurgical data for mill and heap leach to support future studies.
- Finalising infrastructure requirements and capital costs.
- Finalise toll treatment options, potential throughput tonnes, and costs from potential toll treatment providers.
- Explore shared mill arrangements to reduce new mill capital requirements.

Commenting on the study results, Chief Executive Officer Rakesh Gupta said, “*The Company has been progressing the Mt Celia project with the view to develop an*

*economically viable project. These study results are the next step on that path and provide the Company with significant encouragement to move towards mining.”*

Yours faithfully,

Rakesh Gupta

Chief Executive Officer

**Competent Person’s Statement**

*The information in this statement that relates to the Mineral Resource estimates is based on work done by Andrew Hawker of HGS Australia Pty Ltd. Mr Hawker is a Member of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation or type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 edition). Mr Hawker consents to the inclusion in this report of the matters based on his information in the form and the context in which it appears.*

*The information in this statement that relates to the Mt Celia Mining Study estimate is based on work managed by AMC Consultants Pty Ltd.*

**ASX Listing rule disclosure**

*In accordance with ASX Listing Rule 5.23.2, Legacy Iron confirms that it is not aware of any new information or data that materially affects the information included in the 28<sup>th</sup> July 2021 market announcement referred to above, and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in that announcement continue to apply and have not materially changed.*

*Legacy Iron acknowledges that there is a low level of confidence associated with inferred resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources. Any production target is based on the Company’s current expectations of future results or events and should not be solely relied upon by investors when making investment decisions. Further evaluation work and appropriate studies are required to establish sufficient confidence that any target will be met.*

## Annexure 1

Table 2: A summary of the key input parameters, assumptions, and results\*\*

Key Area	Item	Details
<b>Metal Price</b>	Gold price (AU\$/oz)	2300
<b>Mining</b>	Method	Conventional excavator and truck
	Mining dilution (%) *	6% of tonnes
	Ore loss (%) *	17% of tonnes
	Strip ratio (Kangaroo Bore)	Less than 11
	Strip ratio (Blue Peter)	Less than 21
	Pit slope angle (degrees) of Kangaroo Bore and Blue Peter	70-degree batter angle 5.0-8.5m berms
	Overall angle (degrees) of Kangaroo Bore and Blue Peter	With Ramps, 38 degrees in oxide and 41 degrees in fresh
<b>Processing</b>	Process	Carbon in Leach plant
	Method	Toll treated, \$60/tonne
	Gold recovery (%)	92 to 96%
<b>Royalty</b>	Gold royalty (%)	2.5

Note: Where an item contains an Asterix (\*) these parameters are an outcome of a model regularization process.

All other items are conventional items and methods used in gold mining and industry standards.