



## HAWSONS IRON: COMPANY UPDATE

November 16, 2021

The Companies Officer  
Australian Securities Exchange Ltd  
20 Bridge Street  
SYDNEY NSW 2000

Dear Madam or Sir

### PRESENTATION – ANNUAL GENERAL MEETING 2021

Hawsons Iron Ltd (ASX: HIO) advises that Executive Chairman, Bryan Granzien is addressing shareholders at the Annual General Meeting (AGM) at 11am AEST today. The AGM will be webcast at <https://agmlive.link/HIO21> and a copy of the presentation is attached.

Yours sincerely

Hawsons Iron Ltd

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Authorised by Greg Khan Company Secretary

**Released by authority of the Board**  
Hawsons Iron Limited



**HAWSONS IRON LIMITED  
ANNUAL GENERAL MEETING  
OF SHAREHOLDERS**  
**Tuesday, 16 November 2021 at 11:00am**

**CHAIRMAN'S ADDRESS:**

**Company Update by Executive Chairman, Mr Bryan Granzien**

Hawsons Iron is an emerging producer of low cost, premium quality iron ore.

Today I look forward to sharing highlights of last financial year, the achievements to date in FY 22, our unique project, and the outlook for your company.

**FY21 Overview and Highlights**

During FY 21, the Company's focus was on consolidating the Hawsons Iron Project ownership structure following shareholder approval at the last AGM. Hawsons now holds approx. 94% of the Hawsons Iron Project.

Further, the Board was restructured and stabilised under my stewardship as Executive Chairman and the Board skillset and experience enhanced with highly qualified non-Executive Director Jon Parker joining the Board.

Through these changes the path has been cleared to execute our Strategic Plan.

## FY22 Highlights

Moving to Q1 22, The Hawsons Iron Project Bankable Feasibility Study (BFS) was fully funded through a fully underwritten recent capital raise of \$35.6million (before costs). This has delivered the financial resources to undertake the BFS which is targeted for completion in December 2022.

We also took the opportunity to refocus and reinvigorate the company with a new brand: Hawsons Iron. Its fresh green colour palette signifies the “Green Steel” space in which we operate. We now have the platform to significantly enhance our profile and tell the Hawsons’ story.

In this financial year, post Q1, we were pleased to announce the Mineral Resource Upgrade for the project.

The upgrade included a 9% increase in the indicated resources and an 18% increase in the inferred resources.

At the same time, the Mining Study Findings confirmed the outer boundary of the total resource hasn’t yet been fully identified and that the economic pit shell is significantly larger than the one that was used in the Prefeasibility Study 2017.

The life of mine tonnages will therefore increase further with the planned resource extension drilling.

This is excellent news for the project.

## What Makes the Hawsons Iron Project Unique?

During the BFS we have the opportunity to showcase the Hawsons Iron Project.

The story of the project has not been fully told, but the time is now right to shine a light on its unique attributes.

### ***World-Leading Project***

Firstly, leading research firm Wood Mackenzie in Q2 FY2019 rated the project one of the world's best high-grade iron ore development projects - excluding replacement or expansion projects owned by the established miners.

### ***Economically Viable***

Secondly, our project is economically viable, able to withstand the vagaries and volatility of the iron ore price cycle. We have modelled our project at various iron ore price points.

### ***Purest, High Iron Product***

Our product is the purest, high iron content product for quality steel-making. With 70% iron content it really is Supergrade® quality. No-one else in the world has that.

Our Hawsons Supergrade® Product will attract a premium price. While the price may fluctuate, the premium will remain.

### ***Category Creator: Soft Ore***

Importantly, not all ores are created equal. We are very fortunate to own this unique orebody. It is unique due to how it was formed and its 'soft' characteristics.

Thousands of years ago when the Hawsons orebody was formed, it was deposited in a soft siltstone - a fine grained silt in the sea.

The Pilbara orebodies by comparison were deposited in silica which is a glass-like rock called "chert" which is very hard.

Subjected to low grade metamorphism – or heat and pressure - the Hawsons' orebody has, over time, converted its clays within to silicate minerals without hardening the rock.

So technically speaking, the siltstone will break around the grain boundaries, rather than through the magnetite mineral grains.

And when it is crushed it “liberates” or “fractures” along the grain boundaries.

When crushed and ground to 40 microns, the magnetite is observed in its crystalline state.

This is unusual in a processed magnetite concentrate.

There are some clear advantages that come from the softness of the orebody and these inherent characteristics.

Number 1: significantly lower energy is required to crush and grind the ore to extract the magnetite concentrate.

Number 2: A higher grade of magnetite can be achieved because the ore breaks cleanly around the grain boundaries, easily separating from impurities.

Number 3: Less water is consumed during processing due to the ‘dryer’ nature of our product. With an absence of clay in the orebody, it is easier to recover and recycle water used in processing and slurry transport.

The origins and characteristics of the Hawsons orebody really do put it in a category of its own and quite distinct from ‘hard rock’ magnetite orebodies.

### ***ESG and Green Steel Leader***

We also have the opportunity, through our unique orebody, to lead the way with lowest energy usage and CO<sub>2</sub> emissions in the iron-making process.

Our high purity, high iron magnetite concentrate is ideally suited to Direct Reduced Iron (DRI) and Hydrogen steel manufacturers at the cutting edge of low-to-no-carbon emission steel production or “Green Steel”.

The Hawsons Supergrade® Product is one of the best iron ore products in the world within the ESG framework.

The power required to crush and grind Hawsons soft ore is less than a quarter of any other magnetite ore, based on energy per tonne of ore.

Through phased and innovative planning, we can achieve zero emissions in mining and processing at Hawsons.

We share the long-term vision for the Broken Hill area as a renewable energy hub. We are planning to contribute to energy storage and assist with water resources for best-practice energy and water sustainability. For example, as pits are mined, additional pumped hydroelectric energy storage can be installed.

We will use a slurry pipeline for transporting the product using water supplied by desalination - removing salt from seeping into the Murray River. Solar power water supply pumps can deliver the saline water to the site. We plan to run the site on existing Broken Hill solar and wind generation, mostly during daylight and base load.

We will investigate battery-powered mine haulage truck alternatives and mass energy storage including battery storage and pumped hydroelectric storage from mined pits.

Importantly, we must deliver a safe and supportive workplace and take a sustainable approach to the environment and society so our communities benefit from our success.

We believe this approach to Environmental, Social and Governance is not only good for our people, communities, and the future, but also good for shareholders.

***High Grade Demand***

Finally, the demand for high grade ores will continue to be strong with robust DRI growth forecast to 2040, placing us at the forefront for supply negotiations.

World crude steel production for the 64 countries reporting to the World Steel Association was 167.9 million tonnes (Mt) in June 2021, an 11.6% increase compared to June 2020.

***Outlook and Timeline***

We are advancing our BFS schedule with a skilled team in place.

We are extremely excited by the commencement of drilling works, the recent Mineral Resource Upgrade and the opportunities emerging in taking the project into production.

Our schedule currently targets start-up production of 10 million tonnes per annum in 2024 and we think that's achievable.

We really have a very significant asset base, in an ideal position near Broken Hill, with access to key existing infrastructure.

And as I have outlined, our uniquely soft and high-quality product is in high demand, ideally positioning us to lead the way in ESG innovation, "Green Steel" enabling and unlocking shareholder value.

Thank you.



**Hawsons IRON**

WORLD'S BEST IRON ORE PRODUCT

16 November 2021

Annual General Meeting



Hawsons Supergrade® Iron Ore

[www.hawsons.com.au](http://www.hawsons.com.au)

# **Hawsons Iron Limited (ASX : HIO) Annual General Meeting**



1. FY21 Overview and Highlights
2. FY22 Q1 Highlights
3. What makes the Hawsons Iron Project unique?
4. Outlook



## FY 21 Highlights - Restructured to Unlock Value

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- + Consolidation of Hawsons Iron Project ownership
- + Board Leadership restructure
- + Clear Strategic Direction



- + Delivered the full financial resources for the Project's Bankable Feasibility Study (BFS)
  - + Fully underwritten placement, private placement and an entitlements offer to shareholders
  - + Raised \$35,596,844 (before costs)
  - + Cash at bank as of 30 September 2021 of A\$33.96m

### BFS Highlights

- NSW Resources regulator approval to commence confirmatory drilling program to further define the resource
- Appointment of consultants and contractors including specialist geological and mining consultants
- Assembly of a highly skilled and experienced Project team
- Undertook detailed analysis and modelling of future pit optimization
- Progressed selection for preferred end users, offtakers
- Commenced Pilot plant preparation work and process review
- Began detailed analysis of the potential of new technologies to produce a low carbon concentrate and reduce operating costs
- Target date for BFS completion is 31 December 2022

## FY 22 Q1 Highlights

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### + Re-invigorated with new brand

- Re-branded from Carpentaria Resources Limited (ASX: CAP) to Hawsons Iron Limited (ASX: HIO), August 2021 to reflect new direction
- Plan to significantly enhance profile and tell the Hawsons' story



## FY 22 Highlights

### + Announced JORC Mineral Resource Upgrade\*

- + 9% increase in indicated resource to 132Mt
- + 18% increase in Inferred resources to 2,100Mt

#### Mineral Resource

Category	Mt	DTR %	DTR Concentrate Mt
Indicated	960	13.7	132
Inferred	2,100	12.9	268
<b>Total</b>	<b>3,060</b>	<b>13.1</b>	<b>400</b>

#### Current Concentrate Grades

Category	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	S %	P %	LOI %
Indicated	69.9	2.6	0.19	0.002	0.003	-3.0
Inferred	69.7	2.8	0.20	0.003	0.004	-3.1
<b>Total</b>	<b>69.8</b>	<b>2.8</b>	<b>0.20</b>	<b>0.003</b>	<b>0.004</b>	<b>-3.0</b>

Source: Hawsons Iron (ASX:HIO) ASX Announcement 19 October 2021

"Hawsons Iron: Mineral Resource Upgrade"

"Updated Mineral Resource Estimates  
for the Hawsons Magnetite Project, Western NSW", H&S Consultants Pty Ltd 2021

\*post 30 September 2021

## What Makes Hawsons Iron Project Unique?

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World-Leading  
Project

Economically Viable

Purest, High Iron  
Product

Category Creator:  
Soft Ore

ESG and Green Steel  
Leader

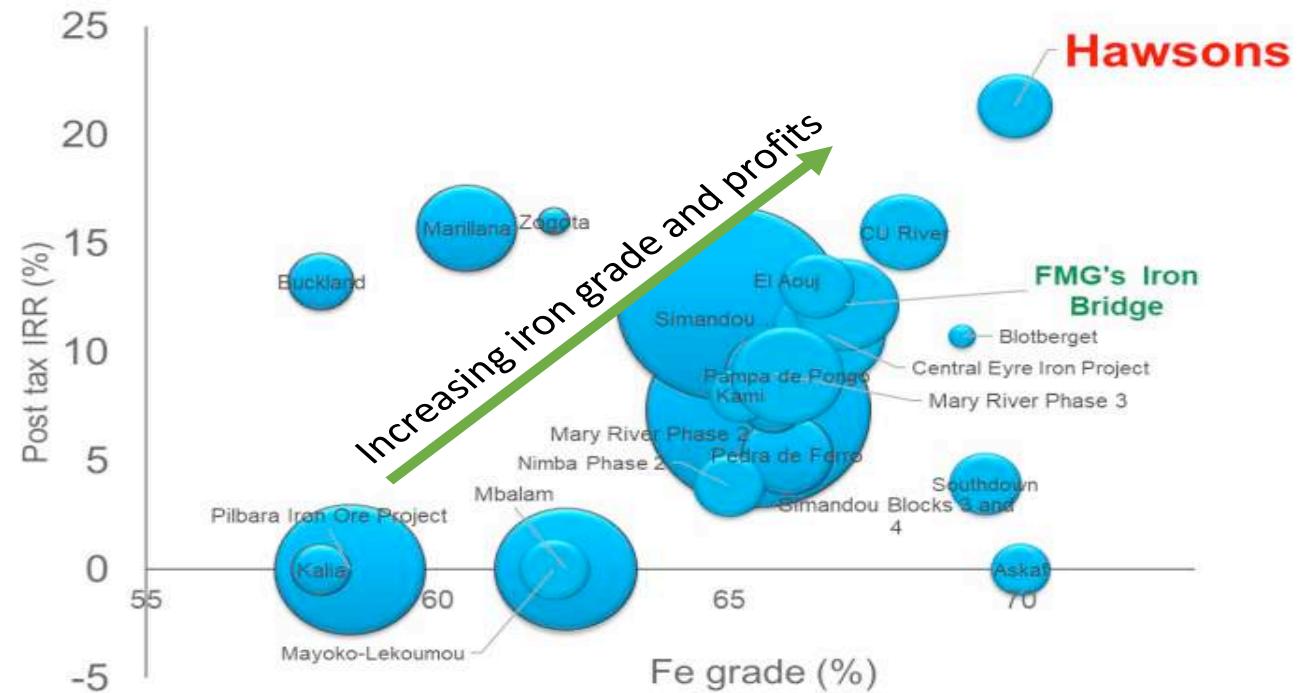
High Grade Demand

# What Makes Hawsons Iron Project Unique?

## World-Leading Project

- + Highest project viability of its type (Wood Mackenzie analysis)
- + Equity NPV at PFS (price US\$88/t) US\$1.091b at 62% grade price – payback within 3 to 4 years
- + NPV at June 2021 iron ore prices is significantly enhanced

IRR and product grades for unfinanced greenfield iron ore projects - PFS stage or later



All projects except Hawsons at BFS stage . Hawsons at PFS stage

\*Assumes that Hawsons is in production and the outcomes are as set out in the prefeasibility study announced on 28 July 2017. The Company confirms that all assumptions and technical parameters underpinning the Resource and Reserve estimates and all material assumptions underpinning the production target or the forecast financial information derived therefrom continue to apply and have not materially changed since first reported on 28 July 2017.

\*Bubble size represents annual production capacity

\*Excludes replacement or expansion projects owned by established miners RIO, BHP, CSN, FMG, Champion

\*Based on Wood Mackenzie long term price forecasts

Source: Wood Mackenzie (developed from company's stock exchange compliant releases, modified uniformly by Wood Mackenzie by internal long term price and cost forecasts, Wood Mackenzie is not aware of any material omissions in the data) Disclaimer. The data and information provided by Wood Mackenzie should not be interpreted as advice and you should not rely on it for any purpose. You may not copy or use this data and information except as expressly permitted by Wood Mackenzie in writing. To the fullest extent permitted by law.

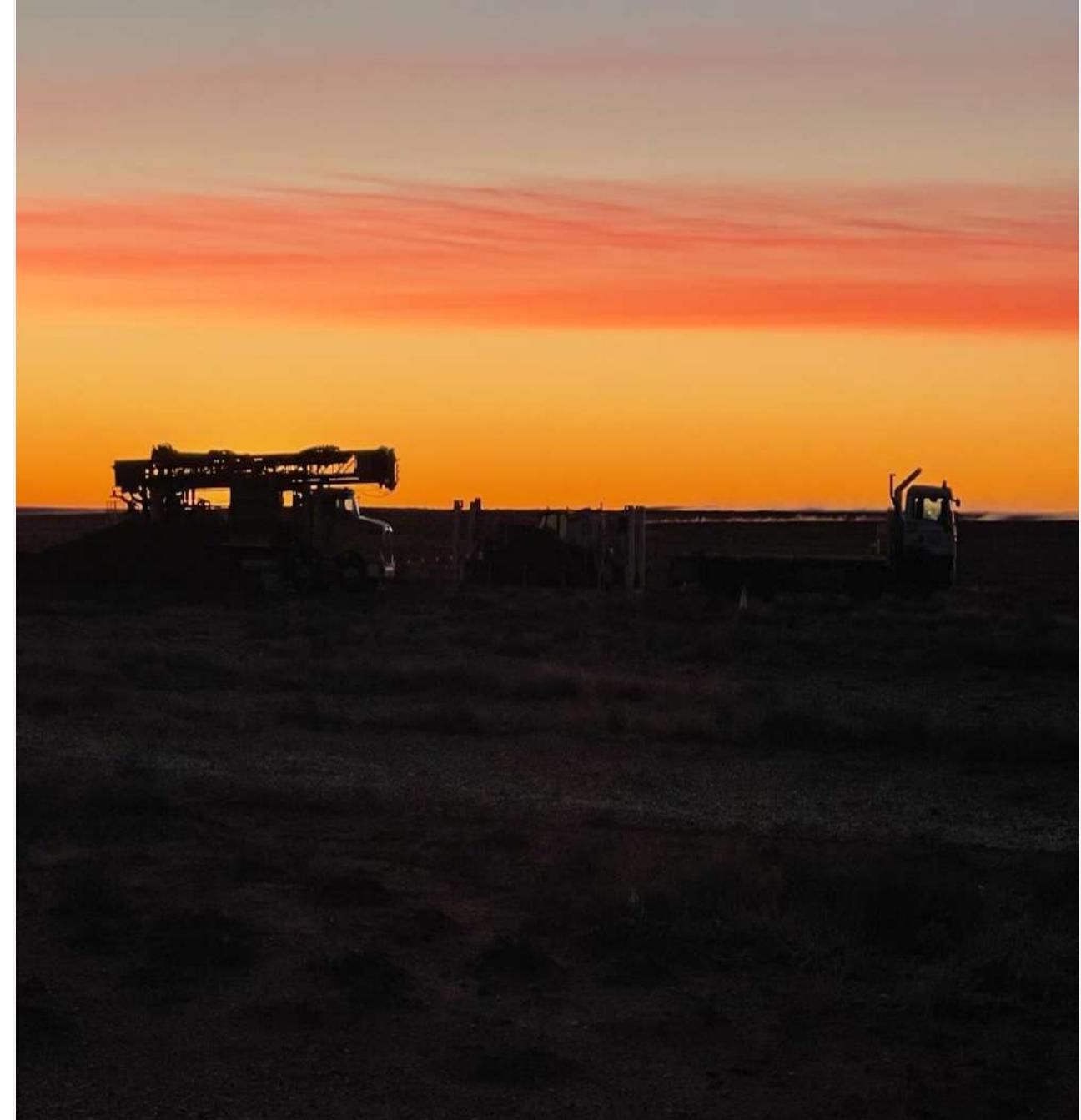
Source: Wood Mackenzie Q3 2020 data

## What Makes Hawsons Iron Project Unique?

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### Economically Viable

- + Viable at all points of iron ore price cycle
- + Robust financial model withstands price volatility



## What Makes Hawsons Iron Project Unique?

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### Purest, High Iron Product

- + Highest iron content iron ore
- + 70% Fe, <3% (silica + alumina)
- + Low impurities delivers high quality steel product

### Current Concentrate Grades

Category	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	S %	P %	LOI %
Indicated	69.9	2.6	0.19	0.002	0.003	-3.0
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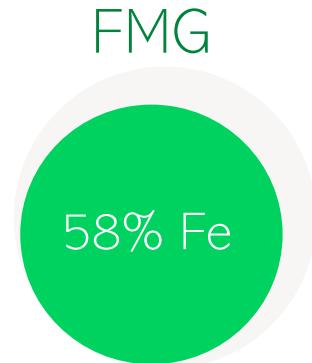
Source: "Updated Mineral Resource Estimates  
for the Hawsons Magnetite Project, Western NSW",  
H&S Consultants Pty Ltd 2021

## What Makes Hawsons Iron Project Unique?

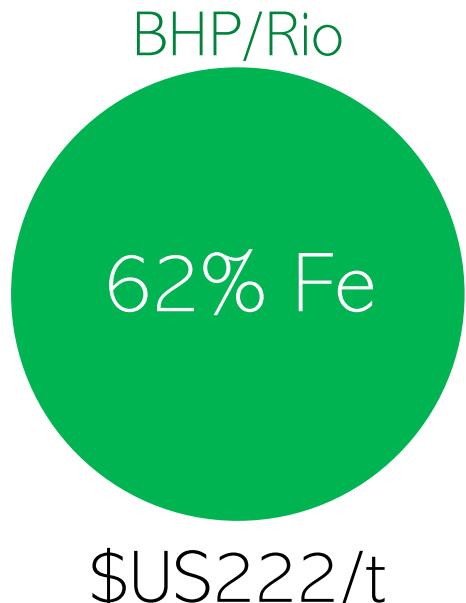
### Purest, High Iron Product

- + HIO Supergrade® (70%) Iron attracts price premium

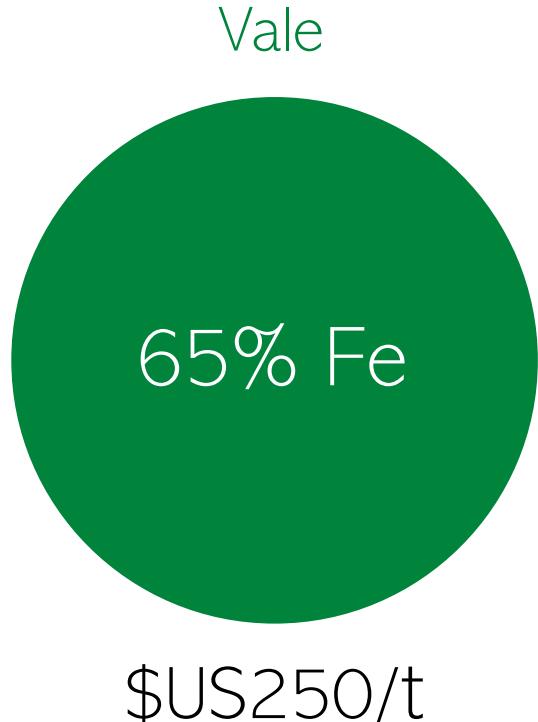
Source: Platts 15 June 2021



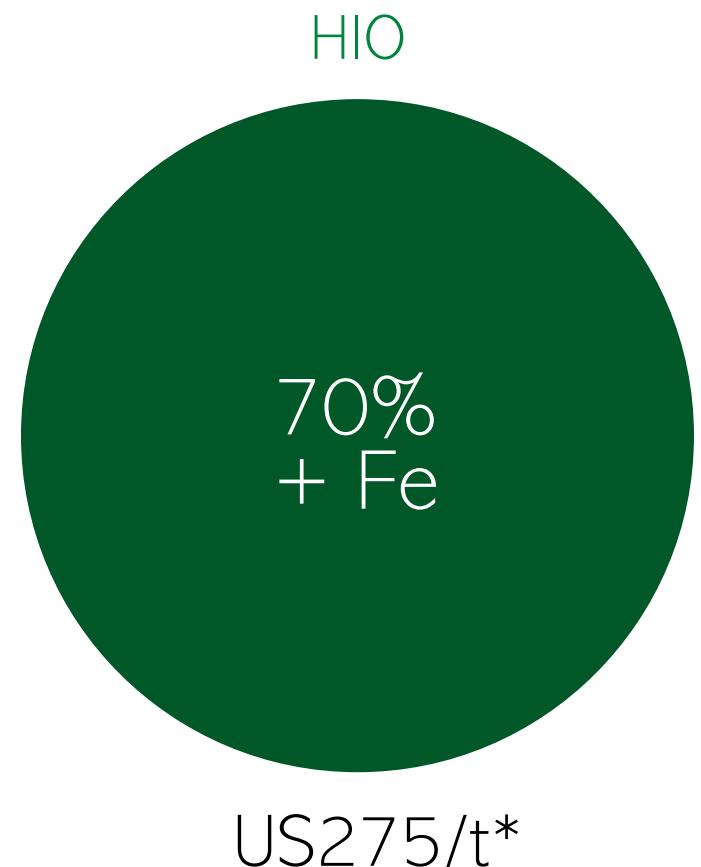
\$US164/t



\$US222/t



\$US250/t



US275/t\*

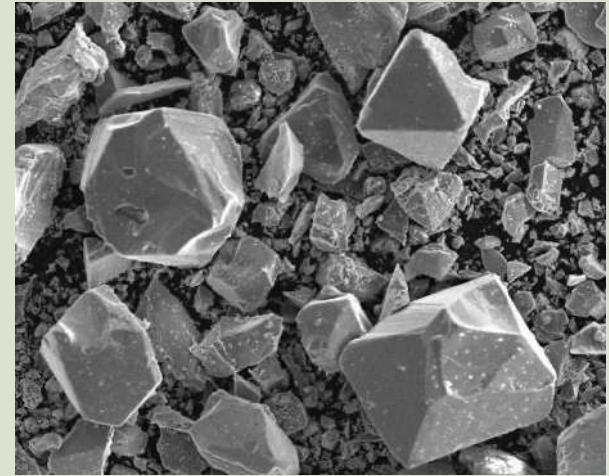
\$US250/t 65%Fe Plus 5 x \$3.65 %Fe + \$7.5 = \$US275.75/t

## What Makes Hawsons Iron Unique?

### Category Creator: Soft Ore

- + HIO ore body deposited in a soft siltstone (a fine-grained silt in a sea) – Soft Ore
- + Unlike Pilbara ore bodies deposited in hard silica (a glass-like rock called “chert”)
- + Subjected to low grade metamorphism (heat and pressure) which converted clays to silicate minerals
- + Breaks around the grain boundaries, rather than through the magnetite mineral grains
- + Significantly less energy used to crush and grind to extract the magnetite concentrate vs traditional ‘hard rock’ magnetite
- + Less water consumed during processing due to absence of clay in the ore body

Not all ores  
created equal



When HIO ore is crushed and ground to 40 microns, the magnetite is seen in its crystalline state.

It “liberates” along the grain boundaries and forms as 3-dimensional crystals.

## What Makes Hawsons Iron Unique?

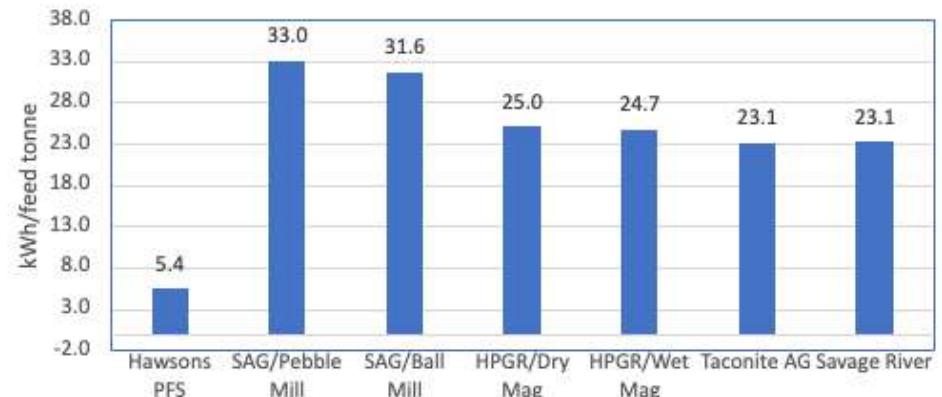
### ESG & Green Steel Leader

- + Global steel-making industry drive for 'green steel' to curb emissions
- + Hawsons Iron Project will lead with lowest energy usage and CO<sub>2</sub> emissions through the value chain
  - + Energy-saving in crushing and grinding
  - + Water-saving processing
  - + Less power per tonne of concentrate produced
- + Essential in steel manufacturing using hydrogen

Hawsons Iron will secure a unique position in the carbon-conscious global steel industry



Comparison of BIF Comminution Power with Hawsons



Based on McNabb et al, Iron Ore 2009, Hawsons PFS and Web based Taconite operating data.

## What Makes Hawsons Iron Unique?

### ESG & Green Steel Leader

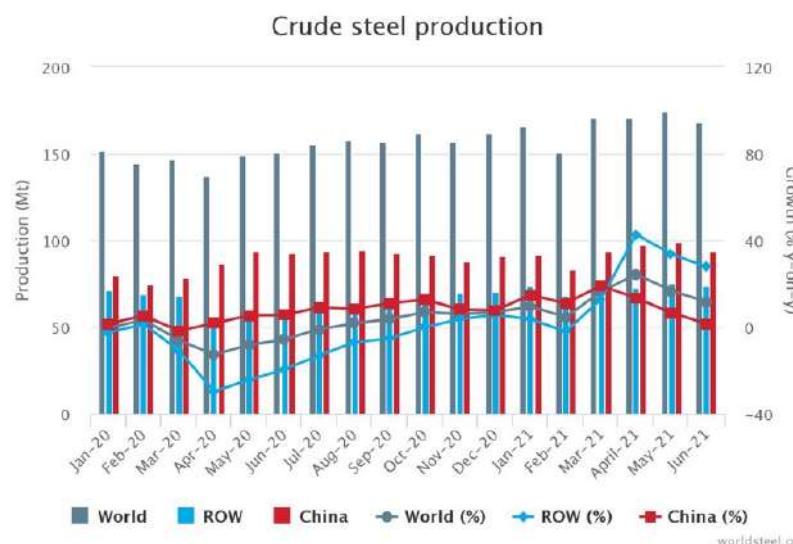
- + Innovative mining and processing operation plan for zero emissions
- + Vision for Broken Hill renewable energy hub
- + Contribute energy storage and water sustainability
- + Run site on solar and wind generation + battery power and storage
- + Deliver a safe and supportive workplace
- + Sustainable approach to environment and society so our communities benefit from our success



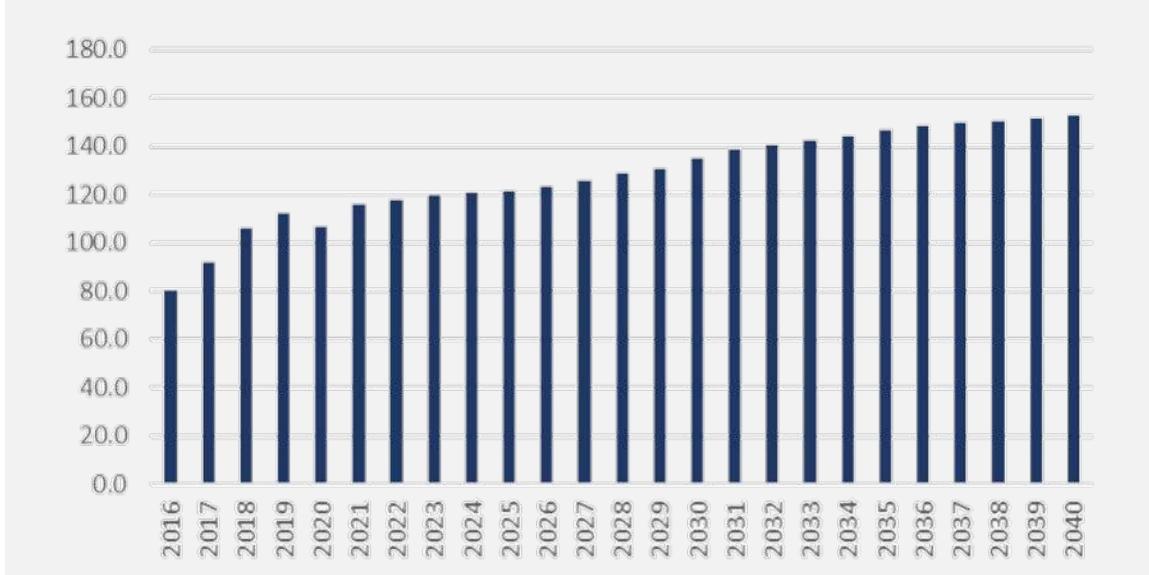
## What Makes Hawsons Iron Project Unique?

### High Grade Demand

- + World Steel world crude steel production up 11.6% compared to June 2020
- + Forecast strong DRI growth to 2040
- + Trend to high grade ores



### Global Direct Reduction Iron Forecast Production (Mtpa)



Source: Wood Mackenzie

- + Market highly resilient
- + Requires an extra 60-70Mtpa high grade iron ore by 2040



## Outlook and Timeline

	2021			2022			2023			2024		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
BFS funding secured												
Approvals												
Bankable Feasibility Study												
Resource upgrade												
Demonstration plant run												
Engineer and design												
Procurement and Contracts												
Cap Raise - Mine Build												
Construction												
First Production												

Advancing Schedule with senior team now in place

Original PFS Schedule: Adjusted  
(Market Advised)



	2021			2022				2023				2024				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
BFS funding secured																
Approvals																
Bankable Feasibility Study																
Resource upgrade																
Demonstration plant run																
Engineer and design																
Contracts and finance																
Construction																
First Production																

# Summary

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## Cautionary Statement

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HIO does not have any obligation to advise any person if it becomes aware of any inaccuracy in or omission from any forecast or to update such forecast. The Company confirms that all assumptions and technical parameters underpinning the Resource and Reserve estimates and all material assumptions underpinning the production target or the forecast financial information derived therefrom continue to apply and have not materially changed since first reported on 28 July 2017.

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