



**Hawsons IRON**

WORLD'S BEST IRON ORE PRODUCT

November 2021

# Hawsons Iron Limited (ASX : HIO)

Hawsons Supergrade® Iron Ore

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

**Note : This is a copy of the Company Update provided during the AGM of 16 November 2021. There is no additional material information included in this presentation that has not been released to the market previously.**



## Executive Chairman - Company Update

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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

### + 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



### + Announced JORC Mineral Resource Upgrade\*

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

\*post 30 September 2021

### 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

## 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

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.

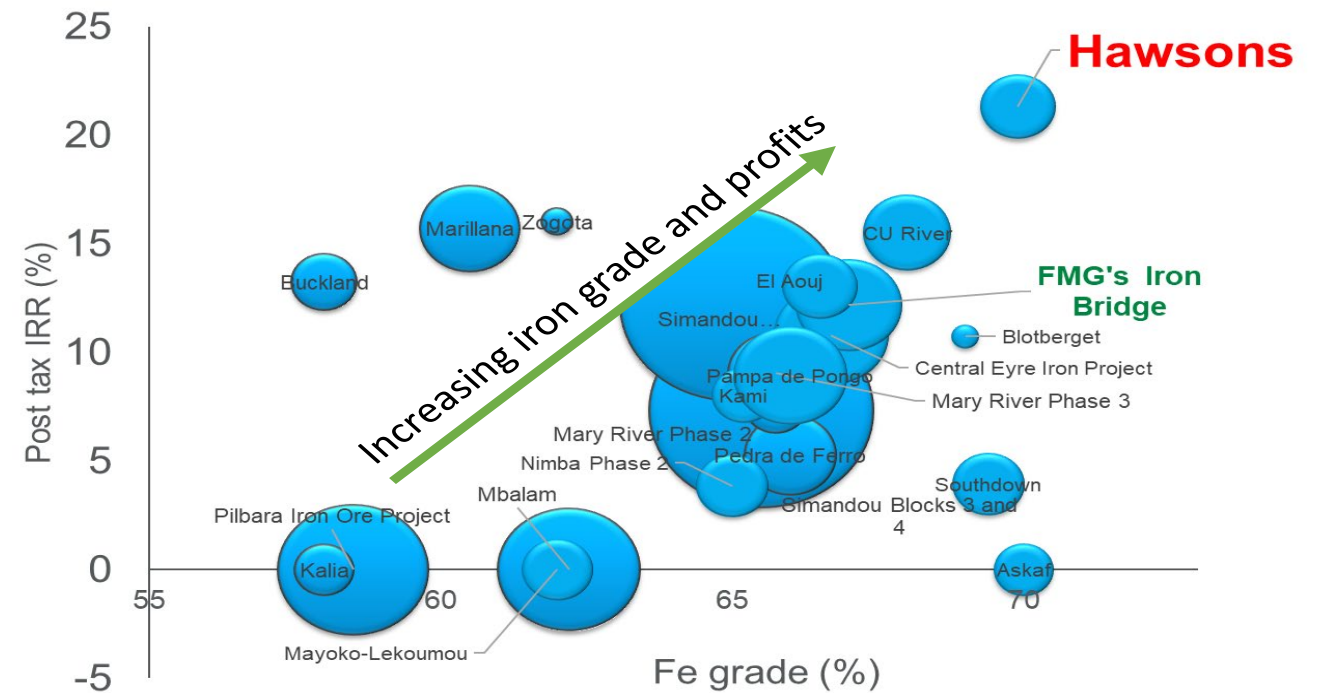
\*Bubble size represents annual production capacity

\*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.

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



Source: Wood Mackenzie Q3 2020 data

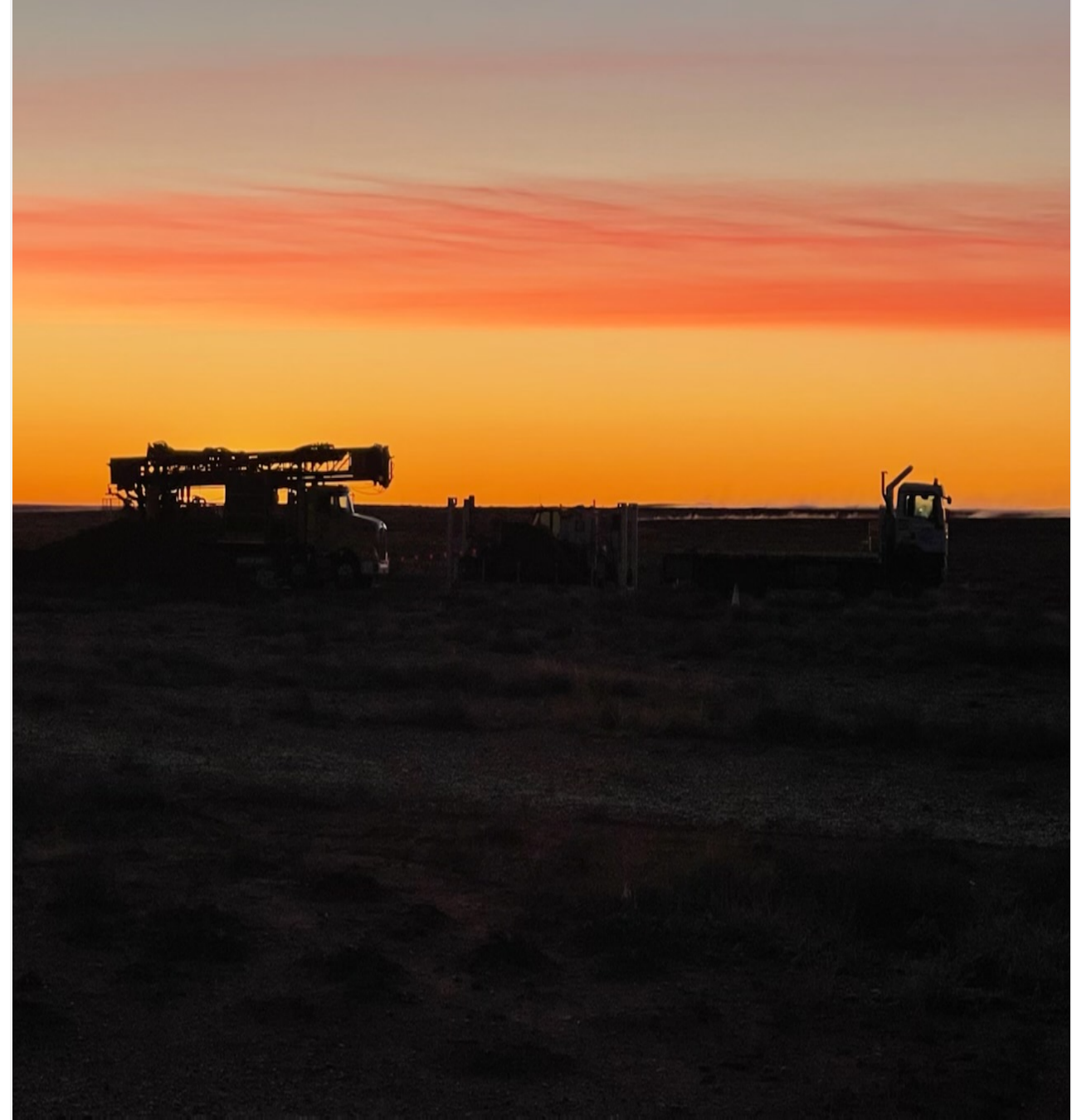


## What Makes Hawsons Iron Project Unique?

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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?

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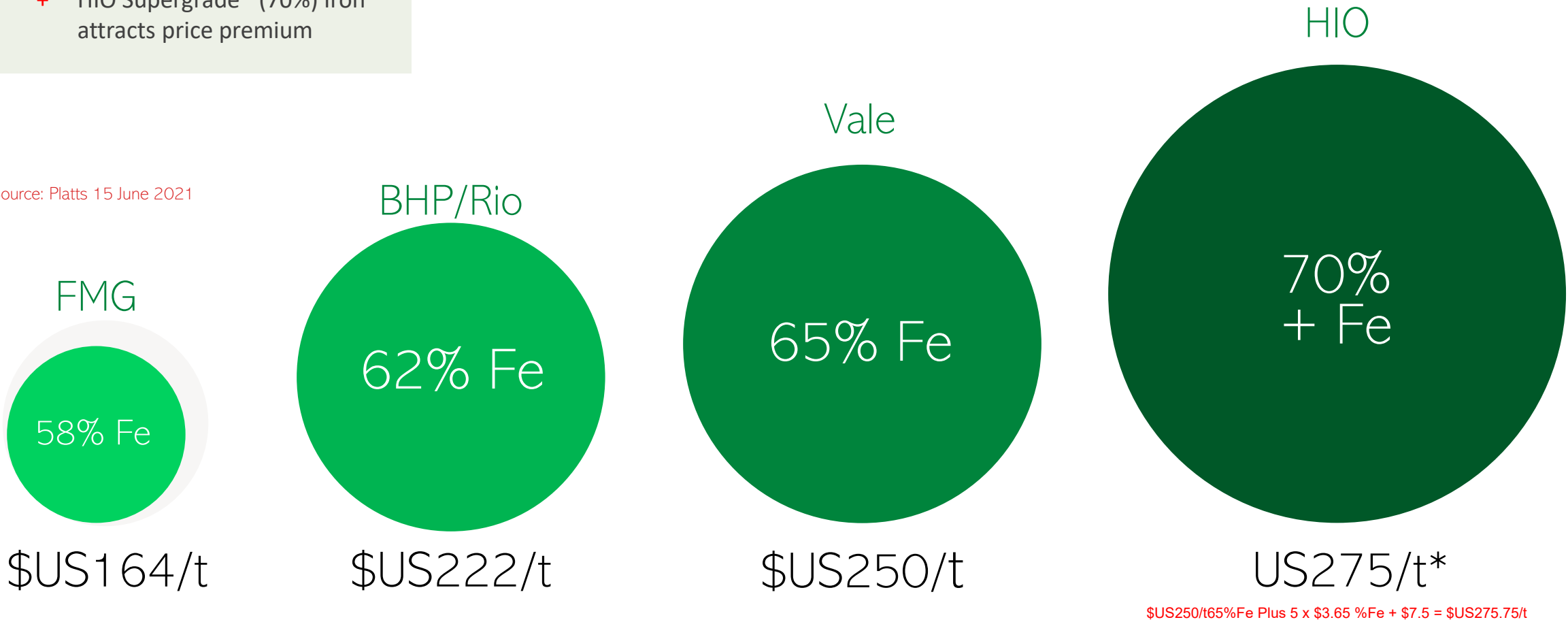
Source: "Updated Mineral Resource Estimates for the Hawsons Magnetite Project, Western NSW", H&S Consultants Pty Ltd 2021

# What Makes Hawsons Iron Project Unique?

## Purest, High Iron Product

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

Source: Platts 15 June 2021

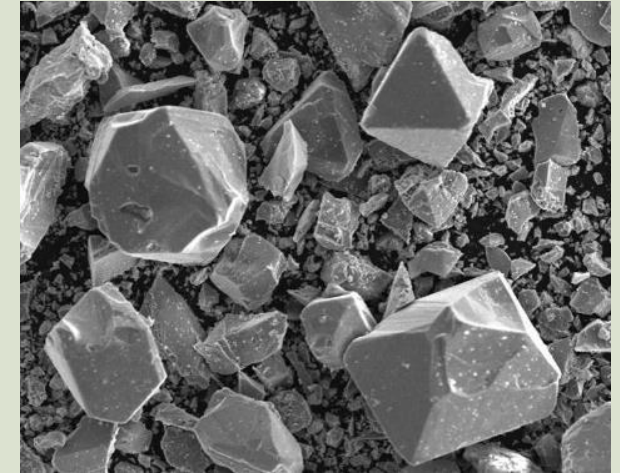


## What Makes Hawsons Iron Unique?

### 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 metamorphosis (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?

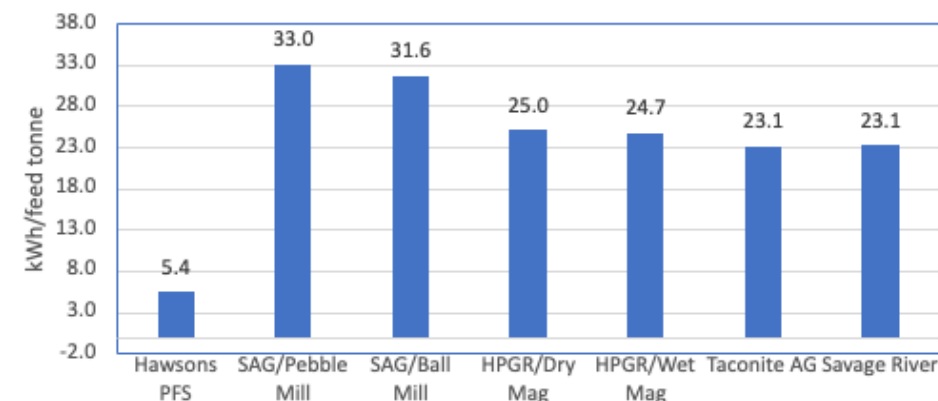
### ESG & Green Steel Leader

- + 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

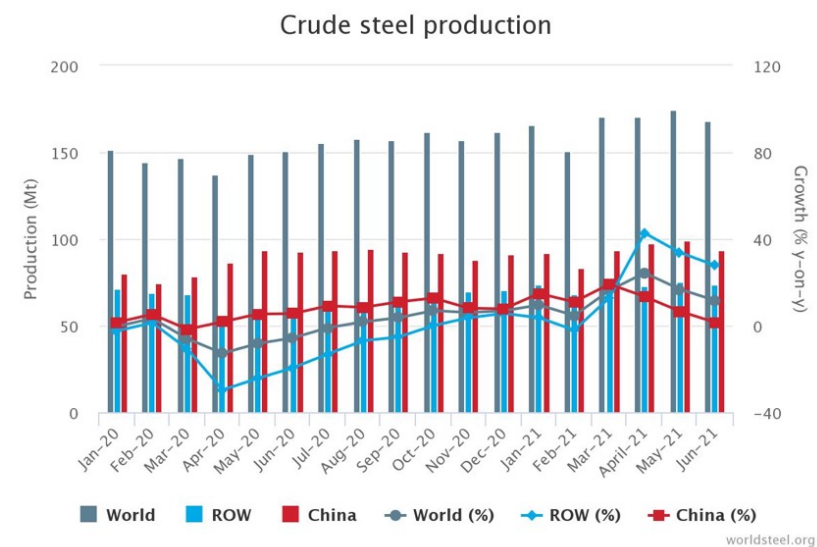
- + Innovative mining and processing operation plan for zero emissions
- + Vision for Broken Hill renewable energy hub
- + Contribute energy storage and water sustainability
- + Run site on solar and wind generation + battery power and storage
- + Deliver a safe and supportive workplace
- + Sustainable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



# What Makes Hawsons Iron Project Unique?

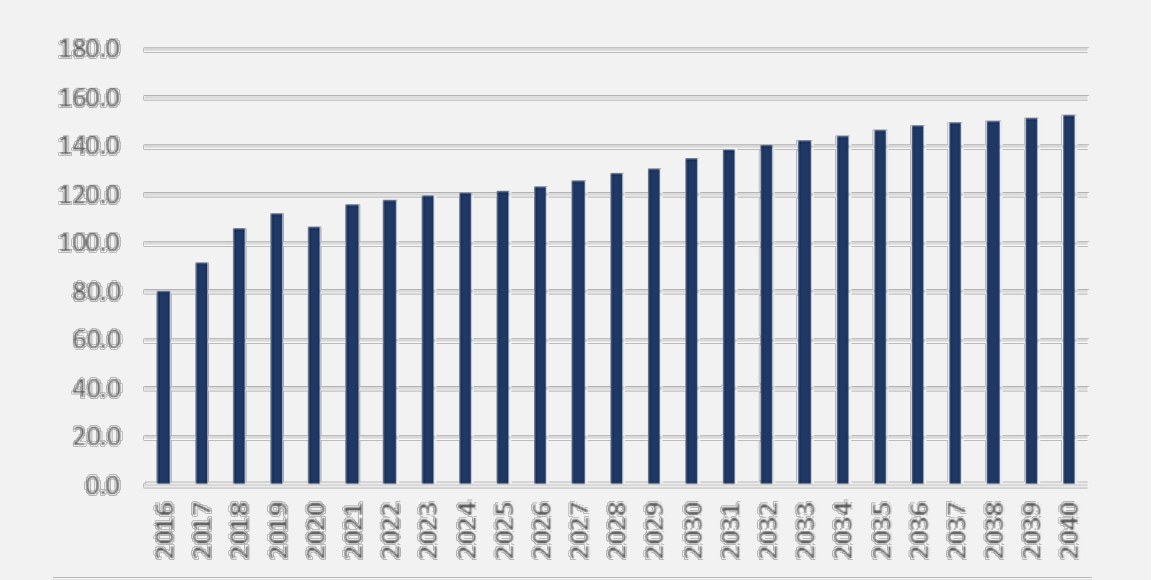
## High Grade Demand

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



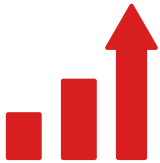
Source: World Steel

## Global Direct Reduction Iron Forecast Production (Mtpa)



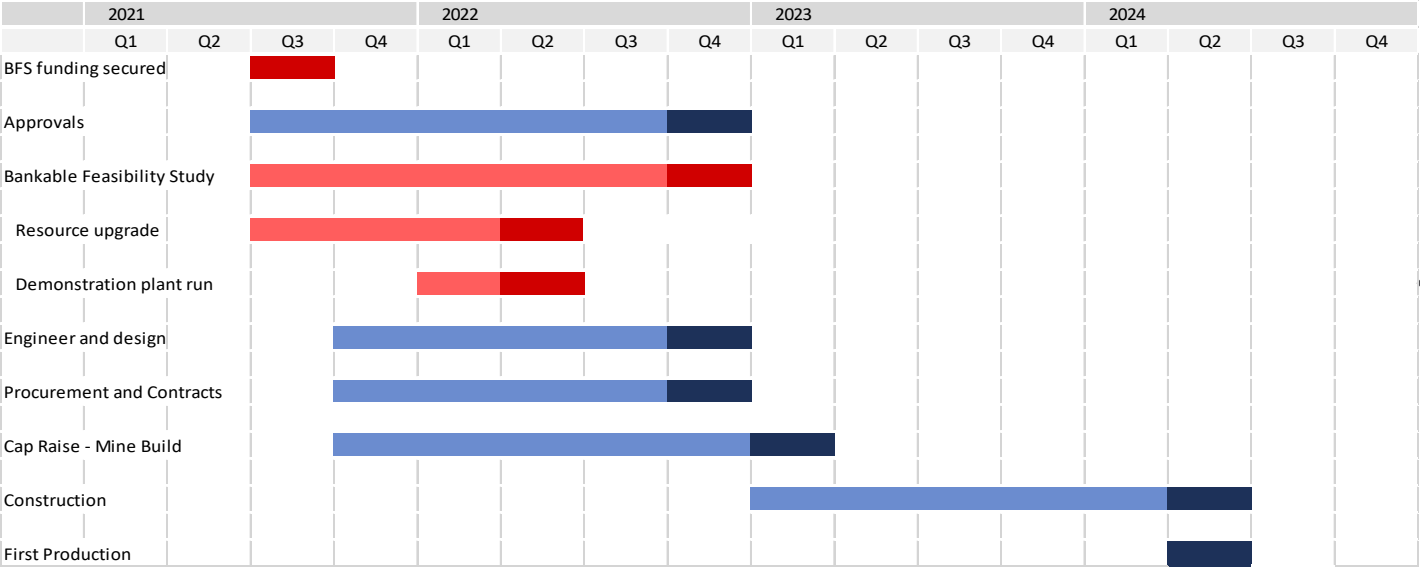
Source: Wood Mackenzie

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



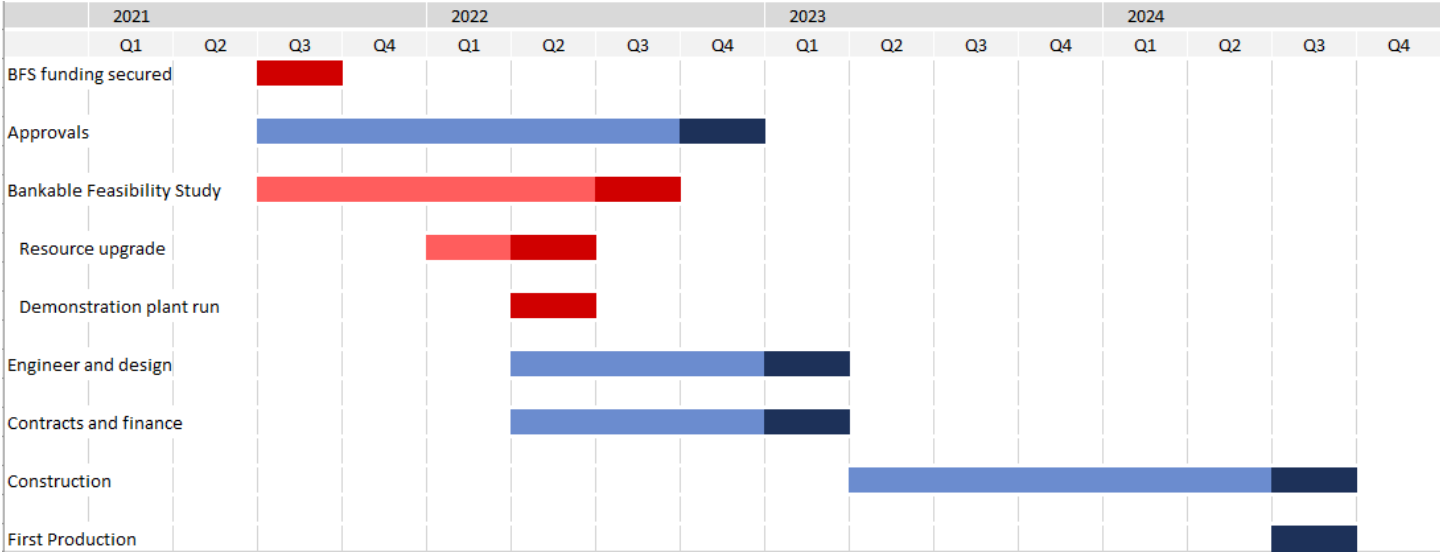


# Outlook and Timeline



Advancing Schedule with senior team now in place

Original PFS Schedule: Adjusted (Market Advised)





## Pre-feasibility Results

<b>PFS FINANCIALS</b>	
Annual profit margin	US\$401m
<b>Equity IRR</b>	29.9%
Equity NPV	US\$1,091m
tonne of supergrade (70%Fe)	201m
Mine life / pay back period	20 / 3-4 years
62%, 65% Fe price assumption	US\$63, 75/t

<b>PFS COST ESTIMATES</b>	<b>PFS Price Assumption</b>
Operating costs - C1 FOB	US\$33.08
Operating costs - All in	US\$39.74
Operating costs - CFR China	US\$48.03
Supergrade price premium over 62% Fe	US\$25.00
Revenue per dry metric tonne	US\$88.00
<b>Equivalent 62%Fe CFR cost</b>	<b>US\$23.03</b>
Capital cost inclusive of contingency	US\$1.40Bn

- + World leading metrics
- + US\$48/t opex. CFR China
- + US\$1.4 Bn capital cost pay back in <1 year today
- + Production 10Mtpa for 20 years, potential to expand and extend
- + Production targeted in 3-3.5 years

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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# Summary

1. World-Leading Project
2. Purest, High Grade Iron Product
3. ESG and Green Steel Leader
4. Soft Ore
5. Economically Strong
6. High Grade Ore – High Demand



## Cautionary Statement

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