

# BHP

## The future is clear

**Jessica Farrell, Asset President Nickel West**  
**3 August 2022**



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# Disclaimer

## Forward-looking statements

This presentation contains forward-looking statements, which may include statements regarding: our strategy, our values and how we define success; our expectations of a competitive advantage for our business or certain products; our commitment to generating social value; our commitments under sustainability frameworks, standards and initiatives; our intention to achieve certain sustainability-related targets, goals, milestones and metrics; trends in commodity prices and currency exchange rates; demand for commodities; reserves and production forecasts; plans, strategies and objectives of management; assumed long-term scenarios; potential global responses to climate change; the potential effect of possible future events on the value of the BHP portfolio; approval of certain projects and consummation of certain transactions; closure or divestment of certain assets, operations or facilities (including associated costs); anticipated production or construction commencement dates; capital costs and scheduling; operating costs and supply (including shortages) of materials and skilled employees; anticipated productive lives of projects, mines and facilities; provisions and contingent liabilities; and tax and regulatory developments.

Forward-looking statements may be identified by the use of terminology, including, but not limited to, 'intend', 'aim', 'project', 'see', 'anticipate', 'estimate', 'plan', 'objective', 'believe', 'expect', 'commit', 'may', 'should', 'need', 'must', 'will', 'would', 'continue', 'annualised', 'forecast', 'guidance', 'trend' or similar words. These statements discuss future expectations concerning the results of assets or financial conditions, or provide other forward-looking information.

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For example, our future revenues from our assets, projects or mines which may be described in this presentation will be based, in part, upon the market price of the minerals or metals produced, which may vary significantly from current levels. These variations, if materially adverse, may affect the timing or the feasibility of the development of a particular project, the expansion of certain facilities or mines, or the continuation of existing assets.

Other factors that may affect the actual construction or production commencement dates, costs or production output and anticipated lives of assets, mines or facilities include our ability to profitably produce and transport the minerals and/or metals extracted to applicable markets; the impact of foreign currency exchange rates on the market prices of the minerals and/or metals we produce; activities of government authorities in the countries where we sell our products and in the countries where we are exploring or developing projects, facilities or mines, including increases in taxes; changes in environmental and other regulations; the duration and severity of the COVID-19 pandemic and its impact on our business; political uncertainty; labour unrest; and other factors identified in the risk factors discussed in BHP's filings with the U.S. Securities and Exchange Commission (the 'SEC') (including in Annual Reports on Form 20-F) which are available on the SEC's website at [www.sec.gov](http://www.sec.gov).

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## Presentation of data

Numbers presented may not add up precisely to the totals provided due to rounding.

Due to the inherent uncertainty and limitations in measuring greenhouse gas (GHG) emissions and operational energy consumption under the calculation methodologies used in the preparation of such data, all GHG emissions and operational energy consumption data or references to GHG emissions and operational energy consumption volumes (including ratios or percentages) in this presentation are estimates. There may also be differences in the manner that third parties calculate or report GHG emissions or operational energy consumption data compared to BHP, which means that third party data may not be comparable to our data. For information on how we calculate our GHG emissions and operational energy consumption data, see our Methodology tab in our ESG Standards and Databook at [bhp.com](http://bhp.com).

## No offer of securities

Nothing in this presentation should be construed as either an offer or a solicitation of an offer to buy or sell any securities, or a solicitation of any vote or approval, in any jurisdiction, or be treated or relied upon as a recommendation or advice by BHP. No offer of securities shall be made in the United States absent registration under the U.S. Securities Act of 1933, as amended, or pursuant to an exemption from, or in a transaction not subject to, such registration requirements.

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## BHP and its subsidiaries

In this presentation, the terms 'BHP', the 'Company', the 'Group', 'our business', 'organisation', 'Group', 'we', 'us' and 'our' refer to BHP Group Limited, BHP Group Plc and, except where the context otherwise requires, their respective subsidiaries set out in note 13 'Related undertaking of the Group' in section 5.2 of BHP's Annual Report and Form 20-F, noting that on 31 January 2022, BHP unified its corporate structure from two parent companies (BHP Group Limited and BHP Group Plc) into one under BHP Group Limited. Those terms do not include non-operated assets. This presentation includes references to BHP's assets (including those under exploration, projects in development or execution phases, sites and closed operations) that either: (i) have been during the period from 1 July 2020 to 30 June in the relevant year, for references to a particular financial year; or (ii) are as at the date of this presentation, for all other references, wholly owned and/or operated by BHP and that have been/are (as applicable) owned as a joint venture operated by BHP (referred to as 'operated assets' or 'operations'). Our functions are also included.

BHP also holds interests in assets that are owned as a joint venture but not operated by BHP (referred to in this presentation as 'non-operated joint ventures' or 'non-operated assets'). As at the date of this presentation, our non-operated assets include Antamina and Samarco. Notwithstanding that this presentation may include production, financial and other information from non-operated assets, non-operated assets are not included in the Group and, as a result, statements regarding our operations, assets and values apply only to our operated assets unless otherwise stated. References in this presentation to a 'joint venture' are used for convenience to collectively describe assets that are not wholly owned by BHP. Such references are not intended to characterise the legal relationship between the owners of the asset.





Kalgoorlie  
Western Australia

# Acknowledgement of Country

Diggers & Dealers Mining Forum  
3 August 2022



# High quality nickel is key to a decarbonising world

**We have a competitive advantage and are positioned to grow**

Social value creates opportunities

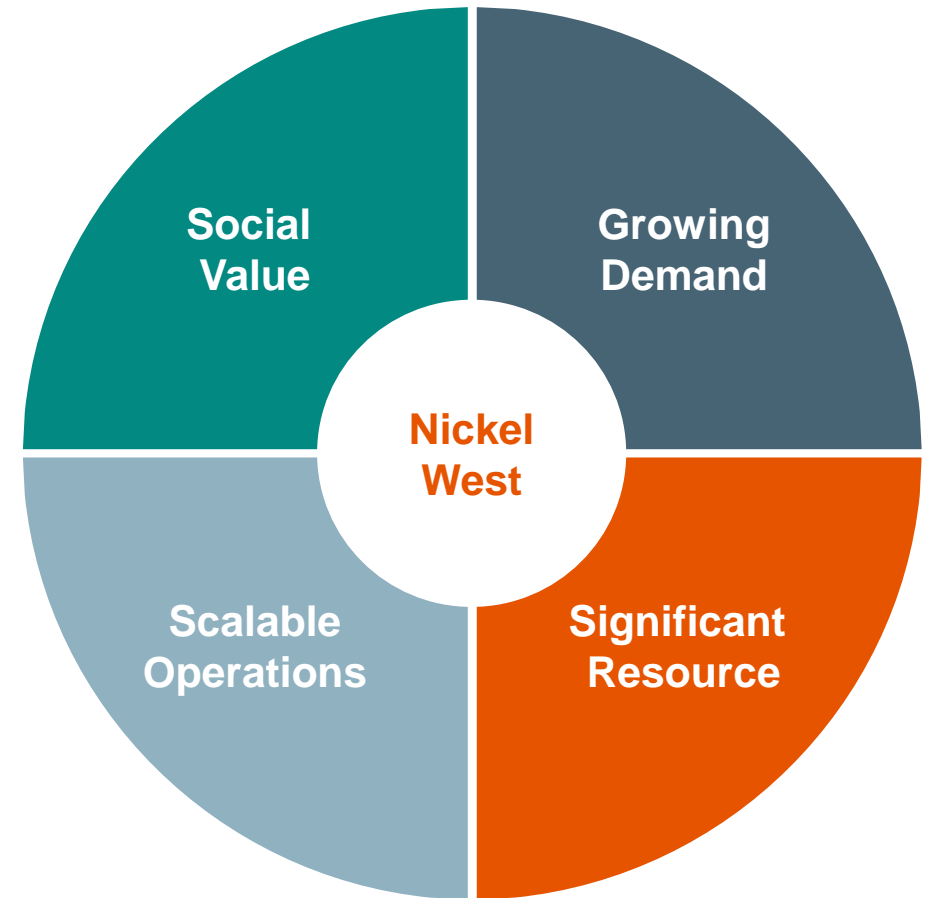
Growing demand for a sustainable nickel product

Second largest nickel sulphide resource in the world <sup>1</sup>

Mining excellence and scalable infrastructure

Investment opportunities across the value chain

<sup>1</sup> 2018 dataset. See global and BHP nickel resources detailed on slide 6.

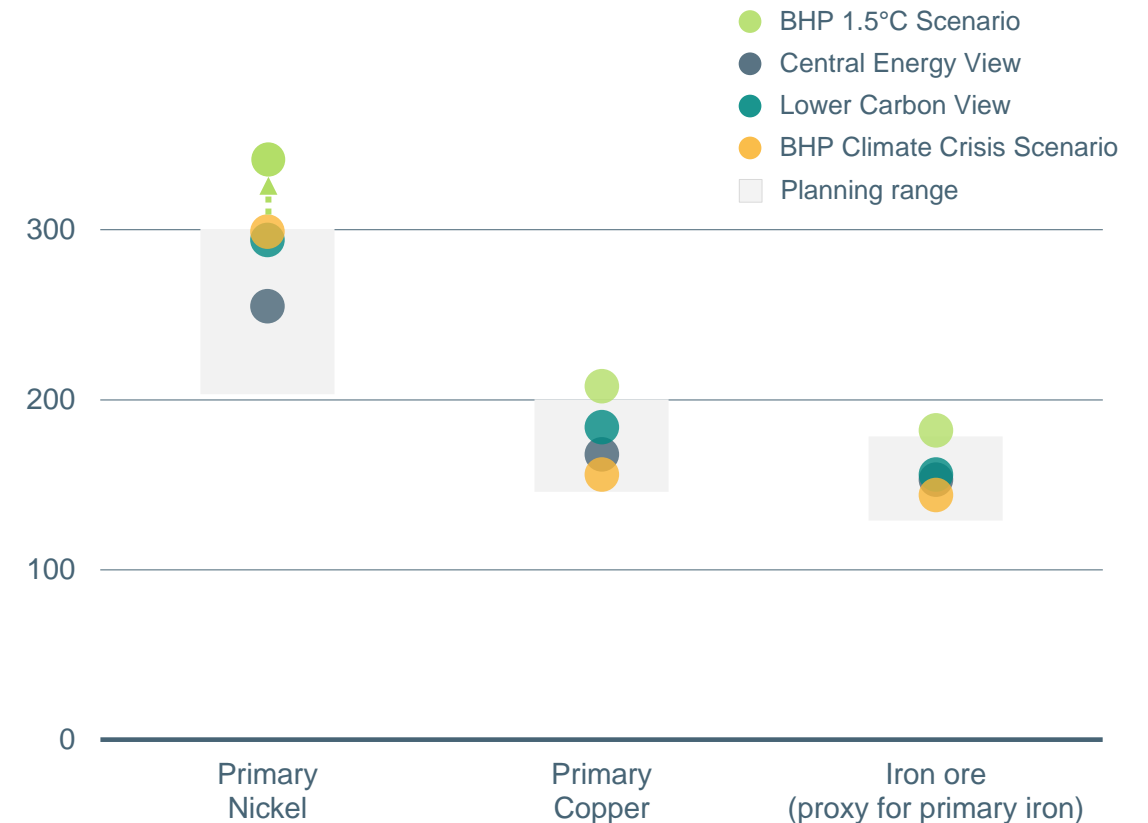


# Megatrends underpin a major uplift in nickel demand

## Providing the opportunity to scale an established and capable asset

- Worldwide, we expect 3 out of 5 passenger car sales to be electric by 2030, rising to 9 out of 10 by 2040
- In the next 30 years, our lowest plausible case envisages a doubling of demand versus the previous 30 years
- In BHP's 1.5°C scenario, which requires steep global annual emissions reductions, sustained for decades, demand uplift is closer to four-fold
- Auto makers are moving fast to secure supply agreements

### Cumulative demand in the next 30 years compared to the last 30 years <sup>1</sup> (%)



Source: BHP, Vivid Economics.

<sup>1</sup> Refer to BHP's Climate Change Report 2020, available at [bhp.com](https://www.bhp.com), for a description of each of these scenarios and their essential assumptions, caveats and limitations.

# World class nickel sulphide resources

With potential for developments north of Mt Keith

## Honeymoon Well

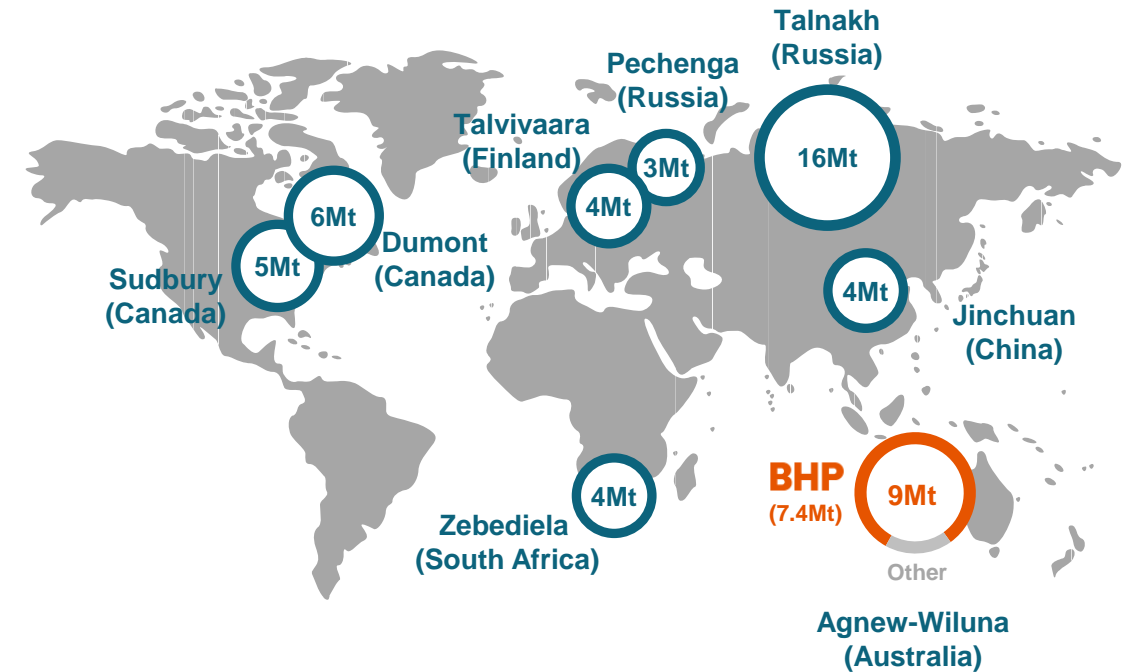
- We are engaging with the underlying native title holders of the Honeymoon Well project
- Wedgetail is potentially accessible via an underground mining method

## Exploration

- 75,000 hectares of exploration potential in the Agnew-Wiluna belt
- More than A\$140 million of planned investment over next two years on brownfield exploration in the Agnew-Wiluna belt, focused on Mt Keith and Leinster hubs
- Greenfield exploration continues in our Seahorse tenement package near the Fraser Range within 1.42 Mha of tenure

## Second largest nickel sulphide resource globally

(Total nickel sulphide resources in producing regions, contained metal nickel Mt)



Source: MinEx Consulting Global Ni Database, December 2018. Only regions with major deposits or deposit clusters of >3 Mt contained nickel sulphide shown. Note: Based on ownership interest. Refer to detailed table for BHP's Nickel Mineral Resources slide 13.

Source BHP data: FY2021 BHP Annual Report.

# Increasing the scale of Nickel West

Through the supply chain, from mine to market



Unlock equity feed sources with new mines



Increase volume through supply chain



Step change in nickel recovery



Debottlenecking opportunities



Furnace renewal key to unlock future capacity



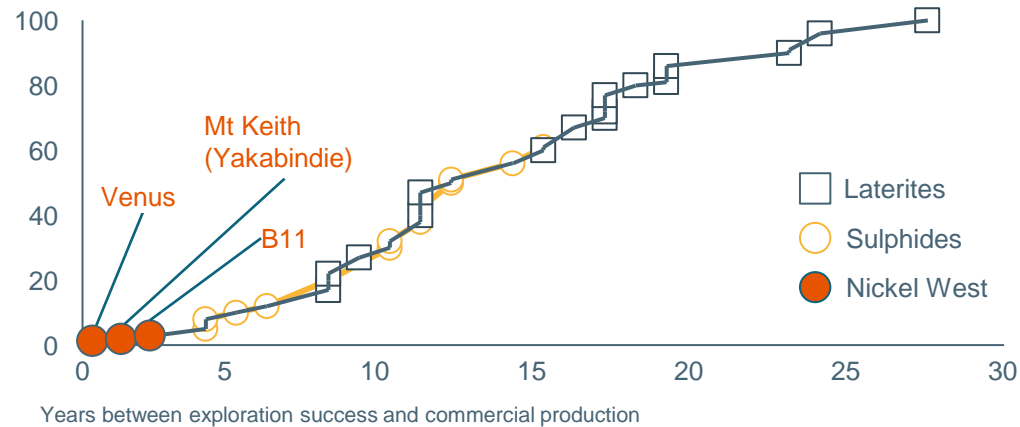
Lex Wood, Furnace Superintendent  
Kalgoorlie Nickel Smelter

# Proven ability to develop our resources

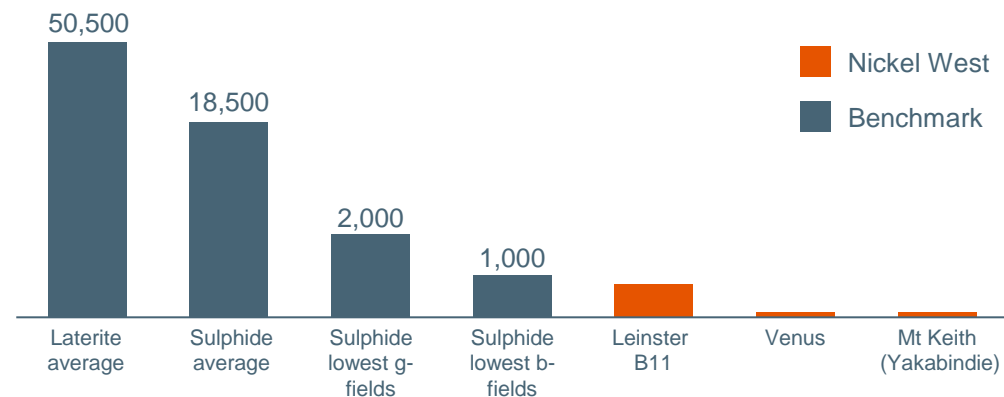
## Transition to new mines completed fast and at low cost

### Mine lead time (feasibility + development), years <sup>1</sup>

Cumulative % of deposits in benchmark



### Capital intensity, US\$/NiT <sup>2</sup>



### Mt Keith operations have a large resource base <sup>3</sup>

- Yakabindie has ramped up quickly and is Mt Keith's primary source of feed to the concentrator
- In 2022 work recommenced on the original Mt Keith open cut mine to expose new ore

### Leinster underground mines are delivering

- Venus sub-level caving operation is progressing to plan and the resource remains open at depth
- Leinster B11 undercut and drawbell development is well advanced
- Cliffs mine extensions to the ore body continue

#### Source:

1. Resources Policy, vol 73, Heijlen, W., Franceschi, G., Duhayon, C. and Van Nijen, K., Assessing the adequacy of the global land-based mine development pipeline in the light of future high-demand scenarios: The case of the battery-metals nickel (Ni) and cobalt (Co). p.102202, 2021 with permission from Elsevier; with BHP analysis.
2. McKinsey & Co Basic Materials Benchmarking, with BHP analysis.
3. Source BHP data: FY2021 Annual Report. Refer to detailed table for BHP's Nickel Mineral Resources slide 13.



# Social value is the right thing to do

It helps to protect our business today and positions us to access future opportunities



# The future is clear

Demand is strong and we are well positioned



Marcel, Superintendent Geology  
Honeymoon Well Core Farm

Demand from batteries estimated to grow substantially over 10 years

BHP has a globally significant resource

We move fast to develop our resources, at low cost

We can increase scale in our vertically integrated asset

Social value creates mutually beneficial partnerships

**BHP**



# Competent Person Statement – Nickel Mineral Resources

## Nickel West Mineral Resources Competent Person Statement

The information in this slide relates to Nickel West Mineral Resources as at 30 June 2021. Mineral Resources are inclusive of Ore Reserves and is based on information compiled by Richard Finch as Competent Person (compiler) for all declared Mineral Resources. The information in this presentation that relates to the FY2021 Mineral Resources reported by the Company in compliance with the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012' ('The JORC Code 2012 Edition') in the 2021 BHP Annual Report. Report is available to view on [www.bhp.com](http://www.bhp.com).

R. Finch is current Member of the Australasian Institute of Mining and Metallurgy (MAusIMM) and he is full-time employee of BHP. R. Finch has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code)'. R. Finch owns shares in BHP and is entitled to participate in employee share holding plans. R. Finch consents to the inclusion in the presentation of the matters based on their information in the form and context in which it appears.

Mineral Resources as presented are reported in 100 per cent terms. Dry tonnages are reported and all tonnage and quality information has been rounded, hence small differences may be present in the totals. Total contained nickel metal is presented in the table below as kilo tonnes (kt). No metallurgical recovery has been applied to the calculation of contained nickel metal. Mineral Resources classification is applied based on mineralisation type, geological understanding and an assessment of reasonable prospects for eventual economic extraction.

## Compiled Nickel West Mineral Resources as at 30 June 2021

Deposit	Ore Type	Measured Resources		Indicated Resources		Inferred Resources		Total Resources			BHP Interest (%)
		Tonnes (Mt)	% Ni	Tonnes (Mt)	% Ni	Tonnes (Mt)	% Ni	Tonnes (Mt)	% Ni	Contained Metal (Ni kt)	
Leinster	OC Disseminated Sulphide	4.1	0.72	77	0.58	52	0.64	133	0.60	798	100
	OC Massive Sulphide	0.25	4.4	1.0	4.9	0.37	4.7	1.6	4.8	77	100
	UG Disseminated Sulphide	15	1.9	10	1.3	3.2	1.2	28	1.6	448	100
	UG Massive Sulphide	0.63	4.5	2.4	4.9	1.1	4.1	4.2	4.6	193	100
	Oxide	-	-	-	-	5.2	1.8	5.2	1.8	94	100
	SP	-	-	1.5	0.76	-	-	1.5	0.76	11	100
	SP Oxidised	-	-	-	-	1.9	1.7	1.9	1.7	32	100
Mt Keith	OC Disseminated Sulphide	133	0.54	67	0.52	24	0.52	224	0.53	1,187	100
	SP	3.6	0.49	-	-	-	-	3.6	0.49	18	100
Cliffs	UG Disseminated Sulphide	-	-	6.3	0.86	1.6	1.0	7.9	0.89	70	100
	UG Massive Sulphide	0.79	3.6	1.1	3.6	0.47	3.6	2.3	3.6	83	100
Yakabindie	OC Disseminated Sulphide	137	0.59	107	0.62	170	0.61	414	0.61	2,525	100
	SP	2.1	0.59	-	-	-	-	2.1	0.59	12	100
Venus	UG Disseminated Sulphide	1.2	1.5	5.4	1.8	1.1	1.1	7.7	1.7	131	100
	UG Massive Sulphide	0.11	6.0	0.7	6.4	0.35	6.2	1.2	6.3	76	100
Nickel West Projects											
Honeymoon Well	OC Disseminated Sulphide	-	-	138	0.62	6.5	0.66	144	0.62	893	100
	UG Disseminated Sulphide	9.1	0.72	18	0.75	3.8	0.74	31	0.74	229	100
	UG Massive Sulphide	0.35	6.0	0.92	6.4	0.17	6.6	1.4	6.3	88	100
Jericho	OC Disseminated Sulphide	-	-	-	-	31	0.59	31	0.59	183	100
West Jordan	OC Disseminated Sulphide	-	-	-	-	43	0.52	43	0.52	224	100