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6 August 2024

Company Announcements
Australian Securities Exchange Level 40
Central Park
152 - 158 St Georges Terrace
Perth WA 6000

By Electronic Lodgment

DIGGERS & DEALERS MINING FORUM PRESENTATION

Dear Sir/Madam

Attached please find a revised Diggers & Dealers Mining Forum Presentation with Slides 6 and 26 removed relating to the comparison of Nickel Resources with other Global Nickel projects in accordance with ASX Guidance Note 08/18.

For and on behalf of the Board
By order of the Board

Sam Middlemas
Company Secretary

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Ardea Resources Limited

Kalgoorlie Nickel Project - Goongarrie Hub

A multi decade, large scale, low cost nickel-cobalt operation

Andrew Penkethman
Managing Director & CEO

Diggers and Dealers Mining Forum
5 – 7 August 2024

Australian Federal Government - Major Project Status

ESG CERTIFIED
Digbee ESG™

ASX:ARL

Disclaimer

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Important notice

This presentation contains general information only and is, or is based upon, information which has been released to ASX or is contained in the Ardea Resources Limited (Ardea or the Company) prospectus dated 9 November 2016 (including supplementary prospectuses dated 18 November 2016 and 6 January 2017), High-grade nickel-cobalt mineralization extended at Goongarrie (8 October, 2018), Goongarrie Pilot Plant trial produces battery grade crystals (31 October 2018), Emu Lake Discovery (3 December 2021, 14 January 2022, 7 February 2022), High-grade Nickel-Cobalt Confirmed at Kalpini with Scandium and Rare Earth Elements (14 March 2022), Kalgoorlie Nickel Project Recognition on All Tiers of Australian Government (21 March 2022), Confirmation of High-Grade Nickel-Cobalt from Goongarrie South Metallurgical Drilling (16 May 2022), Kalgoorlie Nickel Project: Metallurgical Update – Mineralised Neutraliser (16 November 2022), Ardea Completes KNP ESG Accreditation from Independent Leading Global Platform (24 November 2022), Nickel sulphide anomalism from aircore drilling at Kalpini Project (2 May 2023), Mineralised Neutraliser Global Patent Lodged (15 June 2023), Kalgoorlie Nickel Project Mineral Resource Estimate Exceeds 6 Million Tonne Contained Nickel (30 June 2023), KNP Goongarrie Hub Ore Reserve and Feasibility Study Defines +40 Year Operation with Strong Financial Metrics (5 July 2023), Ardea Kalgoorlie Nickel Project – MOU with Sumitomo Metal Mining, Mitsubishi Corporation, and Mitsu & Co., Ltd (5 July 2023), Kalgoorlie Nickel Project Goongarrie Hub Tenement Consolidation (17 July 2023), Ardea Quarterly Activities Report June 2023 (27 July 2023), Ardea Annual Report 2023 (27 September 2023), Ardea and Japanese Consortium Update on MOU (29 September 2023), Nickel Sulphide Prospectivity Confirmed and Lithium-Caesium-Rubidium bearing intrusives in Highway EIS drillhole (15 December 2023), Ardea and Japanese Consortium: Update on Progress on KNP - Goongarrie Hub (21 December 2023), Ardea Quarterly Activities Report December 2023 (31 January 2024), Ardea and Japanese Consortium: Update on Progress on KNP - Goongarrie Hub (29 February 2024), Ardea and Japanese Consortium: Update on Progress on KNP - Goongarrie Hub (27 March 2024)), Ardea Quarterly Activities Report March 2024 (26 April 2024), ARL SMM and MC to form a JV to develop KNP Goongarrie Hub ASX Announcement (29 April 2024), Ardea Completes Updated Kalgoorlie Nickel Project ESG Accreditation From Independent Leading Global Platform (9 May 2024), Ardea receives $1.1 million R&D Rebate (13 June 2024), Kalgoorlie Nickel Project - Goongarrie Hub DFS Drilling Underway (4 July 2024), Kalgoorlie Nickel Project - Goongarrie Hub DFS Underway (8 July 2024) and Ardea Quarterly Activities Report June 2024 (30 July 2024).

This presentation is not an invitation, offer or recommendation (express or implied) to subscribe for, or apply for the purchase of, or to take any other action in respect of securities of any entity described herein and is not a prospectus, product disclosure statement or disclosure document for the purposes of the Corporations Act 2001 (Cth) and has not been lodged with ASIC. None of Ardea Resources Limited (Ardea or the Company) or its representatives are providing or offering investment advice or services by making this presentation.

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This presentation contains forward-looking statements regarding the Company's resources, intentions and future business. These statements reflect current information, expectations, intentions and strategies regarding the future, and are subject to certain risks and uncertainties. Should one or more of these risks or uncertainties materialise, or should any of the underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this presentation. Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made. Other than where required by law, the Company is under no obligation to revise any forward looking statement to reflect events or circumstances after the date of this presentation or to reflect the occurrence of unanticipated events.

The Goongarrie Project has completed the Pre-Feasibility Study phase and has commenced programs that are part of the Definitive Feasibility Study. Though reasonable care has been taken to ensure that the facts are accurate and/or that the opinions expressed are fair and reasonable, no reliance can be placed for any purpose whatsoever on the information contained in this document or on its completeness. Actual results and developments of projects and the market development may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors. A key conclusion of the Pre-Feasibility Study, which is based on forward looking statements, is that the Goongarrie Project is considered to have positive economic potential.

No stock exchange, regulation services provider, securities commission or other regulatory authority has approved or disapproved the information contained in this news release.

Experienced Board, Supportive Shareholders & Tight Capital Structure

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Mat Longworth Non-Executive Chair

Experienced across exploration, project evaluation / development including KNP and corporate management

Andrew Penkethman Managing Director & CEO

Experienced geologist with strong technical and corporate focus including discovery and strategic partner success and ASX, TSX and AIM experience

Maree Arnason Non-Executive Director

Highly experienced director and executive in the natural resources, energy and manufacturing sectors

Ian Buchhorn Executive Director

Mineral economist and geologist, with significant Eastern Goldfields of WA, exploration, evaluation, development and operations experience

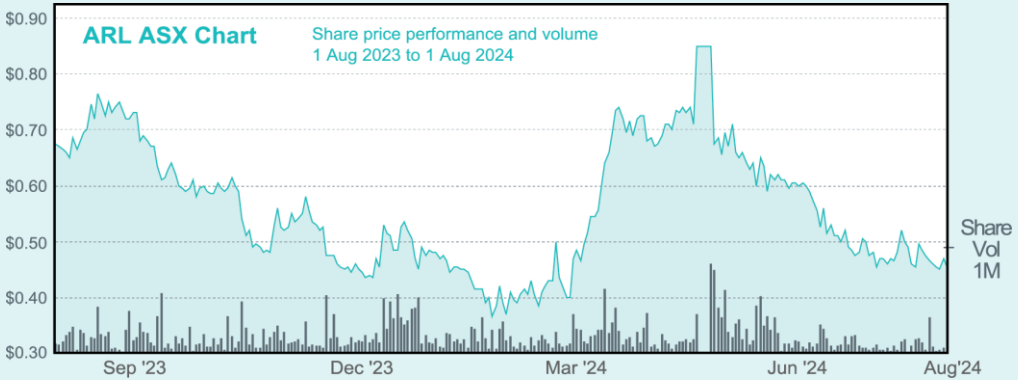
Sam Middlemas Company Secretary

Chartered Accountant experienced in providing Company Secretary services

ASX:ARL

Shares on Issue	199,682,915	Cash (30 Jun 2024)	A$14.8M
Performance Rights	3,316,400	Board and Management	~10% equity
Options	3,000,000	Top 40 Shareholders	~60% equity
Share Price (1 Aug 2024)	$0.455	DFS budget being fully funded by JC[1]	A$98.5M
52 week high / low	$0.95 / $0.34		
Market Capitalisation	$91 million	DFS Funding Advance (SMM)[2]	A$11.1M

1. See ARL ASX Cooperation Agreement Announcement 29 April 2024 detailing proposed Joint Venture with Consortium (JC) consisting of Sumitomo Metal Mining (SMM) and Mitsubishi Corporation (MC)
2. DFS Advance + Cash = available funds $25.9M - Ardea Quarterly Activities Report June 2024 (30 July 2024)



Kalgoorlie Nickel Project – Globally Significant Nickel-Cobalt Resource

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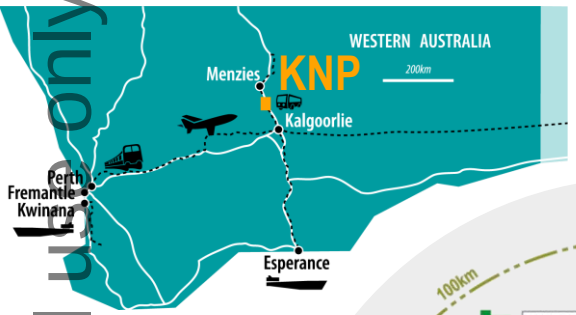
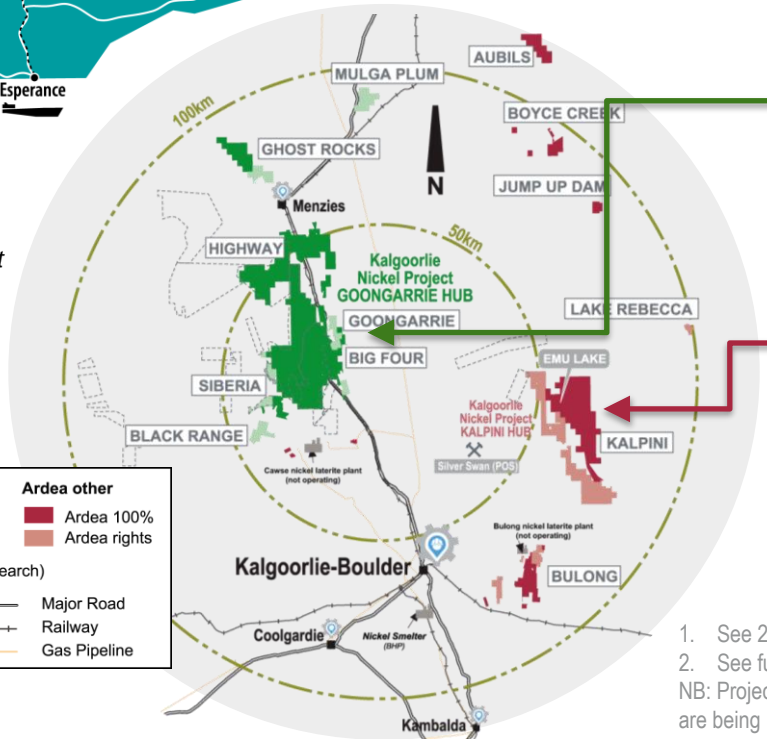


Australian Federal Government Major Project Status

ESG CERTIFIED

Digbee ESG™



KNP Goongarrie Hub	Ardea other
KNPL 100%	Ardea 100%
KNPL rights	Ardea rights
Misc Ls (Water Search)	
Town (skilled mining workforce)	Major Road
	Railway
	Gas Pipeline

KNP Goongarrie Hub hosts
~4Mt contained nickel [2]
KNPL managing JV. SMM & MC earning 50%[1]

Rest of KNP – 100% ARL
~2Mt contained nickel [2]
plus exploration pipeline incl Ni Sulphide discovery at Kalpini

1. See 29 April 2024 ARL SMM and MC to form a JV to develop KNP Goongarrie Hub ASX Announcement
2. See full MRE tables in Appendix and 30 June 2023 ARL ASX Announcement

NB: Project MRE, Ore Reserve, Production, Operation and Financial numbers are being updated in current in-progress DFS

KNP Goongarrie Hub

Cross Section
669 9364mN

Highway

RAIL LINE

Goongarrie Hill

Cross Section
666 9600mN

Goongarrie South

GOONGARRIE HUB PROCESSING FACILITY

Siberia North

Big Four / Scotia Dam

N

1000m

GOLDFIELDS HWY

70km to Kalgoorlie-Boulder

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1. See full tables in Appendix and 5 July 2023 ARL PFS ASX Announcement.

All Nickel Supply Chains are NOT Equal

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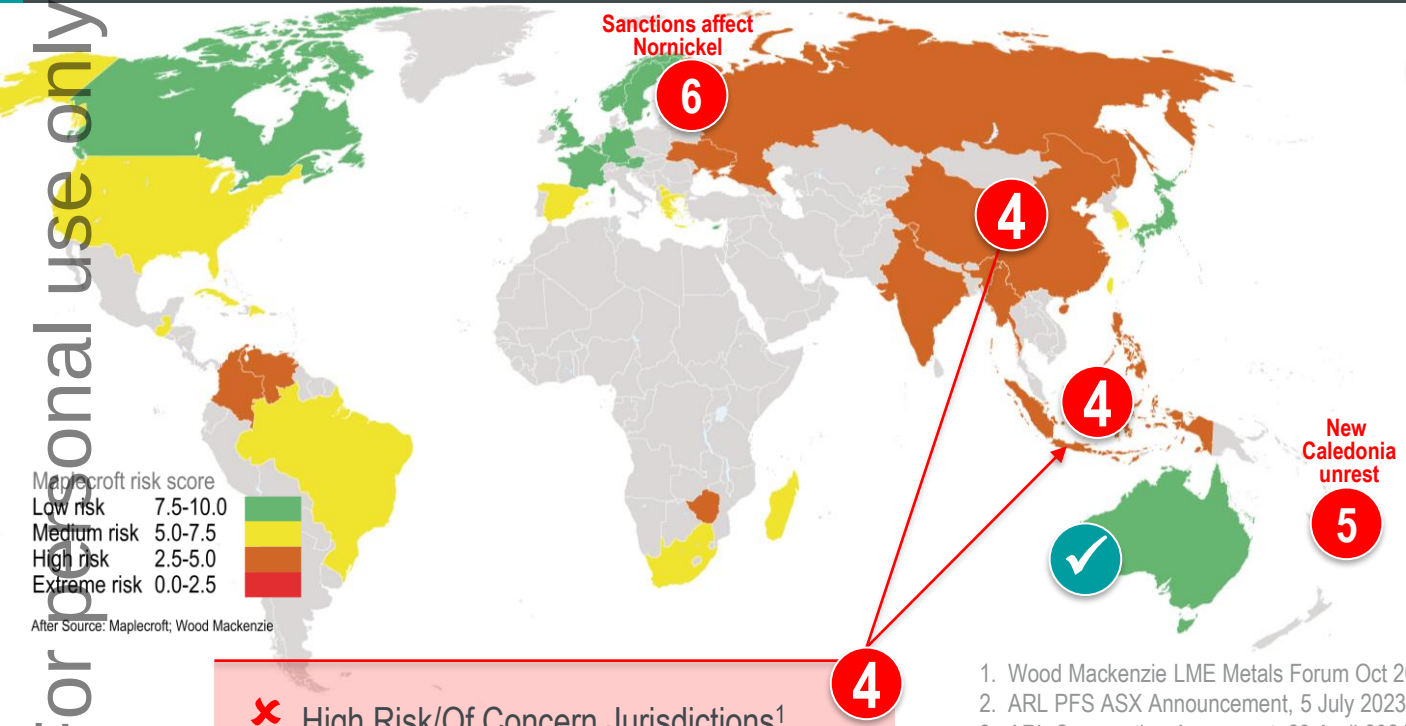

Kalgoorlie Nickel Project Goongarrie Hub

- ✓ Low Risk/Low Concern jurisdiction[1]
- ✓ Large resource, multi-decade operation, robust financial metrics, low Opex - strategic asset attractive to OEMs[2]
- ✓ Complies with IRA, FEOC, EU CRMA
- ✓ Working with Japanese Consortium to form KNP Goongarrie Hub JV[3]

- ✗ High Risk/Of Concern Jurisdictions[1]
- ✗ Significant number of nickel projects may not comply with IRA, FEOC, EU CRMA making them less desirable to OEMs[4]

1. Wood Mackenzie LME Metals Forum Oct 2022. Benchmark Minerals World Tour 2024
2. ARL PFS ASX Announcement, 5 July 2023
3. ARL Cooperation Agreement, 29 April 2024
4. US Inflation Reduction Act (IRA), Foreign Entity of Concern (FEOC) & EU Critical Raw Materials Act (CRMA)
5. Amid growing social unrest, New Caledonia's nickel industry is also in turmoil - link
6. LME plans to suspend nickel brand produced by a plant in Finland owned by Russian metals giant Nornickel - July 2024 link

Significant Critical Minerals Collaboration

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The Goongarrie Hub DFS is the first Critical Minerals collaboration between Australia and Japan, with the project expected to be a multi decade nickel-cobalt operation that provides supply chain diversity, security and meets the high ESG standards expected from Australia and Japan

Ardea Resources Limited

KNPL is a 100% subsidiary of **Ardea** and holds the **KNP Goongarrie Hub**. Ardea are forming a **Joint Venture** with the **Consortium who will contribute financially and technically** to ultimately earn a 50% interest in KNPL. Ardea to retain 50% KNPL interest

KALGOORLIE NICKEL

Kalgoorlie Nickel Pty Ltd (KNPL) (Goongarrie Hub Project Company, managing KNP Goongarrie Hub DFS)

SUMITOMO METAL MINING

Mitsubishi Corporation

Sumitomo Metal Mining (SMM) and Mitsubishi Corporation (MC), together the **Consortium**, **fully funding DFS** up to **A$98.5M** to earn 35% interest in KNPL, and a further 15% interest in KNPL on Final Investment Decision (FID). Consortium to assist KNPL in optimising debt financing

See 29 April 2024 ARL SMM and MC to form a JV to develop KNP Goongarrie Hub ASX Announcement. See Appendix for milestone details

What the Partners are Bringing to the Joint Venture

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Ardea Resources Limited

Ardea's Globally Significant Asset

Goongarrie Hub – **MRE 4Mt contained Ni & 250Kt contained Co. Ore Reserve of 1.36Mt of contained Ni & 99Kt contained Co**[1]

Wealth of data and knowledge

Strong local, state and federal stakeholder relationships and support

Major Project Status

SUMITOMO METAL MINING

Mitsubishi Corporation

SMM and MC will fully fund the KNP Goongarrie Hub DFS

Will provide technical and commercial input and assist KNPL in optimising debt financing

Will have access to 75% of the off-take on commercial terms

SMM is a pre-eminent nickel-cobalt laterite development and production company, operating the Coral Bay and Taganito HPAL nickel operations and the Niihama Nickel Refinery and Harima Refinery

MC is one of Japan's largest and premier general trading and investment companies with decades of experience in supporting the Australian resources sector

1. See 30 June 2023 ARL MRE announcement and 5 July 2023 ARL PFS ASX Announcement and full Financial Metrics. See Appendices in this presentation
   NB: Project MRE, Ore Reserve, Production, Operation and Financial numbers are being updated as part of the in-progress DFS
2. See 29 April 2024 ARL, SMM and MC to form a JV to develop KNP Goongarrie Hub ASX Announcement

KNP Goongarrie Hub – Multi Decade, Large Scale Operation

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KALGOORLIE NiCKEL

The KNP Goongarrie Hub will contribute significantly to local, state and national economy and will be an important part of the Australian Nickel sector

40 year mine life
producing
~30ktpa nickel & 2ktpa cobalt [1,2]

3,000 Jobs
during Construction
>800
Operational workforce [1,2,3]
+ indirect jobs

Project to
support local, state, national,
communities, suppliers and stakeholders

Long term supply of low cost[1,2]
Nickel-Cobalt
Innovative R&D & high ESG standards growing Australian Ni Sector

1. See 5 July 2023 ARL PFS ASX Announcement and Appendices of this presentation for Key Financial Metrics
2. Project MRE, Ore Reserve, Production, Operation and Financial numbers are being updated as part of the in-progress DFS
3. Workforce estimates presented are based on past and current studies, and other industry examples. Indirect employment is not included in estimate. e.g. boost to local employment in City of Kalgoorlie-Boulder and Shire of Menzies site services, hospitality, equipment maintenance, logistics and more

KNP Goongarrie Hub – Large scale, long-life, low-cost Ni-Co operation

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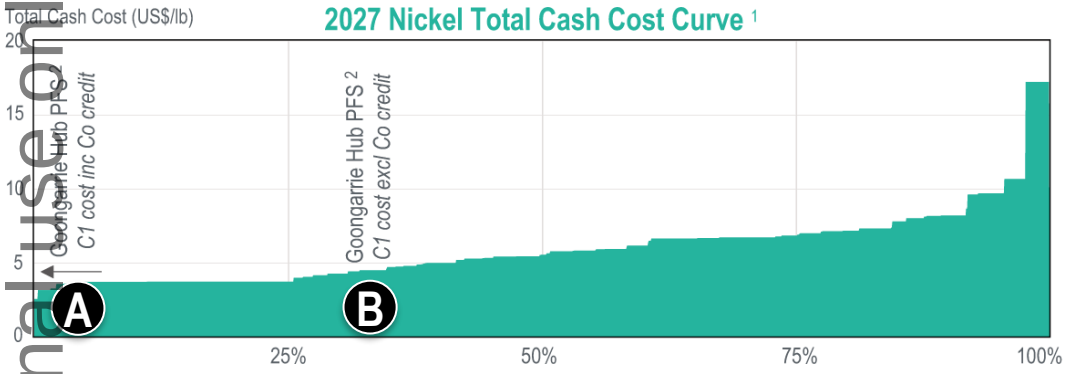
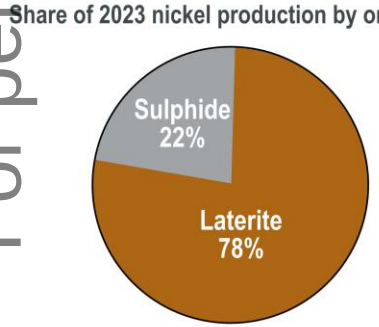
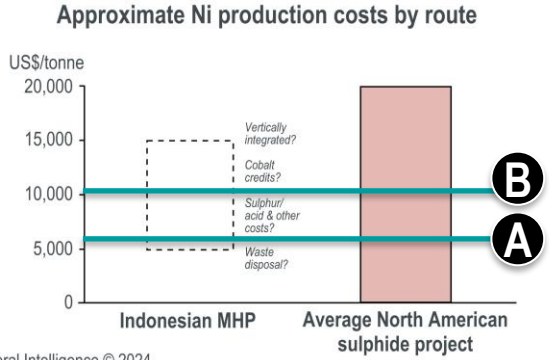


1. S&P Capital IQ.
2. From 5 July 2023 ARL PFS ASX Announcement: LOM C1 Cost including Co credit US$5,763/t (US$2.61/lb)
LOM C1 Cost excluding Co credit US$10,197/t (US$4.62/lb)



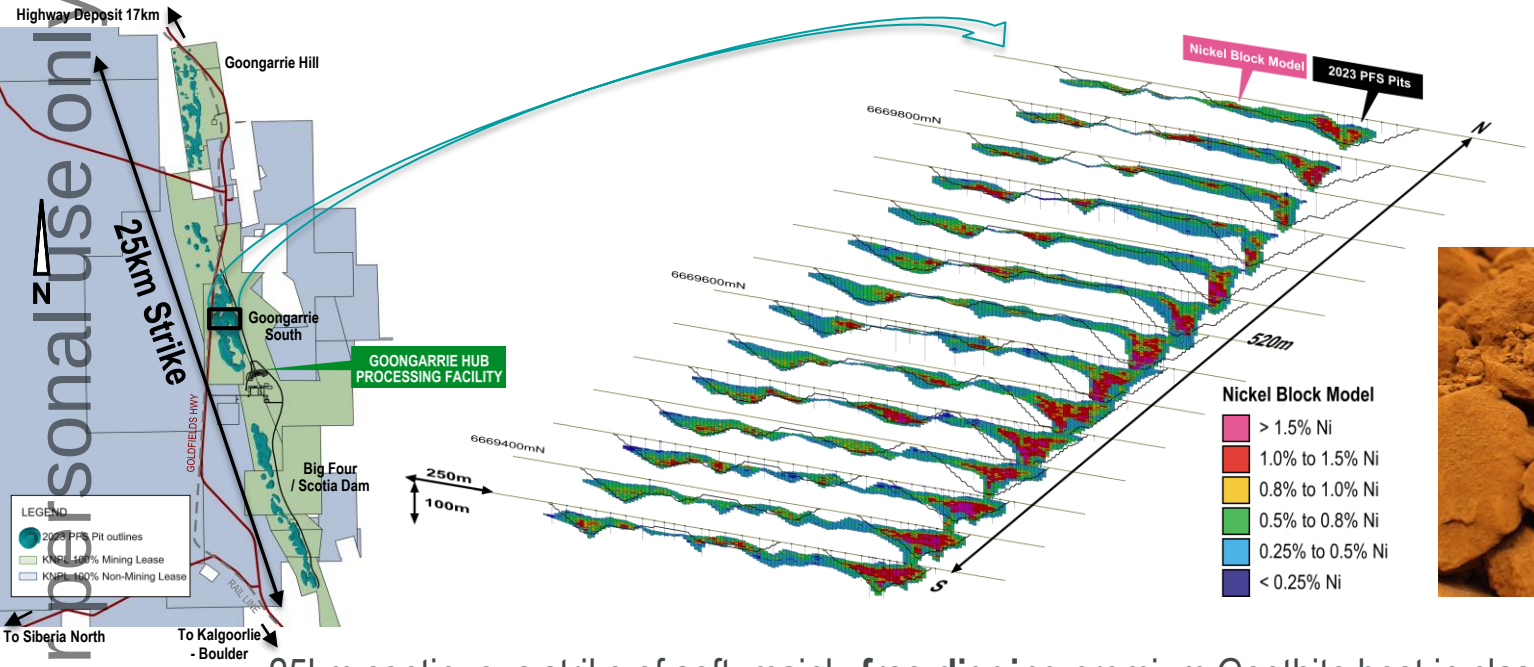


Courtesy of Benchmark Mineral Intelligence © 2024
Data: Benchmark Nickel Forecast

- Goongarrie Hub Ore Reserve[2] **194.1Mt at 0.70% Ni and 0.05% Co for 1.36Mt of nickel and 99,000t of cobalt** to sustain production of approximately **30,000t of nickel and 2,000t of cobalt per year for > 40 years**
- Strong financial metrics with average annual **EBITDA of A$800M**, and Post-tax **$NPV_7$ of A$4,980M (IRR 23%)**[2]
- KNP Goongarrie Hub Low C1 Opex after Cobalt credit of **US$5,763/t Ni** in MHP LOM[2] compares well with Indonesian Opex and lower than most current producers

2. See full tables in Appendix and 5 July 2023 ARL PFS ASX Announcement
A. LOM C1 Cost including Co credit US$5,763/t[2]
B. LOM C1 Cost excluding Co credit US$10,197/t[2]
NB: Project MRE, Ore Reserve, Production, Operation and Financial numbers are being updated as part of the in-progress DFS

Premium Goethite Nickel-Cobalt Ore - Low Cost Characteristics



Typical premium high grade Goethite at Goongarrie South

- 25km continuous strike of soft, mainly **free-digging** premium Goethite best in class plant feed makes up 69% of the direct Plant Feed defined in the 2023 PFS[1]
- Conventional low-cost open pit mining with mining costs less than 12% of total OPEX with 2023 PFS[1] pit schedule very low strip ratio of 1.8:1 (waste:ore) Life of Mine (LOM)

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1 See 5 July 2023 ARL PFS ASX Announcement. NB: Project MRE, Ore Reserve, Production, Operation & Financial numbers are being updated in current in-progress DFS

KNP Goongarrie Hub – Shallow, Thick, High-Grade Nickel

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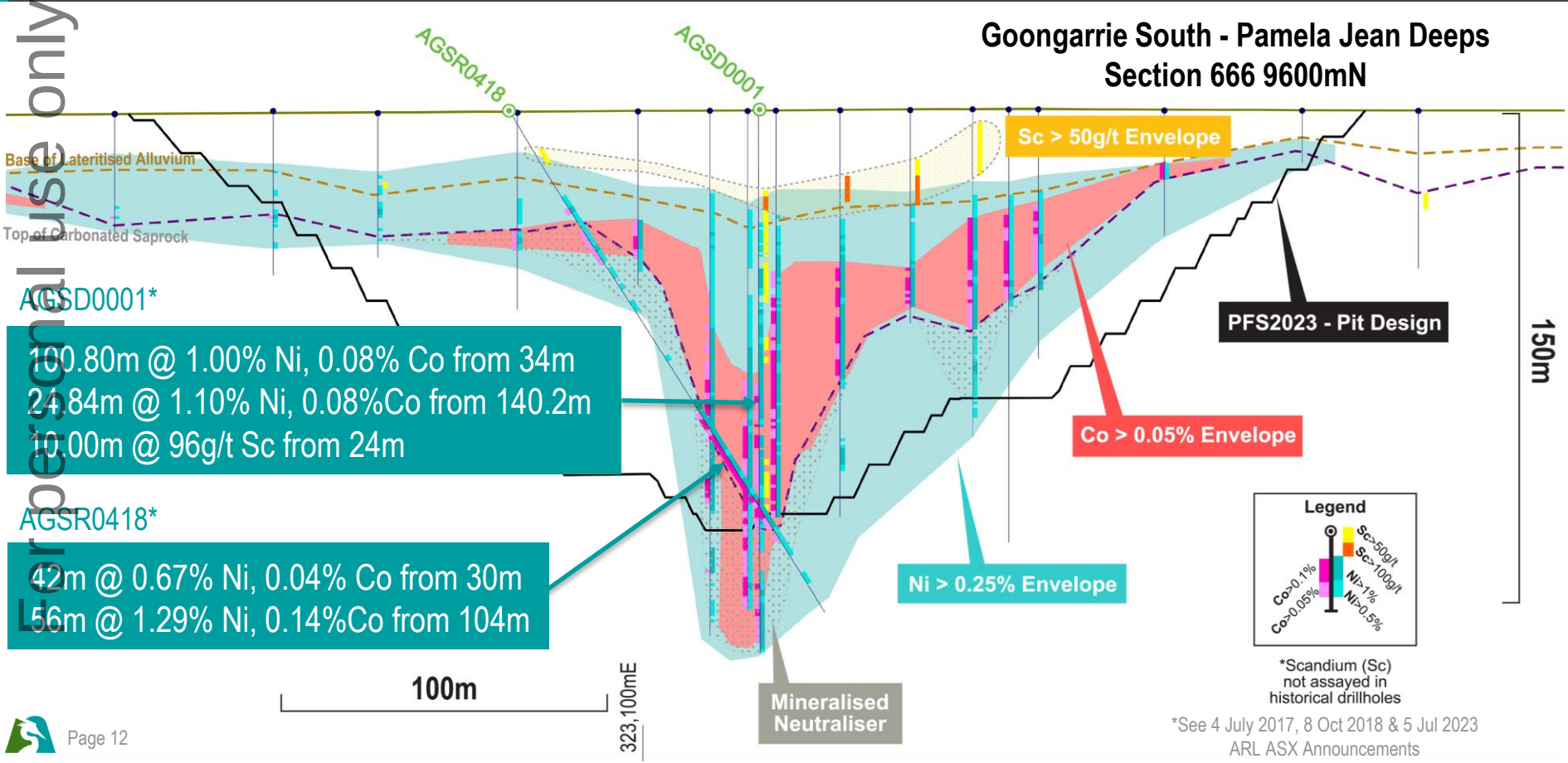

AGSD0001*

100.80m @ 1.00% Ni, 0.08% Co from 34m
24.84m @ 1.10% Ni, 0.08%Co from 140.2m
10.00m @ 96g/t Sc from 24m

AGSR0418*

42m @ 0.67% Ni, 0.04% Co from 30m
56m @ 1.29% Ni, 0.14%Co from 104m

*See 4 July 2017, 8 Oct 2018 & 5 Jul 2023 ARL ASX Announcements

KNP Goongarrie Hub – Mineralised Neutraliser within Highway Ore

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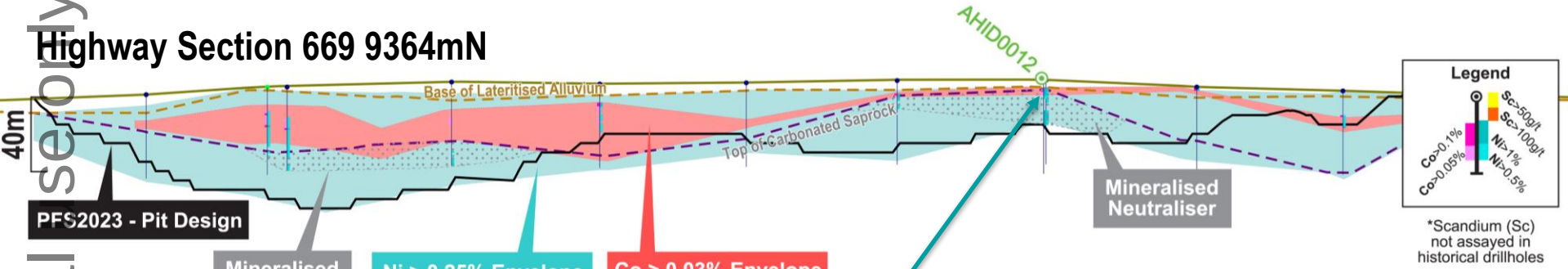
Highway Section 669 9364mN



AHID0012*

20m @ 1.14% Ni, 0.037% Co & 4g/t Sc from 4m
inc 4m @ 2.31% Ni, 0.132% Co & 8g/t Sc from 4m – HPAL feed
& inc 8m @ 1.30% Ni, 0.015% Co & 3g/t Sc from 16m –
Mineralised Neutraliser (see Core Tray photograph for part interval)

Brown Goethite

Typical white magnesite Mineralised Neutraliser at Highway

* See 16 November 2022 ARL Mineralised Neutraliser ASX Announcement, including Appendix 1 for assays of Mineralised Neutraliser

ESG Credentials Strengthened During PFS

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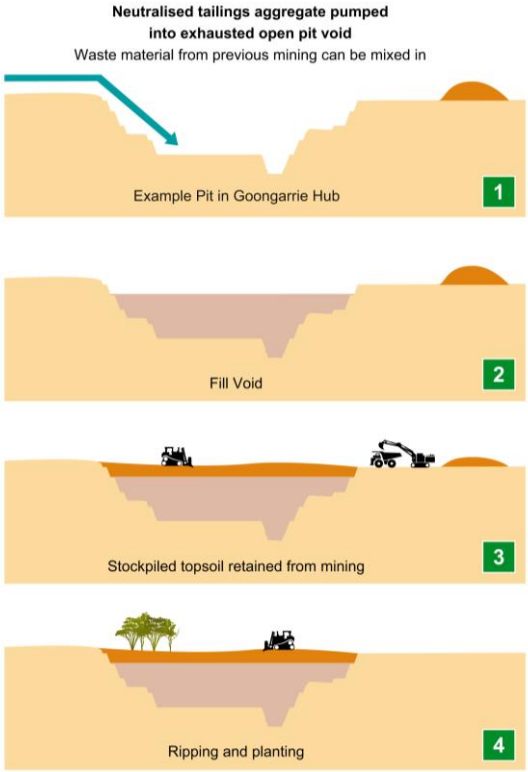
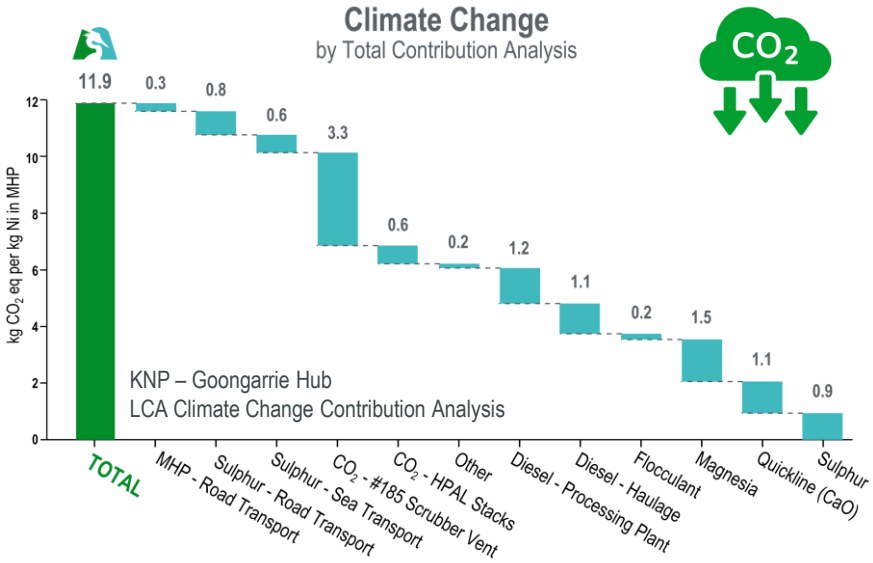
In-pit tailings disposal[1] **minimises environmental footprint** and enables mine site rehabilitation, concurrent with steady-state mine operation.





Life Cycle Assessment (LCA) is expected to be 11.9 kg CO_2 eq. per kg nickel in MHP based on Ardea's Scope 1, 2 and upstream Scope 3 emissions[1]. **This compares favourably to the global average of ~13.0 kg CO_2 eq. per kg nickel produced.**

1. See 5 July 2023 ARL PFS ASX Announcement.

KNP Goongarrie Hub DFS has commenced

KALGOORLIE NICKEL

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KNPL is a 100% subsidiary of **Ardea** with the **Consortium** progressively earning a 50% interest. KNPL holds **the Goongarrie Hub** and will manage KNP Goongarrie Hub DFS[1]

Ardea, SMM and MC representatives comprise the KNPL steering committee. Significant technical and commercial input to the DFS will be made by Ardea, SMM and MC.

The DFS will evaluate increasing processing capacity from 3.5Mtpa (PFS) to **4Mtpa**, through reducing residence time in autoclave from 70 mins to 60 mins (metallurgy testwork results as low as 40 mins[2])

Infill Drilling underway to upgrade definition of Mineral Resources into Measured category within the first five year pit shells as part of the DFS, that will be available for conversion to Proven Ore Reserve[3]

Engineering firm Ausenco awarded the Process Plant contract[3]

The DFS to generate strong news flow

Andrew Penkethman and Matt Read with Sumitomo Metal Mining and Mitsubishi Corporation representatives - Niihama Nickel Refinery, Japan June 2024

KNP Goongarrie Hub Joint Venture being managed by KNPL to generate strong and regular news flow

1. See 29 April 2024 ARL, SMM and MC to form a JV to develop KNP Goongarrie Hub ASX Announcement
2. See 24 July 2018 Goongarrie Expansion Study ASX Announcement
3. See 8 July 2024 Kalgoorlie Nickel Project - Goongarrie Hub DFS Underway ASX Announcement

Current Nickel output cuts to pressure near term surpluses lower

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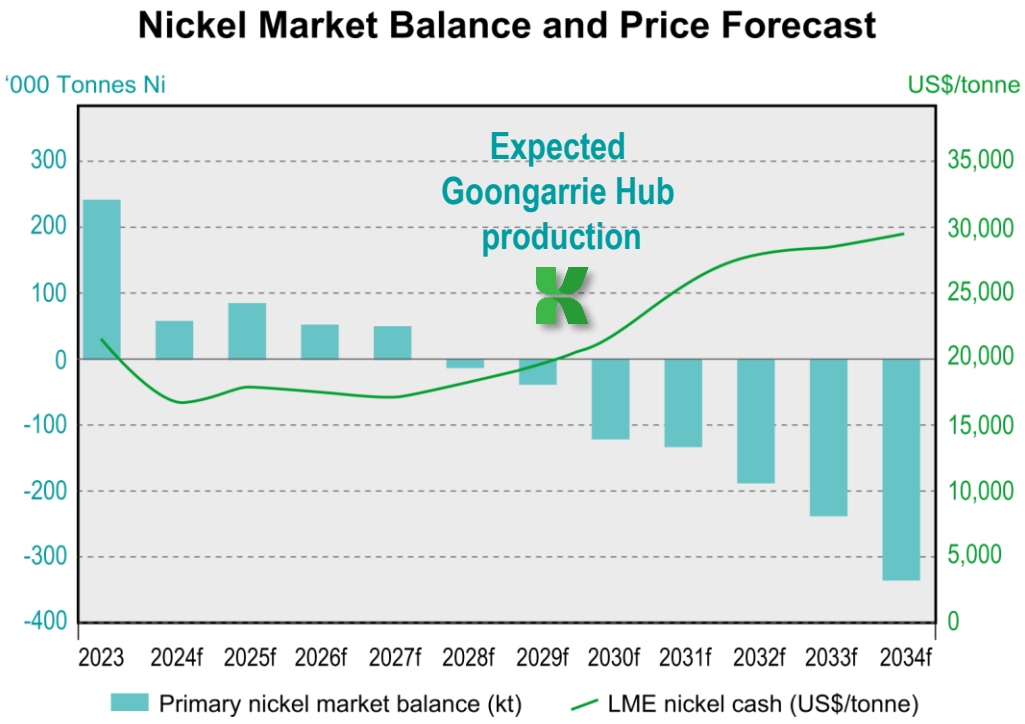
- 2023 large nickel surplus led to a drop in the LME nickel price
- Higher cost producers have responded by cutting / ceasing production which in turn has put pressure on supply
- Security and continuity of critical mineral supply at risk in poor ESG jurisdictions
- 2024-2027 forecast showing reducing surplus, with supply gap increasing progressively from 2028, with forecast LME nickel prices correspondingly rising
- **Security and diversity of nickel supply is imperative with Goongarrie Hub production perfectly timed**



After Source: Fastmarkets Long Term Forecasts 2024

Ardea Exploration Pipeline Upside

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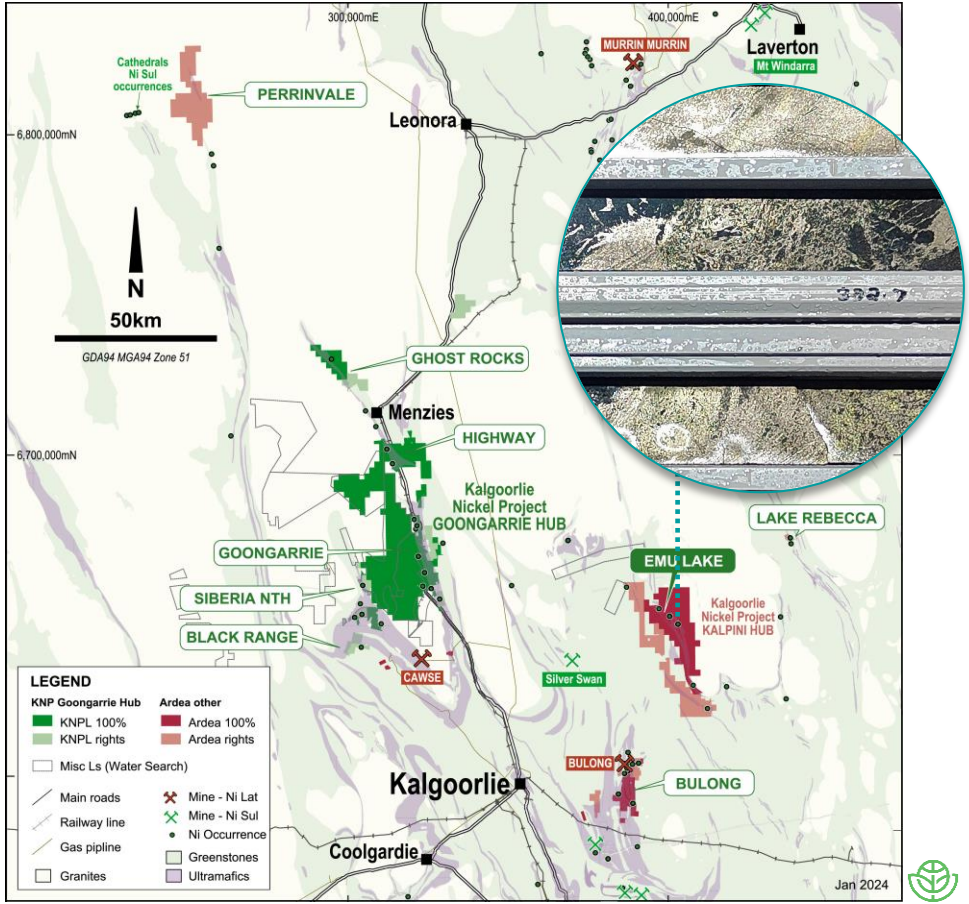
Ardea controls **~3,500km^2 of tenure in the Eastern Goldfields of WA** with unrivalled **Critical Mineral** exploration potential

- **Kalpini Project - Massive nickel-copper-PGE sulphides discovered** at Emu Lake (AELD0003: 2.72m at 5.42% Ni & 0.85% Cu from 391.04m) within largely untested 20km of strike[1]
- **Scandium** and **Rare Earth Elements** (REE) identified at Ardea's **KNP Kalpini**[2] tenure
- Ardea retain 100% ownership of non-Goongarrie Hub KNP projects (where MRE totals 2Mt contained Nickel[3]) providing an internal pipeline for future growth of laterite Ni-Co resources and other commodities



1. See 14 Jan 2022 ARL ASX Announcement
2. See 14 Mar 2022 ARL ASX Announcement
3. See full MRE tables in Appendix and 30 June 2023 ARL ASX Announcement.

Key Investment Considerations – For the stand-out Nickel-Cobalt Stock

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Ardea, **Sumitomo Metal Mining** (SMM) and **Mitsubishi Corporation** (MC) to form a JV to develop the **KNP Goongarrie Hub**[2]. The **DFS,** managed by KNPL, has commenced and will generate **strong news flow**[3]

KNP Goongarrie Hub PFS starter project defined **> 40 year mine life producing ~30ktpa nickel and 2ktpa cobalt,** with strong earnings, project payback in **3.1 years** and **low C1 cost** will provide resilience throughout the commodity price cycle[1]

The **Ardea** Team have relevant experience, local knowledge and are working with highly regarded global partners to advance the globally significant KNP Goongarrie Hub, to **deliver quality outcomes to benefit all stakeholders**

KNP is a strategic asset which includes the Goongarrie Hub, (part of JV with SMM & MC), and remaining KNP Hubs (**100% Ardea**). **The global KNP Nickel-Cobalt resource is the largest in Australia and in top 10 globally**

KNP Goongarrie Hub will be **Australia's next large scale, long life, low cost, Nickel-Cobalt Operation**[1], of a scale that is incredibly rare and important in the World's journey to Net Zero

Ardea controls ~3,500km^2 of tenure in the Eastern Goldfields of WA with unrivalled Battery and Critical Mineral exploration potential, providing an **internal growth pipeline of opportunities**

1. See 5 July 2023 ARL PFS ASX Announcement and full Financial Metrics. See Appendices in this presentation.
   NB Project MRE, Ore Reserve, Production, Operation and Financial Metrics are being updated as part of the in-progress DFS.
2. See 29 April 2024 ARL SMM and MC to form a JV to develop KNP Goongarrie Hub ASX Announcement.
3. See 8 July 2024 Kalgoorlie Nickel Project - Goongarrie Hub DFS Underway ASX Announcement.

Ardea Resources Limited

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For further information

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Managing Director & CEO

+61 8 6244 5136

Our team welcome your questions

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ASX:ARL

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Ardea Resources Limited

Kalgoorlie Nickel Project - Goongarrie Hub

A multi decade, large scale, low cost nickel-cobalt operation

ASX:ARL

Appendices:
Full tables and supporting references

Australian Federal Government - Major Project Status

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Competent Persons

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Information in this presentation has been summarised from ARL ASX MRE Announcement 30 June 2023, ARL ASX PFS Announcement 5 July 2023 and ARL ASX MOU Announcements 5 July 2023, 29 September 2023, 21 December 2023 and 31 January 2024.

Resource Estimation, Exploration Results, and Industry Benchmarking

The Resource Estimation, Exploration Results and Industry Benchmarking summaries are based on information reviewed or compiled by Mr Ian Buchhorn, and Mr Andrew Penkethman. Mr Buchhorn is a Member of the Australasian Institute of Mining and Metallurgy and Mr Penkethman is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Both Mr Buchhorn and Mr Penkethman are full-time employees of Ardea Resources Limited and have sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking 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'.

Mr Buchhorn and Mr Penkethman have reviewed this press release and consent to the inclusion in this report of the information in the form and context in which it appears. Mr Buchhorn and Mr Penkethman own Ardea shares.

Ardea wishes to clarify that its current Kalgoorlie Nickel Project (KNP) Mineral Resource Estimate (MRE) following JORC Code (2012) guidelines is:

					Contained	Contained
KNP	Resource Category	Size (Mt)	Ni (%)	Co (%)	Ni (kt)	Co (kt)
Kalgoorlie Nickel Project Total	Measured	22	0.94	0.079	207	17
	Indicated	361	0.73	0.047	2,622	169
	Inferred	471	0.70	0.043	3,272	200
KNP	Grand Total	854	0.71	0.045	6,101	386

Note: 0.5% nickel cutoff grade used to report resources. Minor discrepancies may occur due to rounding of appropriate significant figures.

The Mineral Resource Estimate information shown in this ASX release has been previously released on the ASX platform by Ardea in ASX release 30 June 2023, in accordance with Listing Rule 5.8.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement noted above and that all material assumptions and technical parameters underpinning the Mineral Resource Estimate in the previous market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcement.

Ore Reserves

Information in this presentation that relates to Ore Reserves at the Kalgoorlie Nickel Project Goongarrie Hub is based on and fairly represents information and supporting documentation compiled by Mr Jake Fitzsimons, a Competent Person who is a full-time employee of Orelogy Mine Consulting, a company engaged by Ardea. Mr Fitzsimons is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Fitzsimons has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being 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 (2012 JORC Code). Mr Fitzsimons does not hold securities in Ardea and consents to the inclusion in this announcement of all technical statements based on his information in the form and context in which they appear.

The Ore Reserve information shown in this ASX release has been previously released on the ASX platform by Ardea in ASX release 5 July 2023, in accordance with Listing Rule 5.9.

					Contained	Contained
Goongarrie Hub	Ore Reserve Category	Size (Mt)	Ni (%)	Co (%)	Ni (kt)	Co (kt)
Ore Reserve	Proven	16.7	0.96	0.09	160	15
	Probable	177.4	0.68	0.05	1,204	84
	Grand Total	194.1	0.70	0.05	1,365	99

Note: Minor discrepancies may occur due to rounding of appropriate significant figures.

Full details on the Ore Reserve are available in the 5 July Ardea ASX announcement, see Section 5 and Appendix 1.

The Ore Reserve information shown in this ASX release has been previously released on the ASX platform by Ardea in ASX release 5 July 2023, in accordance with Listing Rule 5.9.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement noted above and that all material assumptions and technical parameters underpinning the Ore Reserve in the previous market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcement.

KNP Global MRE

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The Competent Persons (CP) for the Mineral Resources, are Mr Ian Buchhorn and Mr Andrew Penkethman, both are full-time employees of Ardea and consider the resource classification applied to the KNP resource models to reflect appropriate confidence in the input exploration data, geological interpretation and resource grade and tonnage estimates.

Various ASX market releases for the Mineral Resources described have been competed by Ardea, notably:

- *30 June 2023 'Kalgoorlie Nickel Project Mineral Resource Estimate Exceeds 6 Million Tonne Contained Nickel'.*
- *16 June 2021 'Highway Nickel Deposit -Mineral Resource Estimate 92 million tonnes at 0.69% nickel and 0.038% cobalt'.*
- *15 February 2021 'GNCP High Grade Resource -60 million tonnes at 1.0% nickel Sustainable Long-life Battery Metal Resource Confirmed'.*

KNP Global nickel and cobalt Mineral Resources based on a 0.5% Ni cut-off grade

					Contained	Contained
KNP Hub	**Resource Category**	**Size (Tonnes)**	**Ni (%)**	**Co (%)**	**Ni (kt)**	**Co (kt)**
Goongarrie Hub	Measured	18,200,000	0.94	0.085	171	15
	Indicated	276,500,000	0.70	0.046	1,923	127
	Inferred	289,300,000	0.67	0.037	1,951	108
	Sub Total	**584,000,000**	**0.69**	**0.043**	**4,044**	**250**
Kalpini Hub	Indicated	15,900,000	1.06	0.055	169	9
	Inferred	113,600,000	0.76	0.047	859	53
	Sub Total	**129,500,000**	**0.79**	**0.048**	**1,028**	**62**
Yerilla Hub	Measured	3,800,000	0.94	0.048	36	2
	Indicated	68,400,000	0.78	0.049	531	33
	Inferred	67,800,000	0.68	0.057	462	39
	Sub Total	**140,000,000**	**0.73**	**0.053**	**1,028**	**74**
Kalgoorlie Nickel Project Total	Measured	22,000,000	0.94	0.079	207	17
	Indicated	360,800,000	0.73	0.047	2,622	169
	Inferred	470,700,000	0.70	0.043	3,272	200
KNP	Grand Total	853,500,000	0.71	0.045	6,101	386

Minor discrepancies may occur due to rounding of appropriate significant figures.

KNP Goongarrie Hub MRE

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The Competent Persons (CP) for the Mineral Resources, are Mr Ian Buchhorn and Mr Andrew Penkethman, both are full-time employees of Ardea and consider the resource classification applied to the Goongarrie Hub resource models to reflect appropriate confidence in the input exploration data, geological interpretation and resource grade and tonnage estimates.

Various ASX market releases for the Mineral Resources described have been completed by Ardea, notably:

- *30 June 2023 'Kalgoorlie Nickel Project Mineral Resource Estimate Exceeds 6 Million Tonne Contained Nickel'.*
- *16 June 2021 'Highway Nickel Deposit -Mineral Resource Estimate 92 million tonnes at 0.69% nickel and 0.038% cobalt'.*
- *15 February 2021 'GNCP High Grade Resource -60 million tonnes at 1.0% nickel Sustainable Long-life Battery Metal Resource Confirmed'.*

KNP Goongarrie Hub nickel and cobalt Mineral Resources based on a 0.5% Ni cut-off grade

Prospect	Resource	Size	Ni	Co	Contained Metal		Estimation Details		
	Category	(Mt)	(%)	(%)	Ni (kt)	Co (kt)	Method	Source	Year
Goongarrie South	Measured	18	0.94	0.085	171	15	LUC	Ardea	2021
	Indicated	82	0.71	0.049	584	40	LUC	Ardea	2021
	Inferred	10	0.64	0.033	61	3	LUC	Ardea	2021
Highway	Indicated	71	0.69	0.038	487	27	LUC	Ardea	2023
	Inferred	21	0.67	0.04	141	8	LUC	Ardea	2023
Ghost Rocks*	Inferred	47	0.66	0.042	312	20	OK	Snowden	2004
Goongarrie Hill	Indicated	40	0.65	0.037	259	15	LUC	Ardea	2021
	Inferred	29	0.6	0.025	176	7	LUC	Ardea	2021
Big Four	Indicated	49	0.71	0.047	346	23	LUC	Ardea	2021
	Inferred	14	0.68	0.043	96	6	LUC	Ardea	2021
Scotia Dam	Indicated	12	0.71	0.065	82	7	LUC	Ardea	2021
	Inferred	5	0.72	0.043	37	2	LUC	Ardea	2021
Goongarrie Subtotal	Measured	18	0.94	0.085	171	15			
	Indicated	253	0.69	0.044	1,758	112			
	Inferred	127	0.65	0.037	823	47			
	Combined	398	0.69	0.044	2,753	175			
Siberia South*	Inferred	81	0.65	0.033	525	27	OK	Snowden	2004
Siberia North	Indicated	14	0.72	0.042	102	6	Ni (UC), Co (OK)	Snowden	2009
	Inferred	72	0.74	0.034	534	25	Ni (UC), Co (OK)	Snowden	2009
Black Range*	Indicated	9	0.67	0.09	62	8	OK	HGMC	2017
	Inferred	10	0.69	0.1	68	10	OK	HGMC	2017
Siberia Subtotal	Indicated	24	0.7	0.061	165	14			
	Inferred	163	0.69	0.038	1,127	61			
	Combined	186	0.69	0.04	1,292	75			
KNP Goongarrie Hub TOTAL	Measured	18	0.94	0.085	171	15			
	Indicated	277	0.7	0.046	1,923	127			
	Inferred	289	0.67	0.037	1,951	108			
	Combined	**584**	**0.69**	**0.043**	**4,044**	**250**			

*Note - Mineral Resources that are not considered in 2023 PFS.

KNP Goongarrie Hub Ore Reserve Summary

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KNP Goongarrie Hub Ore Reserve Summary consisting of ore above 0.5% Ni as the feed stock for the processing facility, and ore as Mineralised Neutraliser above 0.5% NieQ and LOI above 25%

Notes:

- *The Ore Reserve is reported in accordance with JORC Code 2012.*
- *Ore reserves are reported at a cut-off of 0.5% Ni for primary feed stock to the processing facility, plus mineralised neutraliser as ore at a cut-off of 0.5% Ni Equivalent (NiEq) and Loss on Ignition (LOI) above 25%.*
- *NiEq defined using Ni + 2.32 x Co.*
- *The Ore Reserve was evaluated using a base price of US$22,000/t for Ni and US$51,000/t for Co at 85% payable for a Mixed Hydroxide Precipitate (MHP) product, and an exchange rate 0.69 USD/AUD. In view of forward metal price projections averaging US$25,000/t Ni, the Ore Reserve can be considered conservative.*
- *Ore Reserves account for mining dilution and mining ore loss.*
- *Ore Reserves are reported on a Dry Tonnage Basis.*
- *Proven Ore Reserves are based on Measured Mineral Resources only and Probable Ore Reserves are based on Indicated Mineral Resources only.*
- *The sum of individual amounts may not equal due to rounding.*
- *This Ore Reserve estimate is for a subset of the KNP Goongarrie Hub deposits being Goongarrie South, Big Four / Scotia Dam, Goongarrie Hill, Highway and Siberia North.*
- *The Ore Reserve Summary was detailed in ARL ASX PFS Announcement, 5 July 2023.*
- *Minor discrepancies may occur due to rounding of appropriate significant figures.*

	Ore >= 0.5% Ni					Ore > 0.5% NiEq and LOI > 25%					Total Ore				
Deposit	Mt	Ni %	Co %	Ni kt	Co kt	Mt	Ni %	Co %	Ni kt	Co kt	Mt	Ni %	Co %	Ni kt	Co kt
Proven															
Goongarrie South	16.7	0.96	0.09	160	15	0.05	0.43	0.03	0.20	0.01	16.7	0.96	0.09	160	15
Sub-total	**16.7**	**0.96**	**0.09**	**160**	**15**	**0.05**	**0.43**	**0.03**	**0.20**	**0.01**	**16.7**	**0.96**	**0.09**	**160**	**15**
Probable															
Big Four/Scotia Dam	34.9	0.76	0.07	265	23	0.8	0.38	0.04	3	0	35.7	0.75	0.06	268	23
Goongarrie South	33.6	0.79	0.07	265	23	1.8	0.40	0.03	7	1	35.4	0.77	0.07	272	24
Goongarrie Hill	15.8	0.70	0.04	110	7	0.1	0.44	0.02	0	0	15.9	0.70	0.04	111	7
Highway	54.0	0.70	0.04	380	22	27.2	0.39	0.01	106	4	81.2	0.60	0.03	486	26
Siberia North	9.2	0.74	0.05	68	4	-	-	-	-	-	9.2	0.74	0.05	68	4
Sub-total	**147.4**	**0.74**	**0.05**	**1,087**	**79**	**29.9**	**0.39**	**0.02**	**117**	**5**	**177.4**	**0.68**	**0.05**	**1,204**	**84**
PROVEN AND PROBABLE TOTAL															
Big Four/Scotia Dam	34.9	0.76	0.07	265	23	0.8	0.38	0.04	3	0	35.7	0.75	0.06	268	23
Goongarrie South	50.2	0.85	0.08	425	38	1.9	0.40	0.03	7	1	52.1	0.83	0.07	432	39
Goongarrie Hill	15.8	0.70	0.04	110	7	0.1	0.44	0.02	0	0	15.9	0.70	0.04	111	7
Highway	54.0	0.70	0.04	380	22	27.2	0.39	0.01	106	4	81.2	0.60	0.03	486	26
Siberia North	9.2	0.74	0.05	68	4	-	-	-	-	-	9.2	0.74	0.05	68	4
TOTAL	**164.1**	**0.76**	**0.06**	**1,247**	**94**	**30.0**	**0.39**	**0.02**	**117**	**5**	**194.1**	**0.70**	**0.05**	**1,365**	**99**

PFS Key Financial Metrics

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PFS defines > 40-year operation with strong financial metrics[1]:

- Pre-tax NPV_7 of **A$7,625M** (IRR 30%)
- Post-tax NPV_7 of **A$4,980M** (IRR 23%)
- Average **Annual EBITDA of A$800M**
- Project **pay back within 3.1 years**
- Low cost after Cobalt credit of **US$5,763/t Ni in MHP LOM**

1. See 5 July 2023 ARL PFS ASX Announcement.
2. Post tax.
3. From start of operation.

NB: Project MRE, Ore Reserve, Production, Operation and Financial numbers are being updated as part of the in-progress DFS.

Financials		
Nickel Revenue	A$ M	**44,429**
Cobalt Revenue	A$ M	**7,880**
Revenue - combined	A$ M	**52,309**
EBITDA LOM	A$ M	**34,217**
EBITDA Annual (average)	A$ M	**800**
EBITDA margin	%	**65%**
Net Cash Flow (Pre-tax)	A$ M	**31,100**
Valuation		
Net Present Value (NPV_7)[2]	A$ M	**4,980**
Internal Rate of Return (IRR)[2]	%	**23%**
Total Capital Payback[3]	years	**3.1**
Assumptions		
Exchange rate	AUD:USD	0.67
Nickel Price	US$/t	25,000
Cobalt Price	US$/t	60,000

PFS 2023 – Capital Cost Estimate

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KNP – Goongarrie Hub

- Contingency considered appropriate to the level of the capital cost estimate has been included
- Base date March 2023
- Refer to 5 July 2023 ARL PFS ASX Announcement for full details and Reasonable Basis Statement

Preproduction Cost Category	Costs (A$)
Mining – overheads, mobilisation, pre-strip and other	98M
Process plant & infrastructure	2,264M
Sulphuric acid, steam and power plant	574M
Borefield	181M
Total Capital Cost[1]	3,117M

Ardea 5 July 2023 PFS capital cost estimate based on a 3.5Mtpa processing operation consisting of x2, 1.5Mtpa HPAL autoclaves and a 0.5Mtpa Atmospheric Leach circuit.

DFS Key Budget Items

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The Consortium (SMM and MC) will fund 100% of the KNP Goongarrie Hub DFS costs, up to the agreed budget of A$98.5 million

DFS Cost Centre	Costs (A$)
Drilling	13.4M
Metallurgical Test Work	2.3M
Mine Design (incl dewatering & geotechnical)	15.0M
Process Plant Design	28.3M
Buildings and Camp Design	5.3M
Approvals	4.9M
Staff, Corporate and Other	26.2M
Other Expert Consultants	1.5M
Tenement Costs	1.6M
DFS Total Budget	98.5M

KNP – Goongarrie Hub Superior HPAL Intensity

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- ✓ Good ore grade + good slurry density = Lower Capex & Opex $$
- ✓ Atmospheric leach = stable operation, utilizes saprolite resource
- ✓ MHP & MSP Product = known technology & good market acceptance

Operating data from Australian HPAL Producers

Performance Driver	Ardea	Bulong#	Cawse#	Murrin	RNO^	Metric	Ardea Rank	Comment
Atmospheric Leach	Yes	No	No	No	Yes	-	#1	Stable operation and full resource utilisation
HPAL Feed Density	45%	31%	35%	38%	42%	% Solids	#1	The higher the better = Maximises plant throughput
Residence Time	70*	75	105	90	60	minutes	#2	The lower the better = Maximises plant throughput
Slurry Grade Ni	7.55	2.89	3.07	3.87	7.39	Ni kg/m3	#1	The higher the better = Increased revenue stream
Slurry Grade Co	0.59	0.23	0.24	0.34	0.31	Co kg/m3	#1	The higher the better = Strategic Co-Product credits

Data Sources
Ardea – Goongarrie Hub testwork results from PFS and Expansion Study, ASX release 28 March 2018 & Goongarrie Expansion Study, 24 July 2018 and ongoing project assessment as part of completing the DFS.
Bulong, Cawse, Murrin - ALTA 1999, An Engineering Comparison of the Three Treatment Flowsheets In WA Nickel Laterite Projects.
RNO – ALTA 2001, Observations from the RNO Pilot Plant at Lakefield Research, 2000 AD.

^Ravensthorpe Nickel Operation (RNO) figures based on design numbers on upgraded beneficiated ore from the Halleys Deposit which has since been mined out. # Bulong & Cawse – care and maintenance

Ardea data is based on non-beneficiated material (with always an option to beneficiate selected KNP geo-met types, notably at Highway & Goongarrie Hill).

*Goongarrie Hub DFS to assess reduction in Ardea residence time from 70 minutes to 60 minutes. Residence time 45 minutes estimated in Goongarrie Expansion Study (ASX announcement 24 July 2018)

EV Sales Grow – High Nickel Batteries hold increasing share of market

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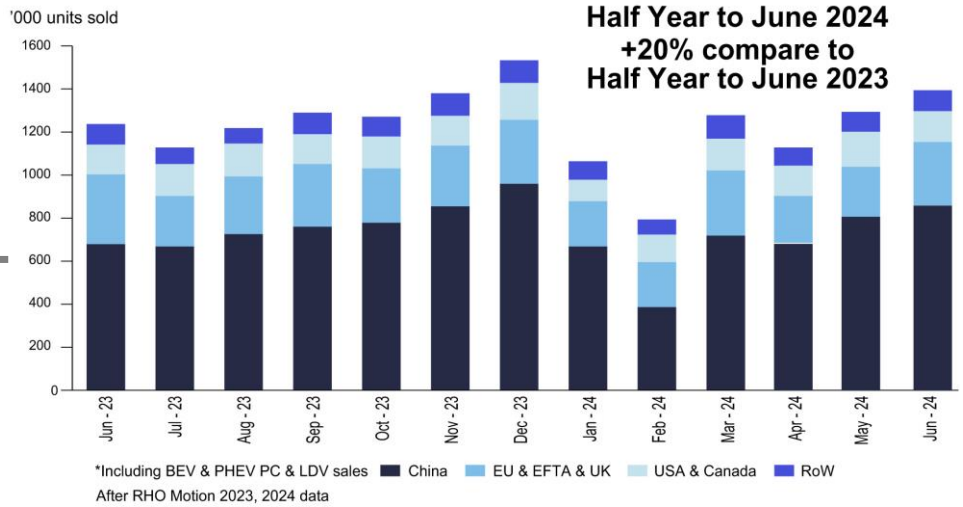
Nickel batteries, which have nearly **twice the energy density of other materials, are leading EV applications** in Domestic, Commercial and Public Transport

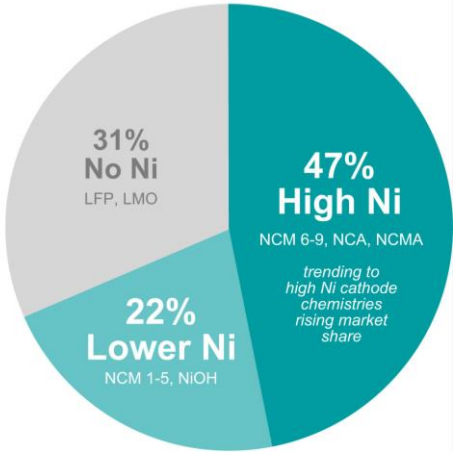
Global EV sales* for Half Year to Jun 2024 was **7M units,** being a **20% increase** compared to Half Year to Jun 2023[1]



- **Nickel** batteries hold a large share of the EV landscape. **High Ni cathodes** favoured, with increasing market share.[2] Developers moving towards **>90% Ni cathodes**

Nickel Cathode Chemistry

Share of EV market by MWh Jul 2023



1. Source: RHO Motion 2023, 2024 data and graph

2. Source: After Adamas Intelligence Oct 2023

Leveraging KNP Goongarrie Hub Material Types

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The KNP Goongarrie Hub nickel-cobalt laterite deposits have developed from intense tropical weathering of the Walter Williams Formation (WWF), an olivine cumulate ultramafic volcanic rock, and preferential weathering of the Bardoc Tectonic Zone crustal scale structures

High grade, **consistent mineralisation at Goongarrie** is due to deep, intense ground-water leaching/ weathering beneath palaeo-lake/channels, resulting in the deep "V" shape of the Goongarrie South deposit. Intense leaching of silica and magnesia minerals has resulted in strong hydrated iron oxide enrichment, being the **premium Goethite nickel-cobalt ore**

Areas with less intense leaching retain **relic carbonate saprock** as a near surface perched horizon, typically white magnesite fragments 'floating' in mineralised clay-goethite. The beneficiated screen oversize is the source of **Mineralised Neutraliser (MN).** The **Fines** are an **additional feed** to the Atmospheric Leach (AL) circuit. MN also may occur at the Saprock interface as magnesite in mineralised clay-goethite

Premium Goethite grind and beneficiation **ore** as HPAL feed comprise 69% and 17% respectively of the plant leach feed.

MN material sourced from within the optimised open pits, provides a low-cost neutralisation alternative to limestone from third-party suppliers, and contributes 16% additional nickel-cobalt metal

* See 5 July 2023 ARL PFS ASX Announcement.

Ardea Receives Improved ESG Certification Score 2024

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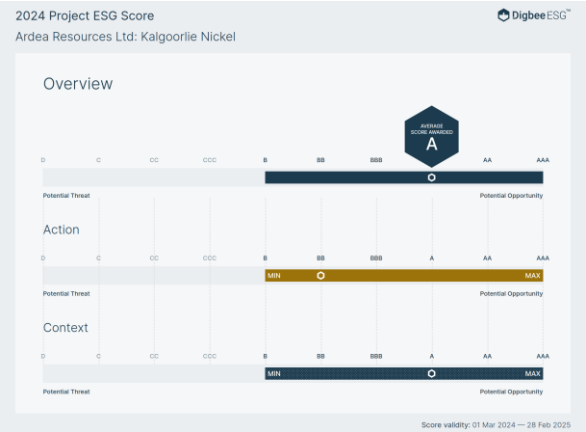
Australian Federal Government
- Major Project Status

2024 ESG Scores for Ardea



Ardea's work practices are aimed at meeting or exceeding the high ESG standards expected by modern society with continuous improvement shown in the two Digbee ESG™ surveys completed

Realising Value from the Kalgoorlie Nickel Project

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NON KNP Goongarrie Hub Projects

KNP Goongarrie Hub

SUMITOMO METAL MINING — 80%

Mitsubishi Corporation — 20%

Incorporated Joint Venture (IJV)

Non KNP Goongarrie Hub Projects including:
- KNP Kalpini Hub MRE 1Mt Ni & 62kt Co
- KNP Yerrila Hub MRE 1Mt Ni & 74kt Co
- Kalpini Project - Massive Nickel Sulphide discovery at Emu Lake
- Scandium and Rare Earth Elements identified at KNP Kalpini
- Perrinvale Project prospective nickel sulphide

KALGOORLIE NICKEL

Kalgoorlie Nickel Pty Ltd (KNPL)
KNPL is 100% subsidiary of Ardea and holds the KNP Goongarrie Hub.
Forming a Joint Venture with the Consortium, who will contribute financially and technically to ultimately earn a 50% interest in KNPL*, Ardea will retain 50% interest into production

*** The Consortium comprised of Sumitomo Metal Mining (SMM) and Mitsubishi Corporation (MC) are fully funding DFS to A$98.5M and assisting KNPL in optimising debt financing to earn:**

MILESTONE	INTEREST IN KNPL
DFS 50% Complete:	17.5%
DFS Completion:	35.0%
FID Approval:	50.0%

For MRE see 30 June 2023 ARL MRE announcement. See Appendices in this presentation.
* See 29 April 2024 ARL, SMM and MC to form a JV to develop KNP Goongarrie Hub ASX Announcement.