

Ardea Resources

World-significant Australian cobalt and nickel
for the battery industry



Presentation to the Australian Nickel Conference - 23rd October 2018

www.ardearesources.com.au

Disclaimer

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 Company's prospectus dated 9 November 2016 (including supplementary prospectuses dated 18 November 2016 and 6 January 2017), the Goongarrie Nickel Cobalt Project Pre-Feasibility Study (dated 28 March 2018) and the Goongarrie Expansion Study (24 July 2018). 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.

Neither Ardea nor its representatives make any representation, warranty or guarantee of any kind, express or implied, as to the accuracy, completeness or reasonableness of the information contained herein or any other written or oral communication transmitted or made available to any person receiving this presentation. To the maximum extent permitted by law, Ardea and representatives expressly disclaim any and all liability based on or arising from, in whole or in part, such information, or any errors or omissions.

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 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 and the Expansion Study, which are based on forward looking statements, is that the Goongarrie Project is considered to have positive economic potential.

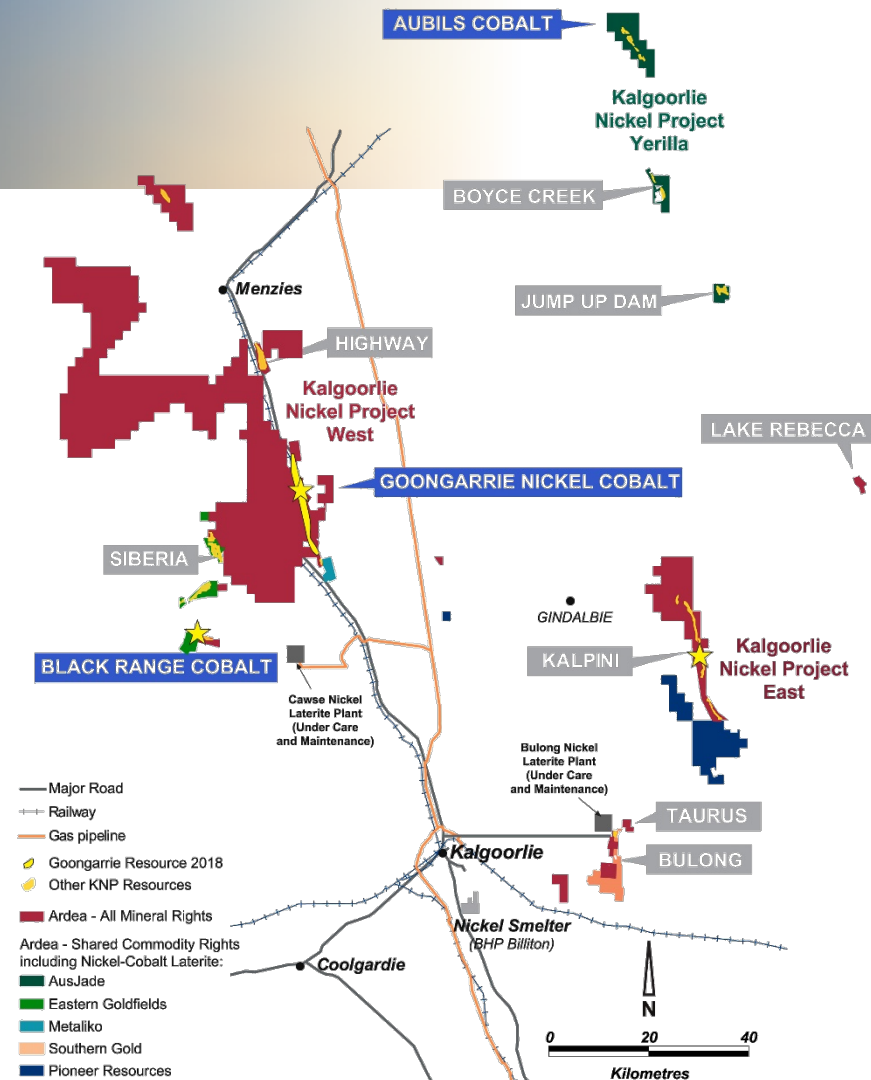
No stock exchange, regulation services provider, securities commission or other regulatory authority has approved or disapproved the information contained in this news release.

Application for securities under the Company's public offer can only be made under the prospectus, a copy of which is available from the Company. Investors should consider the prospectus in deciding whether to acquire Ardea shares and will need to complete the application form that accompanies the prospectus.



The Fundamentals of Ardea

- The Goongarrie Nickel Cobalt Project is part of the broader **Kalgoorlie Nickel Project (KNP)** - multi decade resource
- KNP is the **largest cobalt resource in Australia***
- Potential for **multiple processing hubs**
- Proximity to **world-class infrastructure** and logistics - prime location on the Goldfields Highway
- Ardea is adopting a **staged development approach** via 1.0 Mtpa base case scenario at Goongarrie
- **Upside growth potential** via robust 2.25 Mtpa expansion study
- Goongarrie offers an **ethical, low environmental impact** and long life source of nickel-cobalt from a **stable jurisdiction**



* See appendix for resource breakdown

Corporate Snapshot

Capital Structure

Shares on Issue	104,990,413
Share Price (22 October 2018)	\$0.62
52 week high / low	\$2.20 / \$0.52
Cash (30 Sept 2018)	\$15.8 million
Market Cap (22 October 2018)	\$65 million
Unlisted Stock \$0.25 options (IPO)	12.31 million
Staff performance rights	3.24 million

Ian Buchhorn and associates	11.3%
Citicorp Nominees	8.6%
Brian O'Shannassy and associates	8.5%
BNP Paribas Nominees	7.9%
JP Morgan Nominees	4.2%

Katina Law	Executive Chair
Ian Buchhorn	Executive Director
Wayne Bramwell	Non-Executive Director
Sam Middlemas	Chief Financial Officer
Sarah Mitchell	GM Technical Services
Dr Matt Painter	GM Gold

Experienced management team with global experience in corporate fundraising, processing and engineering for laterite nickel-cobalt deposits, laterite geology and geometallurgy, ensures the right mix to make Goongarrie succeed



Ardea Project Portfolio

Nickel-Cobalt Laterites, WA

Goongarrie Nickel Cobalt Project

Other deposits also under assessment:
Black Range, Kalpini, Yerilla, Boyce Creek,
Aubils, Siberia, Highway, Ghost Rocks

Nickel Sulphide Projects, WA

Includes Perrinvale project
(strike extension of St George's
Mt Alexander project)

Bulk Tonnage Gold Projects, WA

Mt Zephyr Greenstone Belt, high-grade
anomalies along Celia Lineament,
Taurus gold project

Porphyry & Epithermal Copper-Gold Projects, NSW

Lachlan Fold Belt, NSW is
Australia's premier address for
porphyry and epithermal
copper-gold projects

Lewis Ponds Zinc-Silver-Gold, NSW

Historic silver-gold-base
metal mine
High-grade resources
Bulk mining option

Bulk Tonnage Gold Projects, NSW

Includes Ophir, Australia's first goldfield

Developing Goongarrie into the Next Successful Mining Operation

- ✓ Sumitomo at Coral Bay has paved the way and set out an effective and successful HPAL project process to develop and deliver a profitable long-life project
- ✓ Ore type is consistent with only goethite present, with high levels of cobalt, and low acid consumption
 - ✓ No screen upgrade required, which is a significant point of difference and caused problems for other WA laterite projects
- ✓ Onsite neutralizer recovered during laterite mining
- ✓ Environmentally friendly
- ✓ Comparable capital intensity with successful operations
- ✓ Access to a large amount of successful vendor information (20 years) to develop Goongarrie
- ✓ A thorough and high-level of understanding of ore types and processing operations



Goongarrie - A High-Quality Cobalt and Nickel Sulphate Project

Outstanding results delivered from PFS* and Expansion Studies⁺

- PFS 1.0Mtpa base case over a 25-year mine life
- ES 2.25Mtpa with a 25-year mine life
- 95.5% cobalt and 94.5% nickel recovery – life of mine
- Pre-cobalt credit C1 costs in line with current worldwide operators
- PAL** 5th generation plant, proven design, successfully operated in other laterite projects globally

* Goongarrie Nickel Cobalt Project, PFS study, 28 March 2018, ** PAL = Pressure Acid Leach
+Goongarrie Expansion Study, 24 July 2018

	1.0Mtpa	1.5Mtpa	2.25Mtpa
Status	PFS	PFS	ES
No. Trains	1	1	1
Pre Tax NPV₈	US\$ 1.13 billion	US\$ 1.52 billion	US\$ 2.4 billion
Pre Tax IRR	29 %	29 %	31%
CAPEX	US\$ 472 million	US\$ 588 million	US\$918 million
C1 cash cost	US\$ 0.42 / lb	US\$ 0.45 / lb	US\$ (0.34) / lb
Payback	5.3 years	5.6 years	5.1 years
Cobalt sulphate	5,500tpa	6,900tpa	10,000tpa
Nickel sulphate	41,500tpa	55,300tpa	81,000tpa



Metallurgical Test-Work Progress

Building on the \$50 Million already spent by Vale and Heron on 2005-2009 PFS

Rheology and Variability

- A number of successful leach tests already **completed**
- Extensive variability program planned to extend the the geo-metallurgy database to reflect the ore LOM
- Water exploration and water treatment test work **currently ongoing**

Pilot Plant Run

- Continuous beneficiation, leaching through to mixed sulphide product pilot plant **completed**
- Nickel and cobalt sulphate crystals **generated** – assays pending



Advancing Goongarrie Towards Production

Key Milestones

- ✓ Resource drilling at Goongarrie **completed**
 - 26,528m of RC drilling completed by Ardea, 115,384m by Vale and Heron
- ✓ Pilot Plant and production of nickel and cobalt sulphate **completed**
- Strategic Partner Process – **Q4 2018**
- Goongarrie Resource Upgrade – **Q4 2018**
- Approvals
 - Hydrology testing onsite **underway**
 - Spring Flora and Fauna studies **underway**
 - EPA Lodgement – **Q4 2018**



Investment Summary

- ✓ **Advanced Australian nickel and cobalt project at Goongarrie**
 - 141,912 m of RC drilling completed, plus diamond and sonic drilling for bulk metallurgy samples
 - The Goongarrie Mineral Resource contains 1.5 million tonnes of nickel and 130,700 tonnes of cobalt
- ✓ **Prefeasibility Study completed**
 - 1Mtpa and 1.5Mtpa case studies offer significant economic opportunity
 - Scoping Study completed on 2.25Mtpa case shows excellent upside
- ✓ **DFS Programs underway**
- ✓ **Positive metallurgical factors and test-work**
- ✓ **Leveraged to increasing nickel and cobalt demand from the rapidly growing EV and Static Storage Battery markets**



Ardea Resources Limited

ASX : ARL

www.ardearesources.com.au

Suite 2, 45 Ord St, West Perth WA 6005, AUSTRALIA

+61 8 6244 5136

Email us at ardea@ardearesources.com.au