



ASX & Media Release

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ASX Symbol

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Issued Capital

Fully Paid Ordinary Shares
169,737,772

Performance Rights
4,542,000

Options
4,000,000

ABN 30 614 289 342

Kalgoorlie Nickel Project Strategy Update

Ardea Resources Limited (**Ardea** or the **Company**) is pleased to provide an update on Corporate Strategy for the Kalgoorlie Nickel Project (**KNP**).

Settlement of Flow Sheet for the Feasibility Study

Ardea's priority is the development of the KNP Goongarrie Hub as a globally significant Critical Minerals operation focussed on nickel-cobalt. The project finance model seeks to optimise Ardea's project equity and long-term offtake rights.

The project scale has been settled at a 3.5Mtpa operation comprising 2 x 1.5Mtpa High Pressure Acid Leach (**HPAL**) autoclaves combined with a 0.5Mtpa Atmospheric Leach (**AL**) circuit. The flow sheet solely uses hydrometallurgical technology successfully deployed at existing nickel laterite operations over six decades. The main neutralising agent required in ore processing is derived in-pit as Mineralised Neutraliser (**MN**), immediately underlying the nickel-cobalt laterite ore.

Ore preparation focusses on a low-risk comminution "Grind HPAL" circuit treating premium high-grade Goethite ore to facilitate an early project pay-back. With time, an increasing contribution from screened siliceous ore processed in the beneficiation "Bene HPAL" circuit facilitates an optimised resource utilisation and extended mine-life.

The AL circuit ore is sourced from high-magnesium Serpentine below the target Goethite and is gained within pit optimisations pursuant to the Goethite mining and from MN Fines. Power generated from using additional sulphur in the acid plant as required for the AL circuit is the key to the low-carbon footprint.

Initial proposed sale product is a Mixed Hydroxide Precipitate (**MHP**) for the lithium-ion battery sector (**LIB**). Project financing will proceed around an MHP flow sheet. The longer-term objective is to further refine the MHP on-site to Precursor Cathode-Active Material (**PCAM**), and ultimately also recover scandium and Rare Earth Elements (**REE**) from tailings.

Ardea's 2018 Expansion Study (ASX release 24 July 2018) was a single autoclave processing 2.25Mtpa as the preferred Goongarrie Hub throughput. This is now superseded by the 3.5Mtpa base case, which aims to significantly increase initial stage nickel-cobalt production from the KNP resource endowment of 830Mt at 0.7% Ni and 0.05% Co (**5.9Mt contained nickel metal, 380kt contained cobalt metal** – ASX release 16 June 2021).

Ardea is currently working with a number of industry-leading consultants and service providers to complete a feasibility study (Preliminary Feasibility Study (**PFS**) level +/-25%) which will underline the 3.5Mtpa base case. This PFS will consolidate previous studies and be completed in the March Quarter 2023, immediately after which a Definitive Feasibility Study (**DFS**) will be commissioned.

An Ardea Owners Team is being progressively assembled by the Ardea Board to manage the various study requirements and coordinate the service providers.

In-progress Ardea Feasibility Study (**FS**) work streams are focussed on optimising sustainable and ethical battery mineral supply through carbon minimisation.

The February 2022 capital raising through Petra Capital (ASX release 22 February 2022) ensures all such work streams are properly funded, with \$22M in Treasury, as at 30 June 2022. The share register increasingly includes investment funds mandated for ESG compliance.

The current priorities are completing sterilisation drilling for the plant site general arrangement, completing bench-scale metallurgy, updating JORC Code (2012) compliant Ore Reserves, lodging process water licences, EPA approvals submission and completing financial metrics that reflect the 3.5Mtpa base case.

Strategic Partner Process

A number of leading world-recognised companies and organisations continue to approach Ardea seeking to secure nickel-cobalt off-take from the KNP. Ardea has elected to continue to retain 100% of the off-take rights as it better quantifies project economics. Ardea requires off-take to be conditional upon the off-take partner facilitating a project development funding mechanism.

The potential Strategic Partners expressing greatest interest are LIB cell makers, electric vehicle auto manufactures, large miners, commodities traders and groups representing sovereign interests. These parties are variously progressing their due diligence and assessing interim results from the in-progress workstreams.

While a majority of potential partners prefer MHP, some prefer Mixed Sulphide Precipitate (**MSP**) and others nickel and cobalt sulphate (as produced on-specification in the 2018 PFS, ASX release 30 October 2018). As mentioned, Ardea is contemplating later developing further downstream capacity to produce PCAM and it is an active contributor to the Future Battery Industries Cooperative Research Centre (**FBICRC**) PCAM evaluation at Curtin University in Perth.

Ardea will continue the Strategic Partnering process with the primary aim of selecting a preferred partner/s to work with Ardea to advance the KNP through the process of DFS, Final Investment Decision, project funding and project development. In so doing, the partner/s will have input into the end product specifications, and guarantee their equity and off-take share of sustainable and ethical nickel-cobalt off-take for several decades.

Ardea may also assess advancing the DFS independently of any Strategic Partner interactions.

KNP Development Funding

Following the KNP being awarded Major Project Status (ASX release 21 March 2022), engagement with State and Commonwealth agencies has continued, particularly with the Critical Minerals Office (**CMO**), Export Finance Australia (**EFA**) and **Austrade**.

Ardea is also continuing discussions with multiple Export Credit Agencies (**ECAs**) and advisors in jurisdictions aligned geopolitically with Australia and in which potential project partners are based.

The preferred funding option for the KNP Goongarrie Hub development is a mixture of project debt and project equity, with indications of long tenor, favourable ECA debt funding terms being contemplated.

With the rapid expansion of the LIB sector and the push for sustainable and ethical battery mineral supply chain security sourced from tier one operating jurisdictions such as Western Australia, there has never been a better time for Ardea to be advancing the KNP towards development.

Critical Minerals

Ardea's strategic Eastern Goldfields of Western Australia tenement package (Figure 1) covers over 3,400km², and is one of the largest land holdings over nickel-hosting ultramafic stratigraphy in Australia. In addition to the ongoing work streams, compelling magmatic nickel sulphide and Critical Mineral exploration opportunities continue to be evaluated.

In particular, active drilling and geophysical surveys are current at the Emu Lake prospect, located within the nickel sulphide-fertile Western Komatiite Belt at Kalpini.

The Critical Minerals work streams are facilitated through the long-established Research and Development (**R&D**) programs with CSIRO, FBICRC and in-house, with current initiatives including:

- AL studies on bulk drill core at ALS Metallurgical Laboratories, Perth.
- MN, in-house geo-metallurgical evaluation with confirmation at ALS, Perth.
- PCAM at FBICRC Perth.

- In-house magnesia production (key feedstock for KNP MHP production), through calcining magnesite from Siberia North, Kalpini and Bulong, bench-scale studies commenced at Independent Metallurgical Laboratories, Perth.
- Scandium and REE extraction, bulk drill core samples awaiting bench-scale evaluation ALS, Perth.

Exploration work streams will continue concurrently with the ongoing FS work streams, so that Ardea offers investment exposure to the largest nickel-cobalt resource in Australia (ASX release 21 March 2022) as it advances towards development and production, along with the potential for new magmatic nickel sulphide and Critical Mineral discoveries.

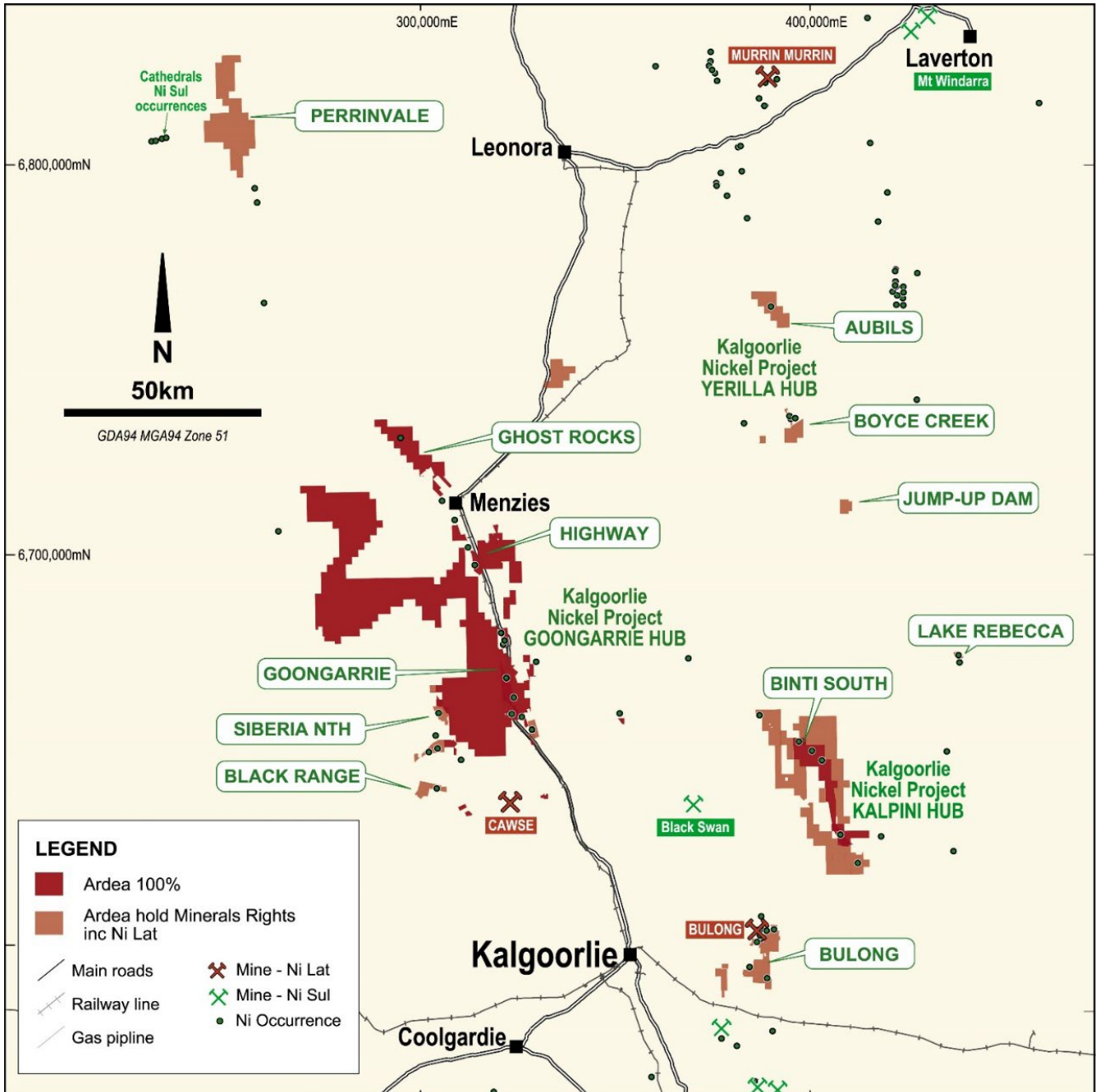


Figure 1: KNP location and infrastructure plan centred around the Goongarrie Hub. Projection GDA94 MGA94 Zone 51.

This announcement is authorised for release by the Board of Ardea Resources Limited.

For further information regarding Ardea, please visit <https://ardearesources.com.au/> or contact:

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About Ardea Resources

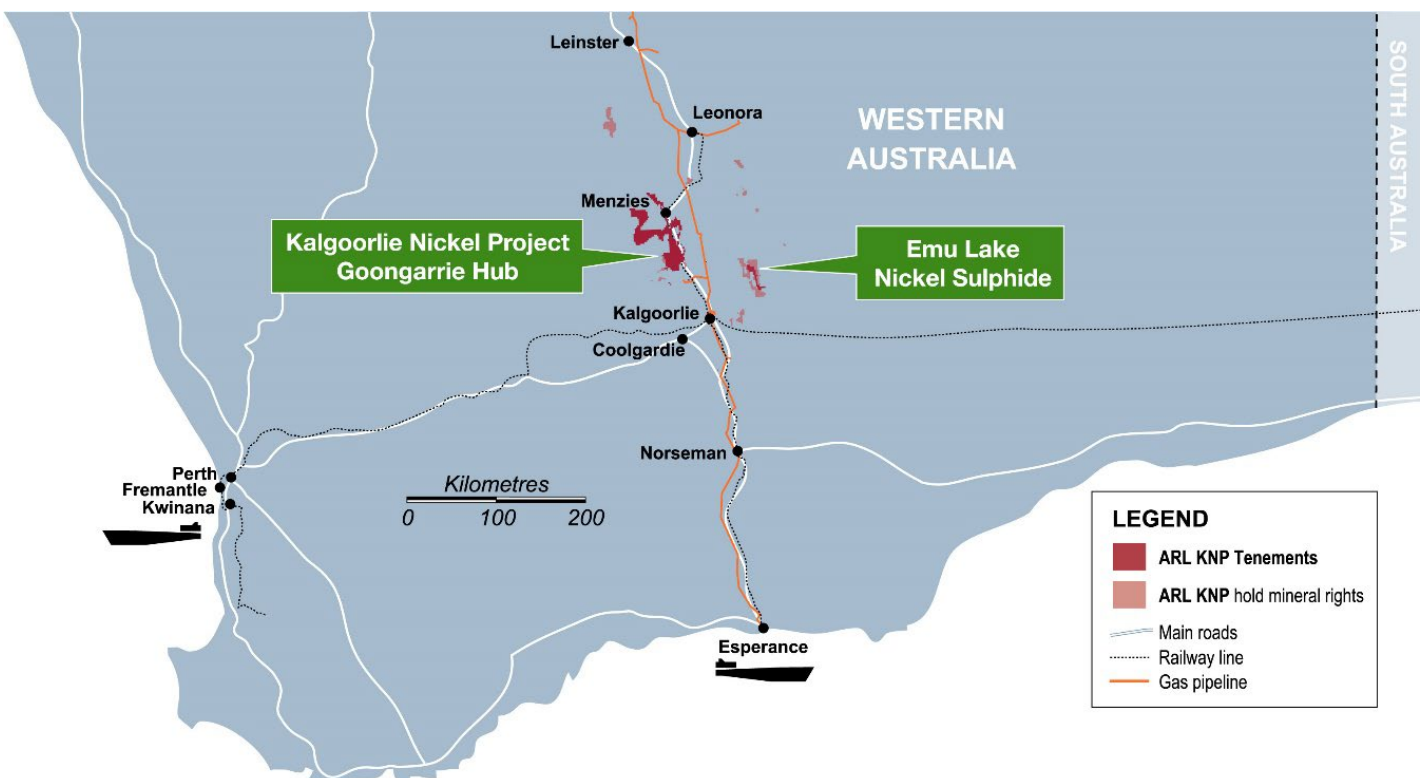
Ardea Resources Limited (ASX:ARL) is an ASX-listed nickel resources company, with a large portfolio of 100%-controlled West Australian-based projects, focussed on:

- Development of the Kalgoorlie Nickel Project (**KNP**) and its sub-set the Goongarrie Hub, a globally significant series of nickel-cobalt and Critical Mineral deposits which host the largest nickel-cobalt resource in the developed world at **830Mt at 0.71% nickel and 0.046% cobalt for 5.9Mt of contained nickel and 380kt of contained cobalt** (Ardea ASX releases 15 February, 16 June 2021), located in a jurisdiction with exemplary Environmental Social and Governance (**ESG**) credentials, notably environment.
- Advanced-stage exploration at compelling nickel sulphide targets, such as Emu Lake, and Critical Minerals targets including scandium and Rare Earth Elements throughout the KNP Eastern Goldfields world-class nickel-gold province, with all exploration targets aimed at complementing the KNP nickel development strategy.

Ardea's KNP development with its 5.9 million tonnes of contained nickel is the foundation of the Company, with the nickel sulphide exploration, such as Emu Lake, as an evolving contribution to Ardea's building of a green, forward-facing integrated nickel company.

Put simply, in the Lithium Ion Battery sector, the Electric Vehicle and Energy Storage System battery customers demand an ESG-compliant, sustainable, and ethical supply chain for nickel and other inputs. In the wet tropics, with their signature HPAL submarine tailings disposal and rain forest habitat destruction, an acceptable ESG regime is problematic. In contrast, the world-class semi-arid, temperate KNP Great Western Woodlands with its benign environmental setting is likely the single greatest asset of the KNP.

The KNP is located in a well-established mining jurisdiction with absolute geopolitical acceptance and none of the land-use and societal conflicts that commonly characterise nickel laterite proposals elsewhere. All KNP Goongarrie Hub production tenure is on granted Mining Leases with Native Title Agreement in place.



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CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This news release contains forward-looking statements and forward-looking information within the meaning of applicable Australian securities laws, which are based on expectations, estimates and projections as of the date of this news release.

This forward-looking information includes, or may be based upon, without limitation, estimates, forecasts and statements as to management's expectations with respect to, among other things, the timing and amount of funding required to execute the Company's exploration, development and business plans, capital and exploration expenditures, the effect on the Company of any changes to existing legislation or policy, government regulation of mining operations, the length of time required to obtain permits, certifications and approvals, the success of exploration, development and mining activities, the geology of the Company's properties, environmental risks, the availability of labour, the focus of the Company in the future, demand and market outlook for precious metals and the prices thereof, progress in development of mineral properties, the Company's ability to raise funding privately or on a public market in the future, the Company's future growth, results of operations, performance, and business prospects and opportunities. Wherever possible, words such as "anticipate", "believe", "expect", "intend", "may" and similar expressions have been used to identify such forward-looking information. Forward-looking information is based on the opinions and estimates of management at the date the information is given, and on information available to management at such time.

Forward-looking information involves significant risks, uncertainties, assumptions, and other factors that could cause actual results, performance, or achievements to differ materially from the results discussed or implied in the forward-looking information. These factors, including, but not limited to, the ability to create and spin-out a gold focussed Company, fluctuations in currency markets, fluctuations in commodity prices, the ability of the Company to access sufficient capital on favourable terms or at all, changes in national and local government legislation, taxation, controls, regulations, political or economic developments in Australia or other countries in which the Company does business or may carry on business in the future, operational or technical difficulties in connection with exploration or development activities, employee relations, the speculative nature of mineral exploration and development, obtaining necessary licenses and permits, diminishing quantities and grades of mineral reserves, contests over title to properties, especially title to undeveloped properties, the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drill results and other geological data, environmental hazards, industrial accidents, unusual or unexpected formations, pressures, cave-ins and flooding, limitations of insurance coverage and the possibility of project cost overruns or unanticipated costs and expenses, and should be considered carefully. Many of these uncertainties and contingencies can affect the Company's actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, the Company. Prospective investors should not place undue reliance on any forward-looking information.

Although the forward-looking information contained in this news release is based upon what management believes, or believed at the time, to be reasonable assumptions, the Company cannot assure prospective purchasers that actual results will be consistent with such forward-looking information, as there may be other factors that cause results not to be as anticipated, estimated or intended, and neither the Company nor any other person assumes responsibility for the accuracy and completeness of any such forward-looking information. The Company does not undertake, and assumes no obligation, to update or revise any such forward-looking statements or forward-looking information contained herein to reflect new events or circumstances, except as may be required by law.

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

Compliance Statement (JORC Code 2012)

The information in this report that relates to Resource Estimates for the KNP is based on information originally compiled by previous and current full-time employees of Heron Resources Limited and current full-time employees of Ardea Resources Limited. The Exploration Results, Resource Estimates and data collection processes have been reviewed, verified, and re-interpreted by Mr Ian Buchhorn who is a Member of the Australasian Institute of Mining and Metallurgy and currently a director of Ardea Resources Limited. Mr Buchhorn has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the exploration activities 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'. Mr Buchhorn consents to the inclusion in this report of the matters based on his information in the form and context that it appears. Mr Buchhorn owns Ardea shares.

The exploration and industry benchmarking summaries are based on information reviewed or compiled by Mr Andrew Penkethman, who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Penkethman is a full-time employee of Ardea Resources Limited and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is 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 Penkethman has reviewed this press release and consents to the inclusion in this report of the information in the form and context in which it appears. Mr Penkethman owns Ardea shares.