

## ASX & Media Release

11 March 2022

## ASX Symbol

ARL

## Ardea Resources Limited

Suite 2 / 45 Ord St  
West Perth WA 6005

PO Box 1433  
West Perth WA 6872

## Telephone

+61 8 6244 5136

## Email

[ardea@ardearesources.com.au](mailto:ardea@ardearesources.com.au)

## Website

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

## Directors

Mat Longworth  
*Non-Executive Chair*

Andrew Penkethman  
*Managing Director & CEO*

Ian Buchhorn  
*Technical Executive Director*

## Executive Management

Sam Middlemas  
*Company Secretary & CFO*

Alex Mukherji  
*Manager Land Access & Compliance*

Mike Miller  
*General Manager Technical Services*

## Issued Capital

Fully Paid Ordinary Shares  
169,537,772

Performance Rights  
4,771,000

Options  
4,000,000

ABN 30 614 289 342

## Goongarrie Hub Water Extraction Licences Granted

- Two Groundwater Licences (**GWL**) for the annual abstraction of 3.5Gl of water resources within Ardea's Goongarrie Hub mining leases have been granted by the Department of Water and Environmental Regulation.
- The GWLs will provide water for processing and mine development activities within the Goongarrie Hub nickel-cobalt development for an initial period of 10 years and are renewable.
- Metallurgical testwork to finalise Ardea's industry-leading flow sheet continues, focussed on the off-grid energy strategy.

Ardea Resources Limited (**Ardea** or the **Company**) advises that the Department of Water and Environmental Regulation (**DWER**) has granted the Company two Groundwater Licences for the annual abstraction of 3.5Gl of saline water for processing and mine dewatering and development activities within Ardea's Kalgoorlie Nickel Project (**KNP**) Goongarrie Hub (**Goongarrie**). The initial period of grant is 10 years and is renewable.

Hydrogeology Consultants, Rockwater Pty Ltd, successfully completed the drilling and pump testing of four water bores to support the lodgement of reports applying for the water abstraction licences in the December Quarter 2021 (ASX release 28 January 2022).

These reports have been assessed by DWER. Following the mandatory period of public notification in late 2021, no submissions or concerns from the public were received for the two Ground Water abstraction licence applications.

The grant of the abstraction licences will secure access to water on a long term basis to provide base-load water requirements for the 3.5Mtpa Goongarrie Hub processing facility which is currently undergoing a Definitive Feasibility Study (**DFS**) for the development of a multi decade nickel-cobalt development.

Ardea's flow sheet and development plan is based on the Lithium Ion Battery (**LIB**) sector and customers demanding an Environmental Social and Governance (**ESG**) compliant, sustainable, and ethical supply chain for nickel and other Critical Mineral inputs. Ardea is perfectly placed to meet this demand with the Company building a green, forward-facing integrated nickel company.

### Ardea's Managing Director, Andrew Penkethman, said:

*"The grant of the Goongarrie Hub Groundwater Licences is another step towards the development of our globally significant sustainable and ethical nickel-cobalt project.*

*With the KNP hosting the largest nickel-cobalt resource in Australia, the Company is well placed to provide a significant supply response for the lithium-ion battery sector, from the best resources operating jurisdiction in the World.*

*Importantly, Ardea owns 100% of the resource and all processing facilities will be located on the same granted mining leases that host our resources, which will guarantee that the Company has custody of all aspects of the operation so that best practice project management is assured.*

*Ardea acknowledges the strong support of the communities within which the Company operates and would like to thank all stake-holders for their support."*

## Background

The Kalgoorlie Nickel Project (KNP) - Goongarrie Hub (**Goongarrie**) (Figure 1) is located 70km northwest of the City of Kalgoorlie-Boulder (**CKB**), the resource development capital of Australia. CKB is consistently ranked as one of the best mine operating jurisdictions in the World due to the strong stake holder support and no competing land use in the semi-arid, temperate Greater Western Woodland with its benign environmental setting.

Goongarrie is undergoing a Feasibility Study for a High Pressure Acid Leach (**HPAL**) and Atmospheric Leach (**AL**) processing operation using proven technology successfully in use at other operations, such as at Coral Bay in the Philippines and the Ravensthorpe Nickel Operation in Western Australia. The base case end product from Goongarrie will be Mixed Hydroxide Precipitate (**MHP**) which is the preferred nickel-cobalt input for the LIB sector.

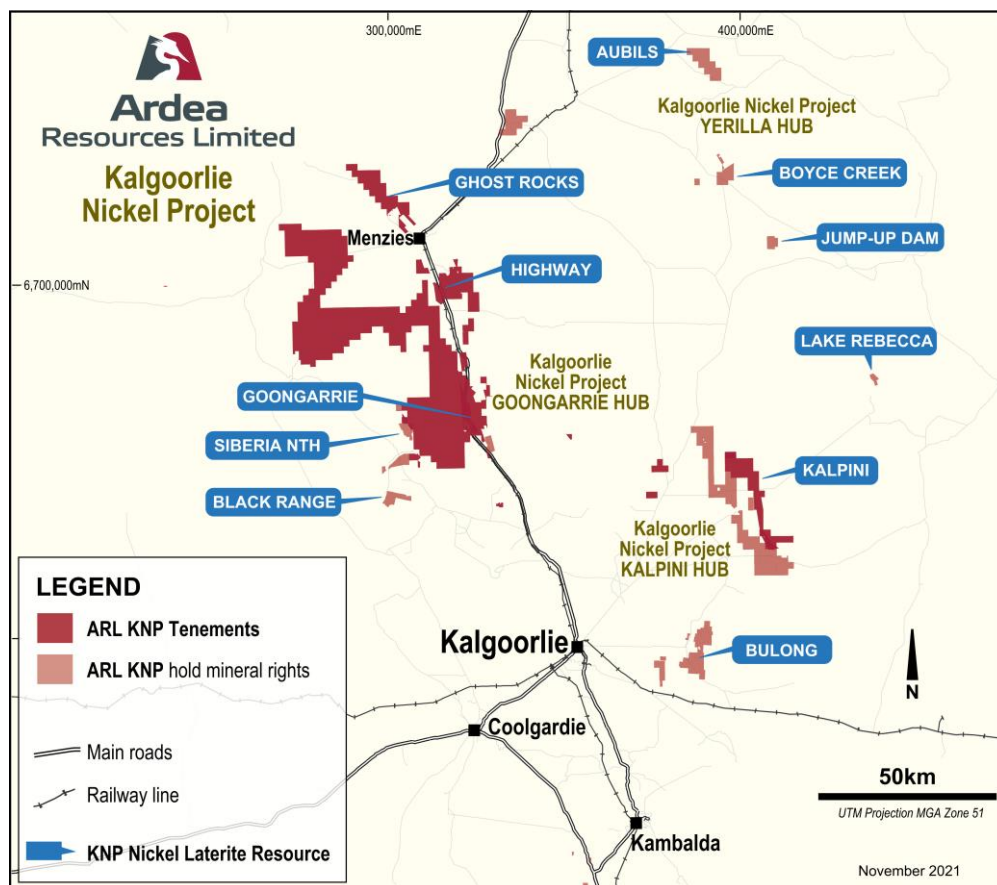


Figure 1: Kalgoorlie Nickel Project (KNP) location plan.

## Kalgoorlie Nickel Project Goongarrie Hub DFS Update

Metallurgical testwork is continuing at the ALS Laboratory Group, Perth (ASX release 25 January 2022) with the metallurgical program designed to assess the Goongarrie Hub flow-sheet with two HPAL autoclaves each rated at 1.5Mtpa, as well as an Atmospheric Leach of some 0.5Mtpa. The bench-scale metallurgy also aims to quantify the likely screen beneficiation performance, notably at Goongarrie Hill and Highway, as well as further evaluating the use of on-site neutraliser and looking at the viability of recovering other Critical Minerals from the pregnant liquor solution, including Rare Earth Elements and Rare Metals.

There have been laboratory delays in the ore preparation testwork related to COVID-19 disruption, staff availability and assay turnaround times. The impacts of this on the project schedule are being evaluated. It is now unlikely that the DFS can be completed in the December Quarter of 2022. Additional updates on the project schedule will be provided as more clarity on testwork timing is available.

Authorised for lodgement by the Board of Ardea Resources Limited.

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

**Andrew Penkethman**

Managing Director and Chief Executive Officer

Tel +61 8 6244 5136

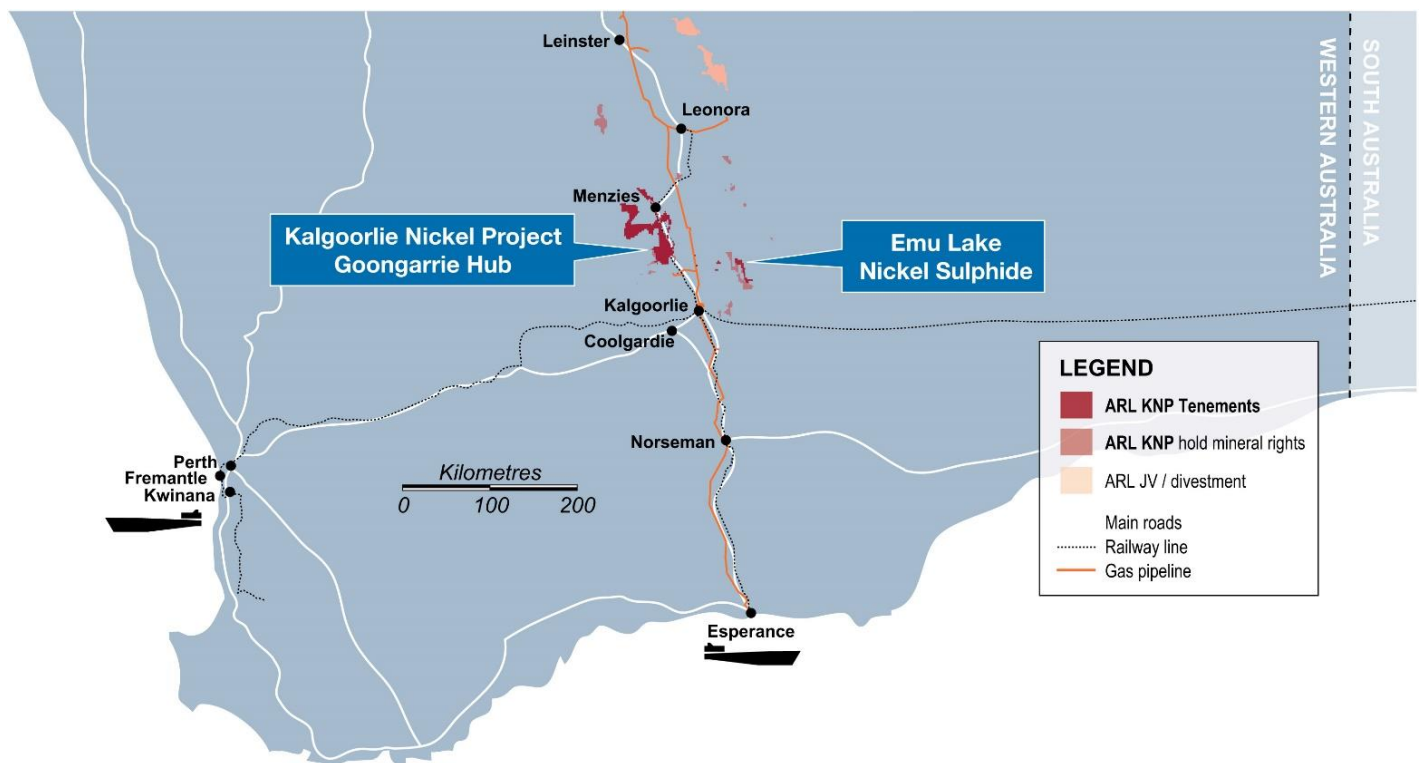
**About Ardea Resources**

Ardea Resources (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** (ASX releases 15 February, 16 June 2021), located in a jurisdiction with exemplary ESG credentials.
- Advanced-stage exploration at compelling nickel sulphide targets, such as Emu Lake, and Critical Mineral targets throughout the KNP Eastern Goldfields world-class nickel-gold province, with all exploration targets 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 (**LiB**) sector, the Electric Vehicle and Static Storage Battery customers demand an Environmental Social and Governance (**ESG**) compliant, sustainable, and ethical supply chain for nickel and other inputs. In the wet tropics, with their signature submarine tailings disposal and rain forest habitat destruction attached to their nickel, an acceptable ESG regime is problematic. In contrast, the world-class semi-arid, temperate Greater Western Woodland with its benign environmental setting is likely the single greatest asset of the KNP.



**Follow Ardea on social media**





## **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 2012)**

*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.*