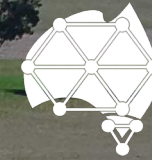


Sharewise Webinar Presentation

July 2024



**AUSTRALIAN  
RARE EARTHS**  
*Metals for our future*

# Developing a portfolio of Energy Transition Metals

- Leading the Development of Australia's next Rare Earths Province
- Secured Strategic Tenure for Uranium Exploration in South Australia

Travis Beinke – Managing Director & Chief Executive Officer

ASX: AR3



# Australian Rare Earths Corporate Presentation – May 2024

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## COMPETENT PERSONS STATEMENT

The information in this report that relates to Exploration results is based on information compiled by Australian Rare Earths Limited and reviewed by Mr. Rick Pobjoy who is the Technical Director of the Company and a member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr. Pobjoy has sufficient experience that is relevant to the style of mineralisation, the type of deposit under consideration and to the 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. Pobjoy consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcement (ASX announcement dated 19 September 2023) and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement (ASX announcement dated 19 September 2023) continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement (ASX announcement dated 19 September 2023).

The information in this report that relates to metallurgical results is based on information compiled by Australian Rare Earths Limited and reviewed by Mr. Jon Weir who is the Technical Director of Wallbridge Gilbert Aztec and a member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr. Weir has sufficient experience that is relevant to the metallurgical testing which was 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. Weir consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.



# Developing a Portfolio of Energy Transition Metals

## AR3: Leading Multi-generational Rare Earths Province with Expansion into Uranium Exploration

01

**Significant Rare Earth Resource:** 186Mt @ 712ppm TREO with significant upside potential (Exploration Target 340Mt to 3.1Bt)<sup>1</sup>.

02

**High Magnet Rare Earth Recoveries:** Testwork confirms strong recoveries of magnet rare earths Nd, Pr, Dy & Tb.

03

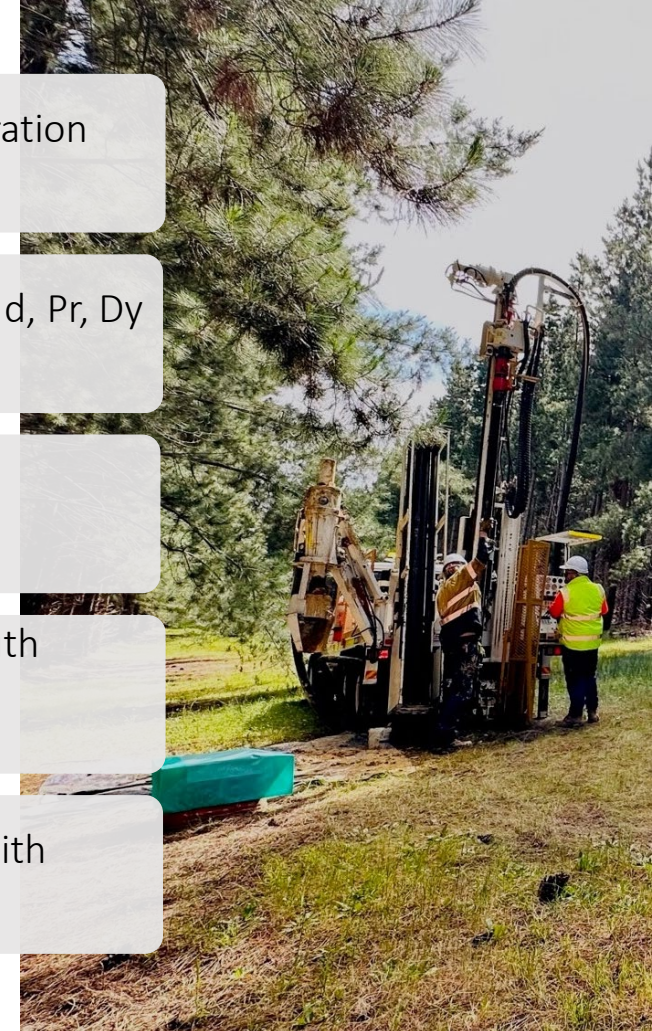
**Sustainable Development Approach:** Advancing a progressive heap leach and rapid rehabilitation approach for reduced environmental impact and lower capex.

04

**Diversifying Beyond Rare Earths:** Overland Project: 3,000 km<sup>2</sup> prospective uranium tenure in South Australia and Triggs Bore: Securing 250 km<sup>2</sup> tenure to unlock untapped uranium potential in the Callabonna Sub-basin.

05

**Growth Focused Strategy:** Multiple exploration projects across South Australia and Queensland with significant potential for future discoveries.



<sup>1</sup> The potential quantity and grade of the Exploration Target is conceptual in nature. Further exploration is required to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource

# Team & Corporate Snapshot

Experienced Team, Strong Backing and Well-funded



**Angus Barker**  
Chairman

20 years' experience as a mergers and acquisitions and capital markets adviser, working with global investment banks in Hong Kong, Australia and the United Kingdom.

- B.Com (Hons), University of Melbourne
- M.Phil, University of Cambridge Graduate
- Member of Australian Institute of Company Director
- Trusted adviser to corporations and governments for decades
- Current Director of WAM Capital



**Pauline Carr**  
Independent Non-executive  
Director

Experienced company director in compliance, governance and risk over 30 years in resources sector.

- Chancellor of Adelaide University
- Chair of National Pharmacies
- NED Highfield Resources
- Previous roles with Normandy Mining and Newmont



**Travis Beinke**  
Managing Director & CEO

Over 20 years' experience with both Australian and internationally listed resource companies. Broad range of strategic, commercial, finance and business development experience, particularly in exploration and growth projects.

- Previous roles with OZ Minerals, Ensign Energy Services and ExxonMobil Australia



**Rick Pobjoy**  
Chief Technical Officer & Co-  
Founder of AR3

Geologist with more 25 years' experience in the mining and minerals exploration industry.

- Extensive experience in definition, development, and production from sedimentary hosted deposits.
- Successful project delivery for VHM Exploration, Murray Zircon, and Heathgate Resources.

Share price

**\$0.092**

16 July 2024

Shares on issue

**155.9m**

Market capitalisation

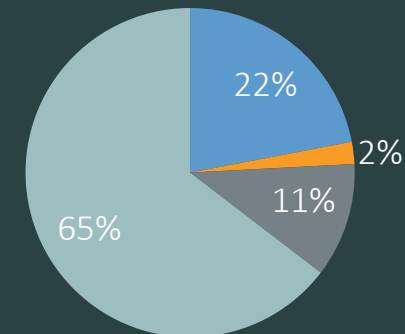
**\$14.3m**

Cash

**\$9.1m**

31 Mar 2024

Distribution Of Shareholders



- Directors, Management & Co-Founders
- NEO Performance Materials
- Acorn Capital
- Other



# Diversified Energy Transition Project Portfolio

Securing Australia's Energy Transition Metals for a Sustainable Future



## Koppamurra REE Development Project:

- 100% ownership spanning 7,600km<sup>2</sup>
- Located ~300km SE of Adelaide, in southern Australia and Victoria
- Resource of 186Mt @ 712ppm TREO with significant upside potential (Exploration Target 340Mt to 3.1Bt)

## South Australia Uranium Projects:

- Overland Project: ~3,000km<sup>2</sup> prospective tenure, ~200km south of Honeymoon Mine
- Triggs Bore: strategic ~250km<sup>2</sup> brownfields exploration tenure with drill-ready follow-up uranium targets

## North Queensland REE Projects:

- Dalrymple Project ~1,200km<sup>2</sup> of prospective tenure
- Kennedy Province ~1,100km<sup>2</sup> of tenure includes the Massie Creek, Oaky Valley, Sandy Tate and Forty Mile Scrub prospects





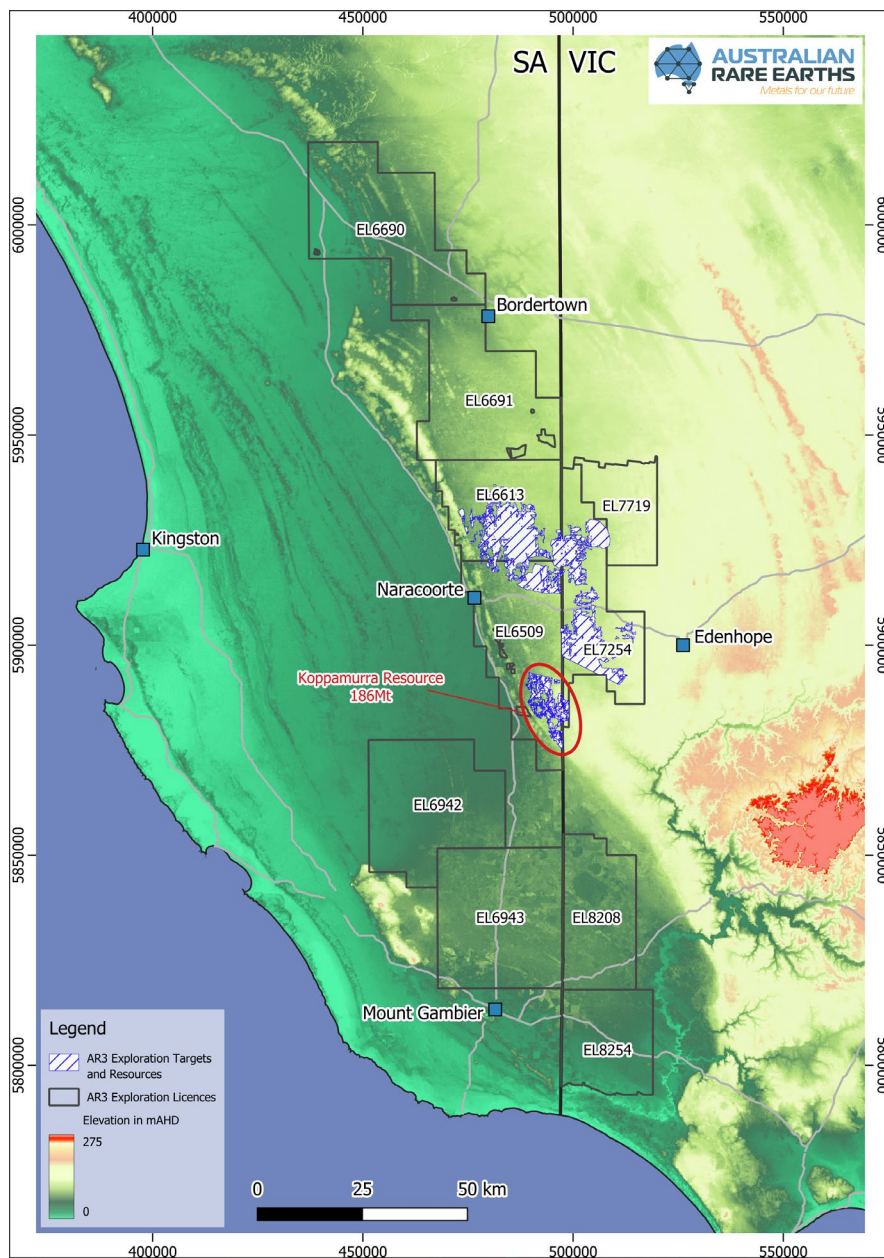
# Koppamurra Rare Earths Province

Leading the Development of a Multi-  
Generational clay hosted Rare Earths  
Province in Australia



# Koppamurra: Australia's most advanced ionic clay-hosted Rare Earths project

## Multi-generational Rare Earth Province Potential



Koppamurra project area, SA and Victoria

- **100%-owned** clay-hosted critical REE deposit ~300km SE of Adelaide
- **Multi-generational province:** one of the largest ionic clay-hosted REE provinces spanning 7,600km<sup>2</sup>
- **Total Mineral Resource estimate (MRE):** of 186Mt with an average TREO grade of 712ppm
- **Resource Growth Potential:** Exploration Target of up to 3.1Bt
- **Cost Advantage:** Favourable capex and low technical risk



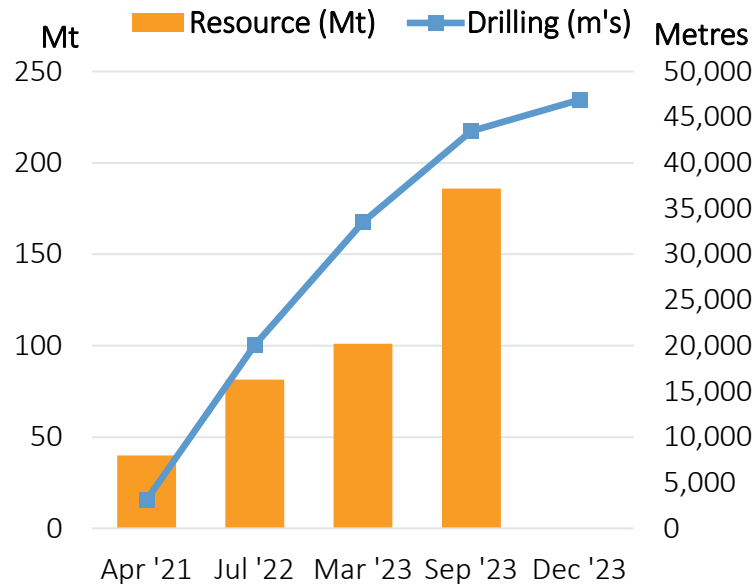


# Koppamurra Mineral Resource and Exploration Target

## Demonstrating Province Potential with Increased Mineral Resource

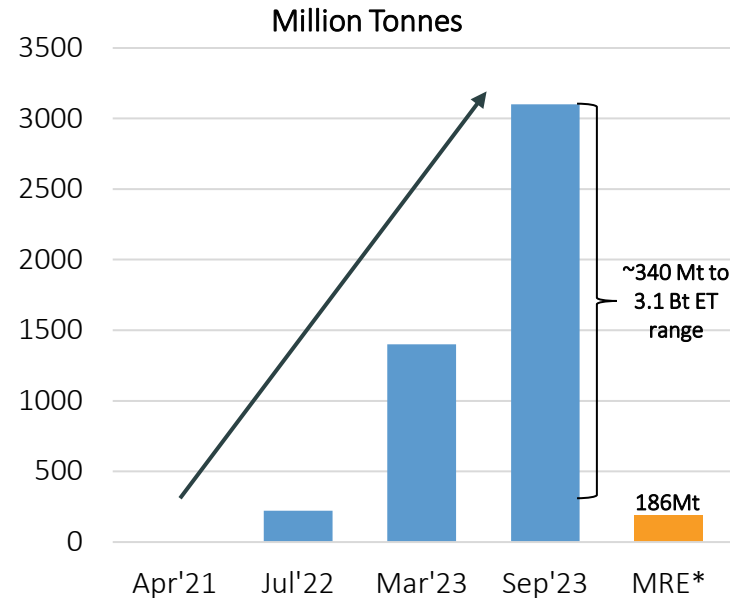
- MRE **increased 84%** to 186 Mt at 712 TREO in Sep'23
- All **four key REEs present** (including heavy REE's **Dysprosium & Terbium**)
- Total of ~64,000 metres drilled since 2021

### Mineral Resource Estimate\*

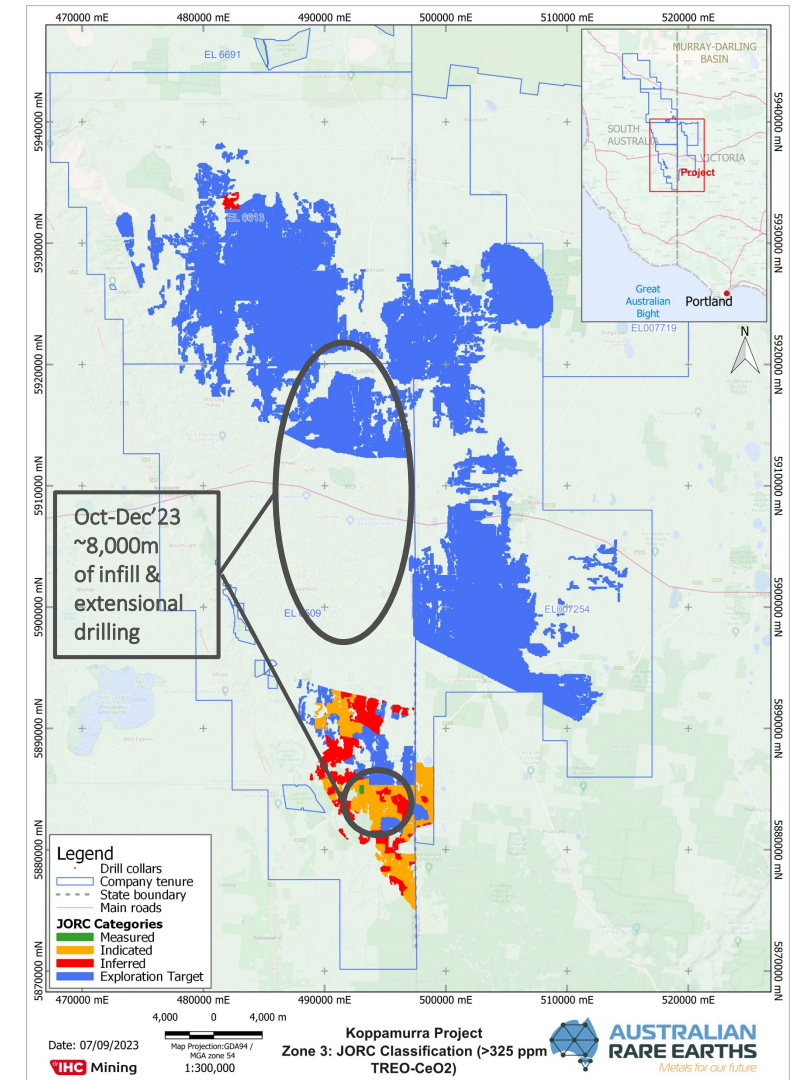


\* Mineral Resource estimate and Exploration Target as at September 2023

### Exploration Target\*



Koppamurra project area JORC Mineral Resource categories

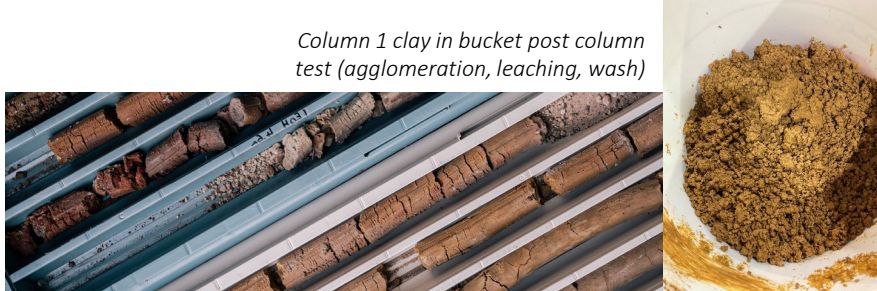


# Progressive Heap Leach Development Pathway at Koppamurra

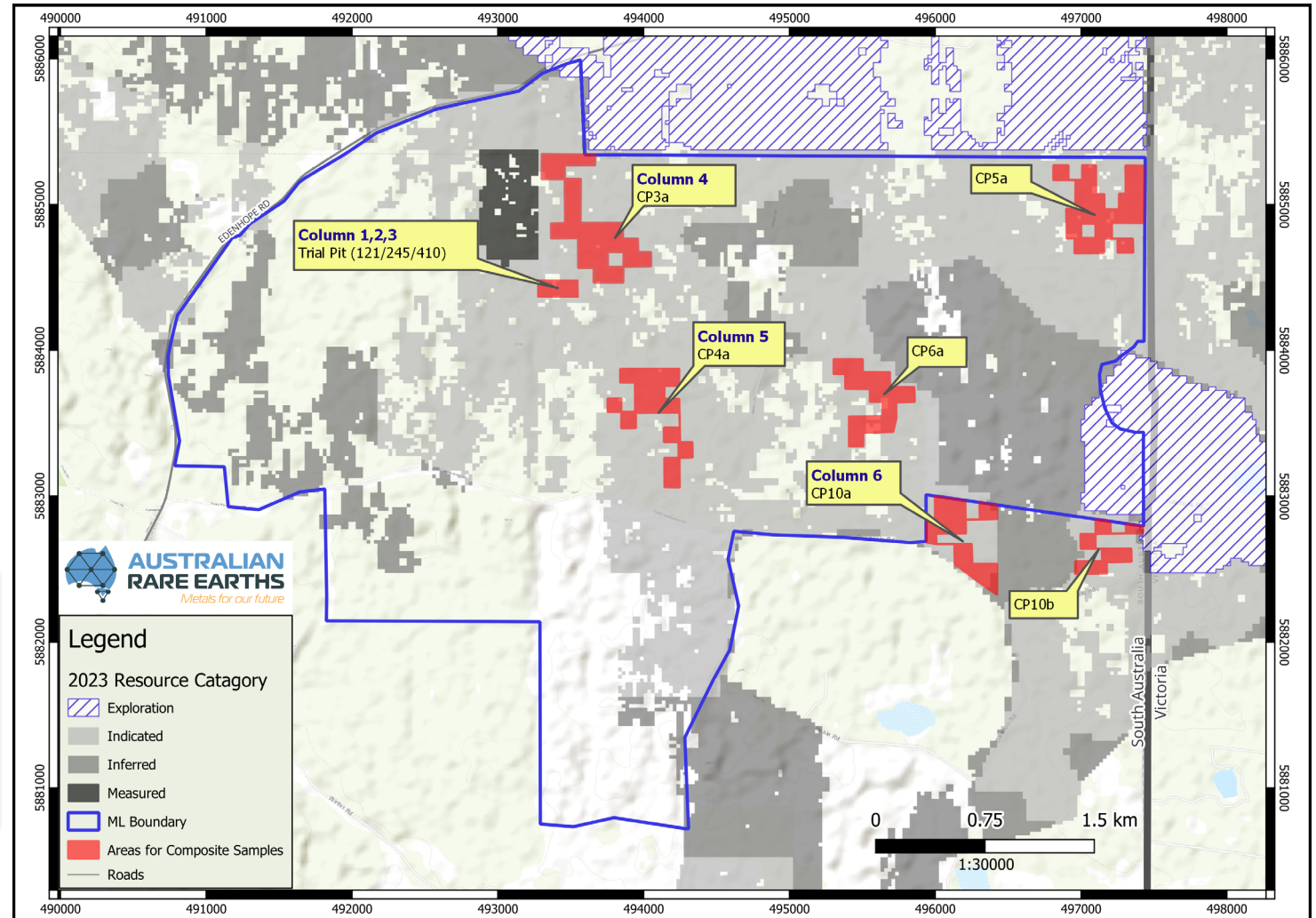
Initially Targeting High-grade Subset of Mineral Resource

- **High Magnet Rare Earths (MRE) recoveries** (up to 74%)
- **Lower costs** than tank leach alternative
- **Easy expansion** and scalability
- Validates potential **development pathway**
- **Government funding** received for metallurgical testwork
- **Potential Offtake agreement** (Non-binding MOU with NEO)

Column 1 clay in bucket post column test (agglomeration, leaching, wash)



Location of the bulk samples for the column test work.



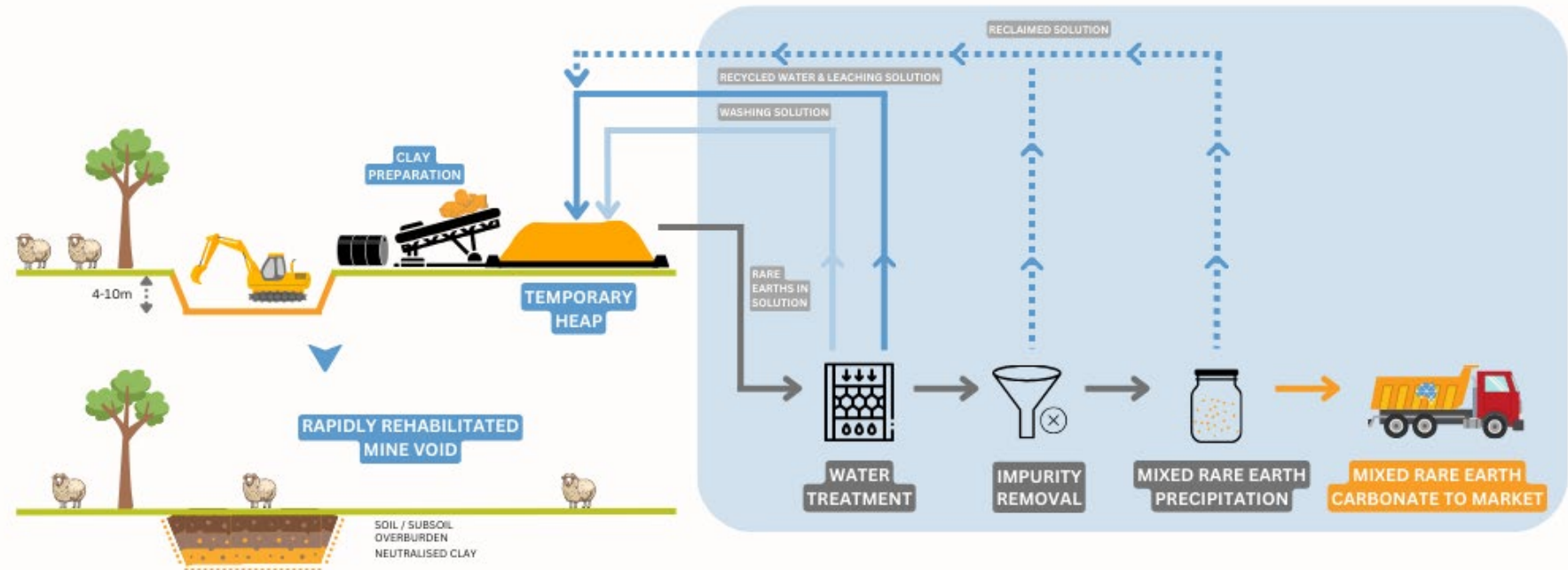


# Sustainable Development Pathway for High-Grade Rare Earth Clays

Heap Leaching: A Scalable, Efficient & Sustainable Solution for Koppamurra

- **Scalable, efficient REE production pathway** with staged satellite developments
- **Improved environmental sustainability** characteristics:
  - Less water & energy usage
  - Enables rapid, progressive land rehabilitation

## KOPPAMURRA CONCEPTUAL PROJECT FLOW SHEET



A SIMPLE PROCESS WITH LOW TECHNICAL RISKS  
AND IS ENVIRONMENTALLY SUSTAINABLE



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# Mine Design Incorporating Progressive Land Rehabilitation

## Successful Bulk Sample Pit and Rehabilitation Program



April 2022



September 2022



September 2023



# Koppamurra Next Steps

01

Flowsheet optimisation including further Heap Leach testwork



02

Finalise baseline environment baseline studies and progress work to support initial Mine Lease Application



03

Exploration Target and Resource updates based on recent drilling due in H2'24



04

Rapid exploration assessment of recently granted southern tenements



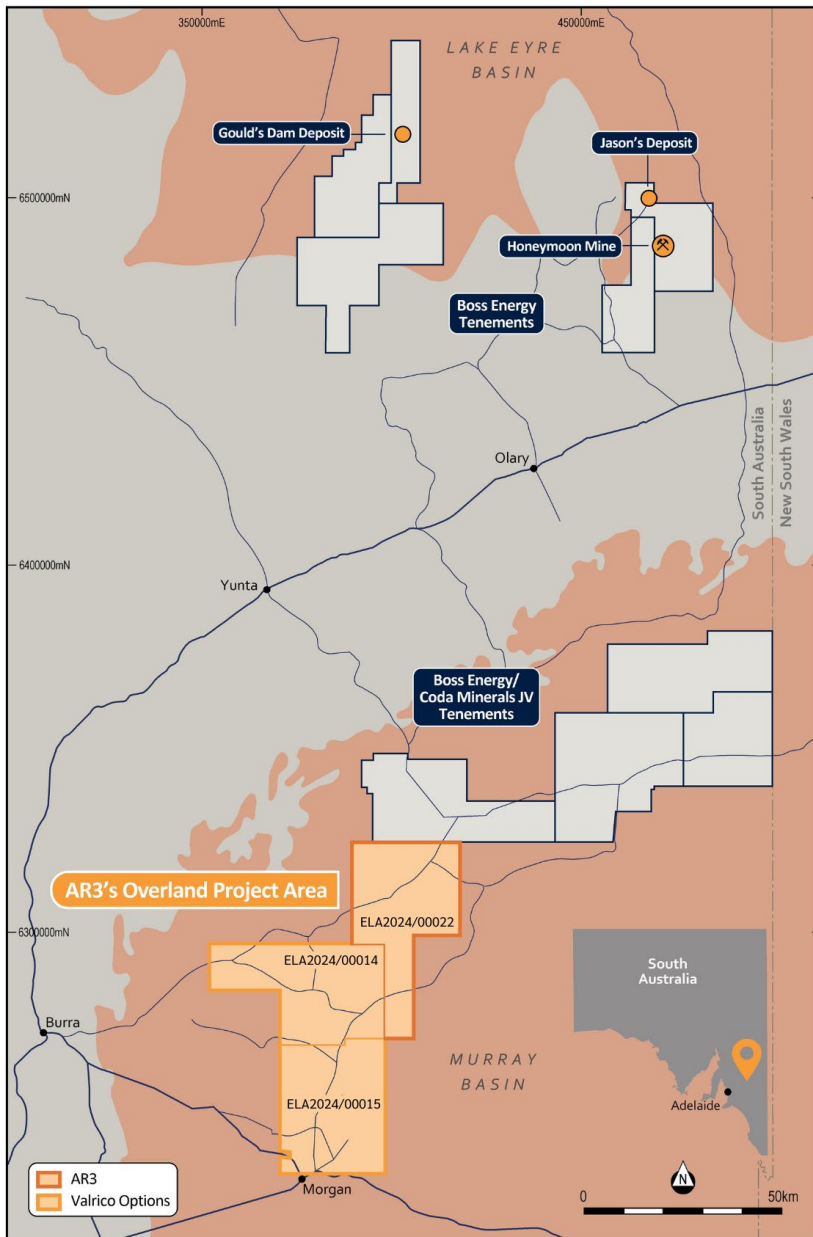
05

Continue to build strong stakeholder engagement



# Uranium Portfolio





# Overland Uranium Project: Untapped Uranium Exploration Potential

AR3 Strengthens Energy Transition Metals Focus with Overland Project

01

**Leveraging expertise:** in uranium exploration and development

02

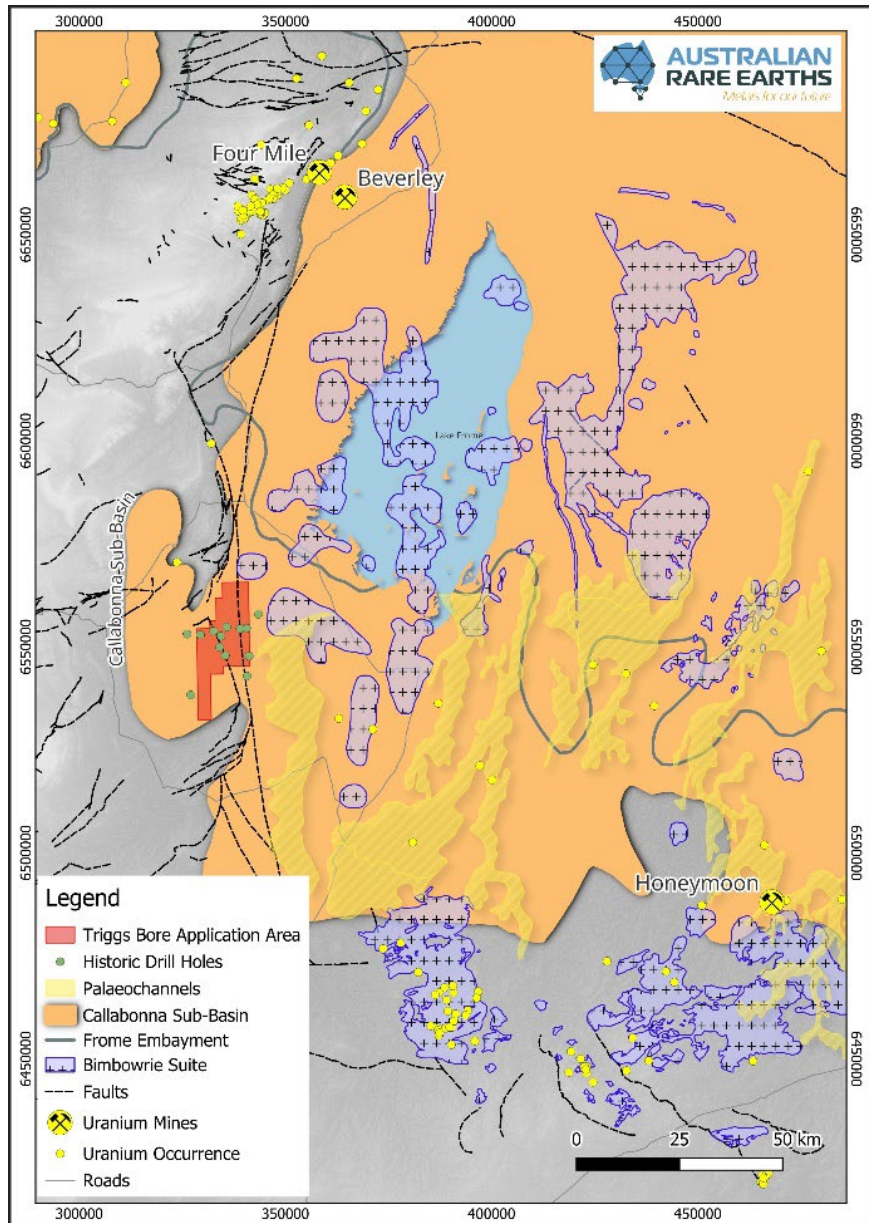
**Overland Project: 3,000 km<sup>2</sup> prospective tenure in South Australia:** Targeting Renmark Group sediments similar to successful Lake Eyre Basin; Option to acquire 100% upon exploration license grant

03

**Next Steps:** Exploration PEPR preparation, Stakeholder engagement, data compilation & interpretation, drilling and geophysical surveys

AR3's Overland Project location map





## Triggs Bore: Advancing Uranium Exploration with New License Application

Securing a Strategic 250 km<sup>2</sup> Tenure position to Unlock Untapped Uranium Potential in the Callabonna Sub-basin

01

**Exploration License Application:** (ELA) 2024/00044 submitted, covering ~250km<sup>2</sup> of prospective tenure targeting uranium mineralisation within the Callabonna Sub-basin.

02

**Untested Uranium Potential:** indications of uranium mineralisation previously discovered in 2011 but remain untested.

03

**Eyre Formation Sediments:** Triggs Bore hosted within the Eyre Formation sediments, a known uranium-bearing formation, also host to nearby Four Mile, Beverley and Honeymoon uranium deposits.

*Triggs Bore ELA relative to regional geology*



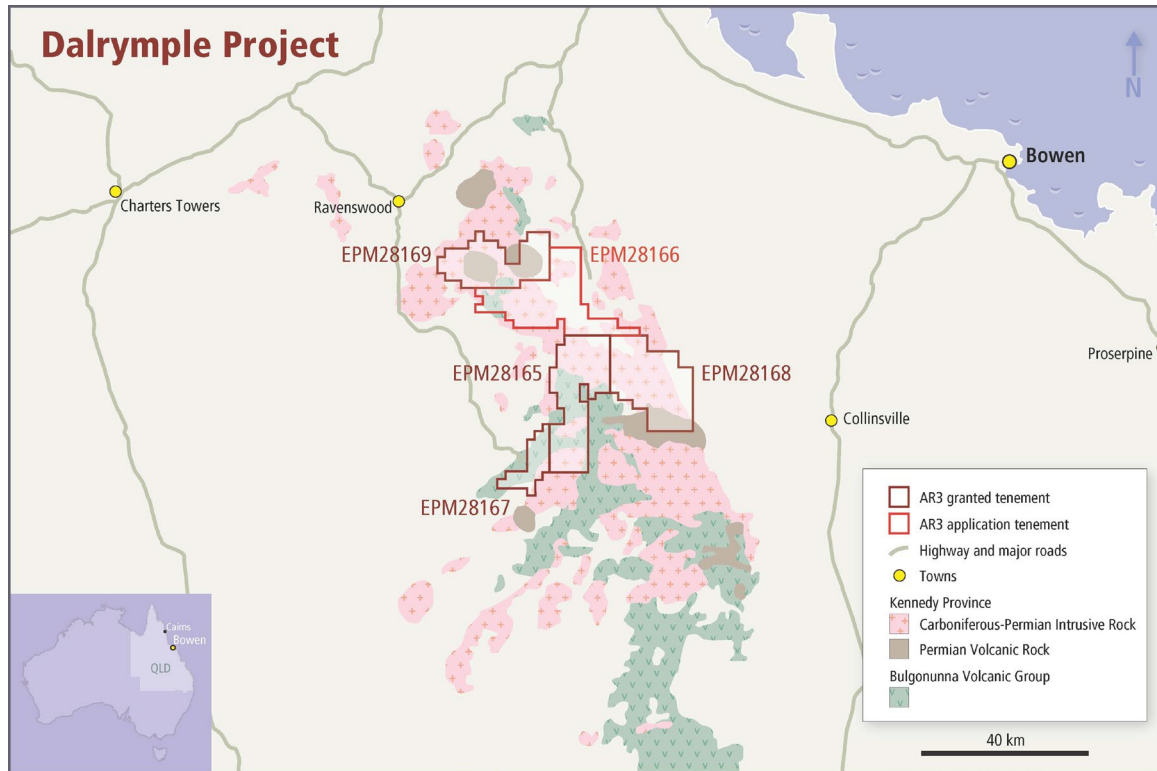


# North Queensland Portfolio

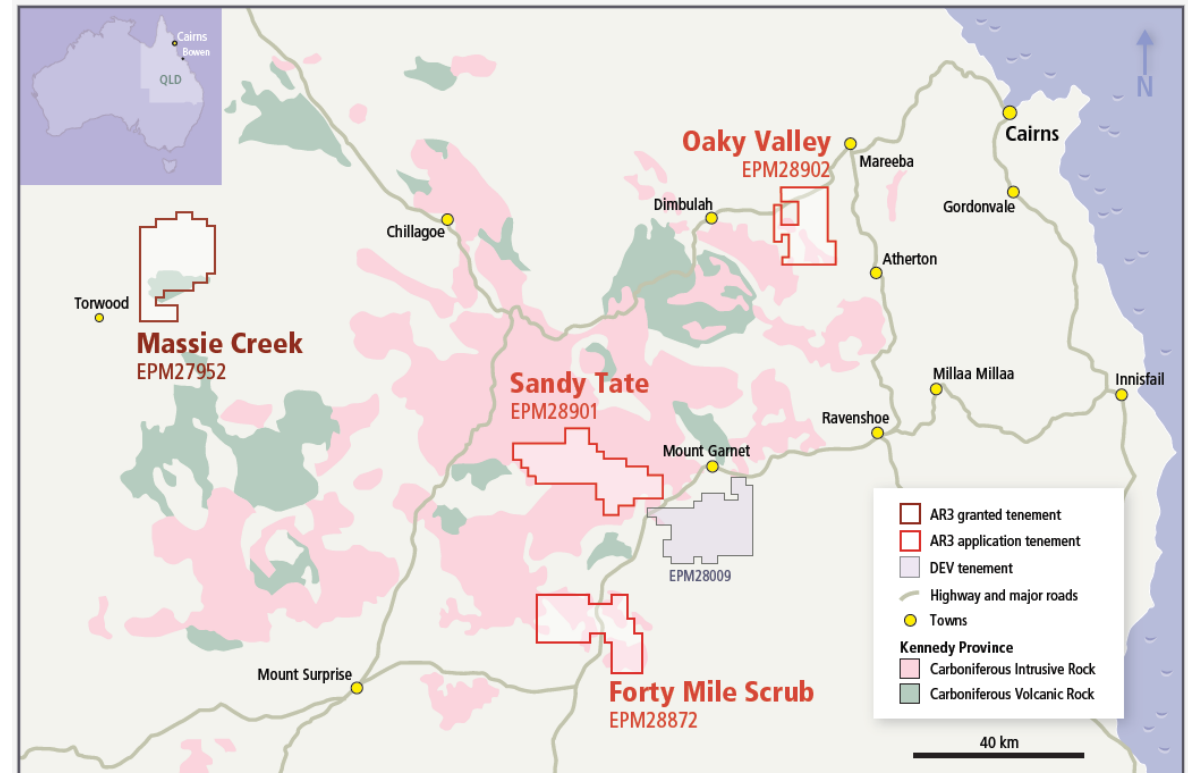


# Creating a Rare Earth Exploration Portfolio

## Dalrymple Project and Kennedy Province in Queensland



**Next Steps:** Follow-up sampling and metallurgical test work



**Next Steps:** Rapid, on-ground, exploration assessment post granting of Exploration Licence applications

# Summary: Developing a Portfolio of Energy Transition Metals

## AR3: A Leading Multi-generational Rare Earth Province with Expansion into Uranium Exploration

### **Koppamurra REE Development Project:**

Large, multi-generational REE Mineral Resource with a sustainable development pathway, pioneering clay-hosted rare earths in Australia

01

### **Overland and Triggs Bore Uranium Projects:**

Leveraging internal expertise to advance frontier, prospective uranium exploration projects

02

### **Growth focused strategy:**

Pathway to be Australia's first ionic clay hosted REE mine with a portfolio of diversified, energy transition metals exploration projects across South Australia and Queensland

03







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*Metals for our future*

## Securing Australia's Energy Transition Metals for a Sustainable Future

ASX: AR3

