

## Australian Rare Earths

Australian Rare Earths Limited (AR3) is an Australian company progressing the exploration of a significant deposit of valuable clay-hosted rare earth elements in Australia.

At AR3, we are working to supply an independent and sustainable source of rare earths, playing a pivotal role in the global transition to a green economy.

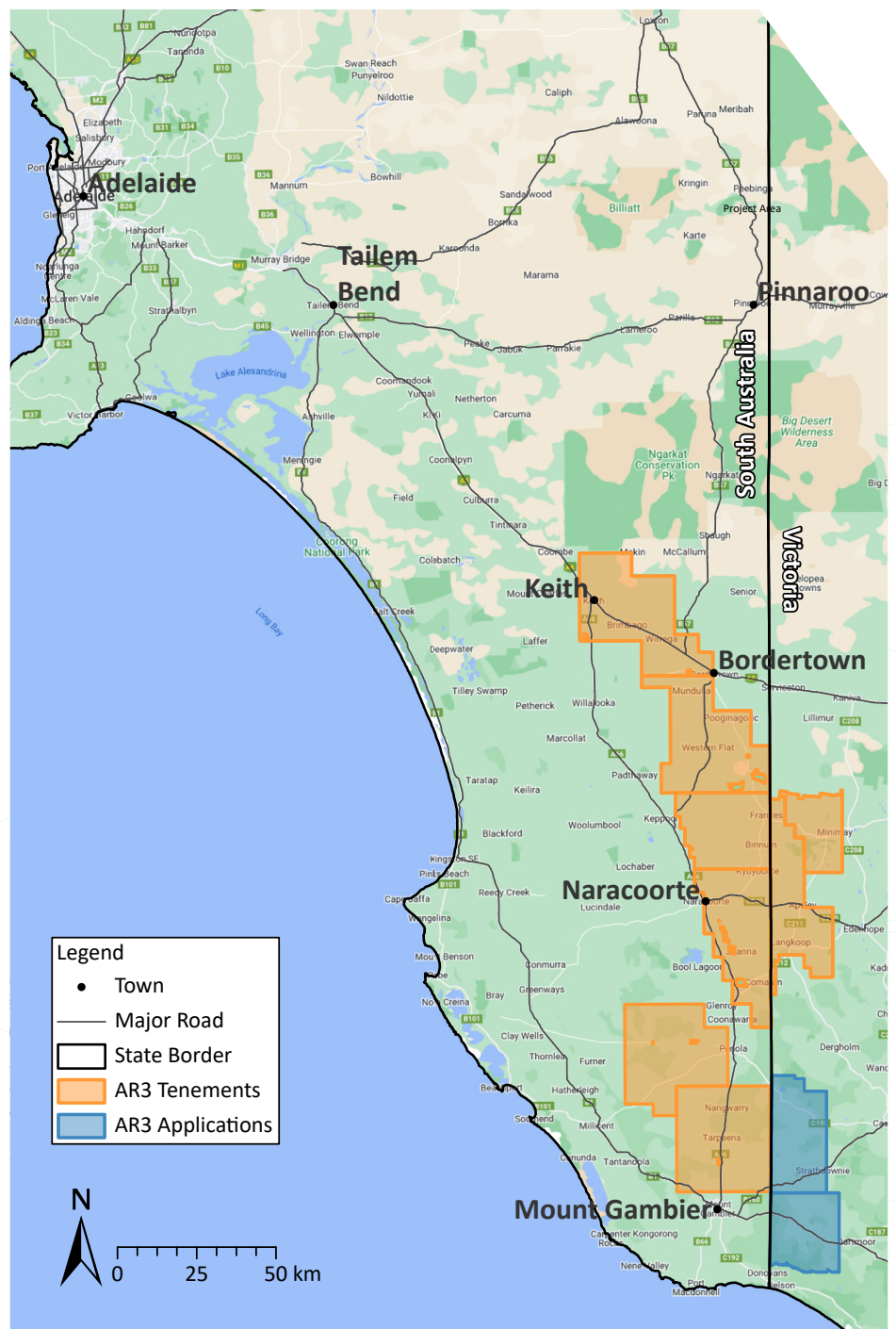


Our Koppamura Project (100% owned by AR3) is a frontier ionic clay rare earth opportunity in the south east of South Australia and western Victoria.

Koppamura is uniquely rich in the four key critical rare earths (praseodymium, neodymium, terbium and dysprosium) required in the manufacture of rare earth permanent magnets which are essential components for energy efficient technology such as electric vehicles, wind turbines and domestic appliances.



AR3 tenements



# Koppamurra Mining Lease Project update

The Project is currently in the scoping stage to assess a range of options to determine the optimal technical solution for development.

This includes a range of mining and processing alternatives. In parallel, a number of environmental studies are underway to develop the baseline information required for the impact assessment that will inform the mining lease application and support the mining proposal under the SA Mining Act 1971 to the Department for Energy and Mining (DEM).

The journey from discovery to mine includes numerous opportunities for landholder and community engagement, as shown in DEM's landholder and community engagement diagram, right.

Studies completed, or currently underway include:

## Groundwater and groundwater dependent ecosystems

- > A groundwater well census was undertaken through 2022 and 2023 and additional investigation wells installed for ongoing monitoring.
- > Baseline data collection occurred including collecting data from pumping tests that will be used to build a groundwater model of the local area. The model will be used to test various scenarios, predict potential impacts and support development of a project design that avoids/mitigates potential impacts.
- > More baseline data collection is planned throughout 2024 on a quarterly basis.

## Sinkholes

- > A technical study on local surface water catchments and depressions (known locally as sinkholes) was commissioned.
- > It investigated if water from depressions (that receive surface water when ground conditions are saturated) could seep into the underlying aquifer.
- > It included engagement with landowners to gain an understanding of the characteristics and behaviours of sinkholes, and the value of these features on their properties.
- > It found no evidence of low salinity groundwater indicative of rapid recharge via sinkholes – suggesting diffuse recharge is the predominant recharge source.

AR3 Board members inspect the site



## Stygofauna

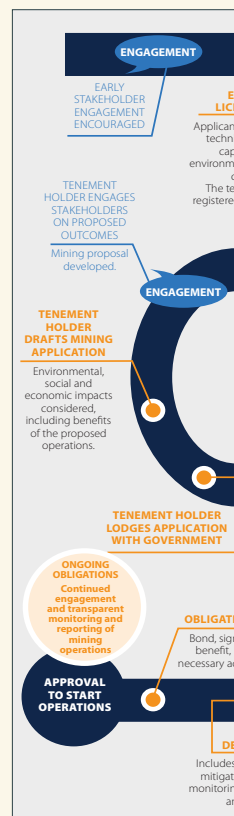
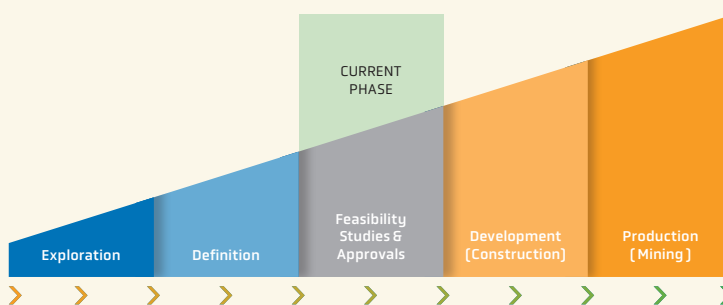
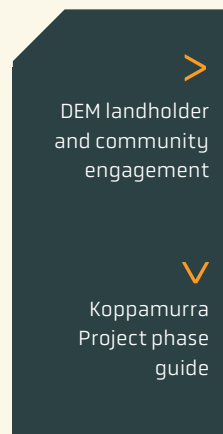
- > An initial desktop study has been undertaken on the potential for stygofauna to exist in the region.
- > A follow up report is planned for 2024.

## Soils

- > The trial pit rehabilitation is ongoing and on track with the proposed rehabilitation plan. [View the plan: www.https://ar3.com.au/11-12-23-trial-pit-open-day-booklet/](https://ar3.com.au/11-12-23-trial-pit-open-day-booklet/)

## Heritage

- > A desktop assessment was completed in Oct 2022 indicating that there were no known Aboriginal heritage sites recorded within the Project area, and that the risk of works impacting unknown Aboriginal heritage sites/objects was low.
- > Consultation with Traditional Owner groups will continue as the Project progresses.



### Dust/noise

- > Dust deposition gauges have been collecting data around the proposed mining lease area since Jan 2023 and noise monitors were installed in selected locations in Feb-Mar 2023.

### Ecology

- > Desktop and field assessments were undertaken in Sep-Oct 2022 identifying a wetland which could be considered for listing under the federal Environment Protection and Biodiversity Conservation Act. This area has since been removed from the mining lease area to mitigate potential impacts to it.
- > Scattered tree assessments were undertaken for most of the proposed mining lease area through 2022-23.
- > Red Tailed Black Cockatoo surveys were recently commenced to understand local populations.

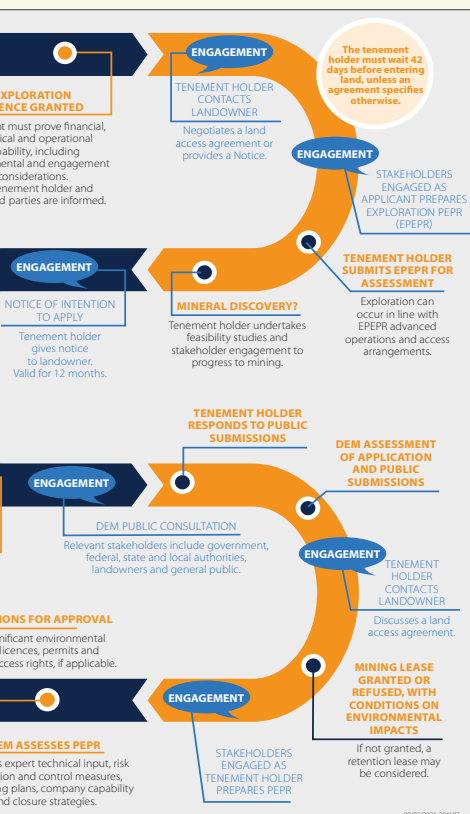
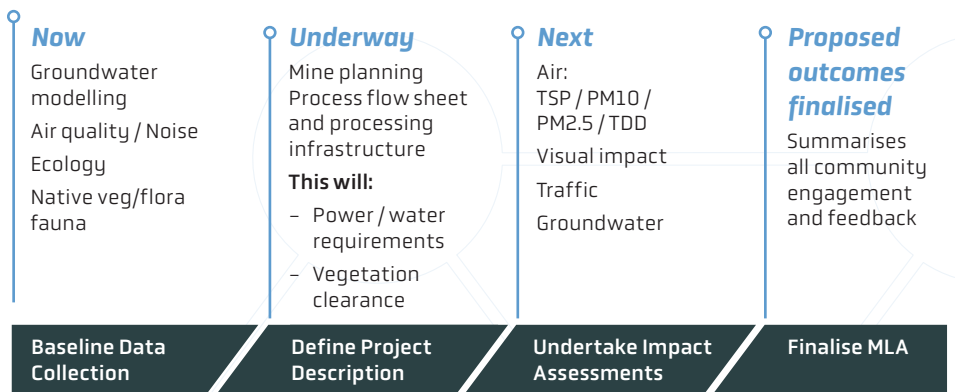
# Project highlights

The Project has been a hive of activity over the past few months as the team works to continue to grow its understanding of the Project.

### Activity has included:

- > Published an updated Mineral Resource & Exploration Target in September which incorporated the results from the drill program conducted Jan-Jun 2023.
- > Commenced a drilling program in Oct to expand the Koppamurra Rare Earths province (targeting resource extension to the north of the proposed mining lease area).
- > Acquired two new exploration licences to the south of the existing licence areas in SA and two in Vic in application.
- > Appointed Stephen McEwen as our new Study Manager for the Koppamurra Project in October, following the appoint of a new CEO in June.
- > Progressed metallurgical test work with ANSTO, including using some of the mineralised clay material from the trial pit in an effort to develop sustainable extraction techniques which can be demonstrated at scale.

### Stages to a Mining Lease Application



May 2022 - Aerial view of trial mining pit





# Koppamurra Landholder Reference Group



The Koppamurra Landholder Reference Group (KLRG) is made up of key stakeholders within and adjacent to the proposed area.

Landholders who are invited to attend the meetings are predominantly graziers, croppers, wine growers and Forestry, 141 Plantations, along with the Limestone Coast Landscape Board, Wattle Range Council, Naracoorte Lucindale Council and Rural Support Landowner Information Services.

Over the past (approx.) 12 months, the group has met four times. Meeting agendas and minutes are available on our website, [www.ar3.com.au](http://www.ar3.com.au)

## What's upcoming?

Here are some of the things we are going to be busy working on over the next few months:

- > Additional land access agreements to the north to support future drilling to expand the resource
- > Road verge drilling and paddock drilling to the north of the ML area
- > Continued scale up of metallurgical recovery testwork processes.



### Meeting 1 – 6 September 2022

#### Key topics

The group met to brainstorm the topics they would like to know more about and the experts they would like to hear from. A number of topics were identified and recorded on a register that remains live and is being worked through as the project progresses.

View the key topics:

[www.ar3.com.au/18-11-22-koppamurra-meeting-questions/](http://www.ar3.com.au/18-11-22-koppamurra-meeting-questions/)

### Meeting 2 – 6 December 2022

#### Department of Energy and Mining and Rural Business Support

At the second meeting, members heard from representatives of the Department of Energy and Mining and Rural Business Support about the regulatory process and landholder rights.

View the summary notes:

[www.ar3.com.au/17-1-23-koppamurra-landowner-reference-group-2/](http://www.ar3.com.au/17-1-23-koppamurra-landowner-reference-group-2/)

### Meeting 3 – 12 April 2023

#### Dr Melissa Fraser, soil

Dr Fraser discussed the rehabilitation at the trial pit and the results of the soil studies.

View the summary notes:

[www.ar3.com.au/27-4-23-koppamurra-landowner-reference-group-3/](http://www.ar3.com.au/27-4-23-koppamurra-landowner-reference-group-3/)

### Meeting 4 – 25 July

#### Paul Magarey, WSP, hydrogeology

Hydrogeology was the topic of the fourth meeting. The Hydrogeologist gave an overview of what we know to date about the valuable ground water resource in the region. This was the first of 3 proposed presentations on groundwater (as the topic is so vast)!

View the summary notes:

[www.ar3.com.au/13-11-23-koppamurra-landowner-reference-group-4/](http://www.ar3.com.au/13-11-23-koppamurra-landowner-reference-group-4/)

