



A R A F U R A
RARE EARTHS LIMITED

ENVIRONMENTAL STUDIES

A KEY COMPONENT OF DEVELOPING THE NOLANS RARE EARTHS PROJECT IS UNDERSTANDING ITS LIKELY IMPACT ON A RANGE OF ENVIRONMENTAL ASPECTS, INCLUDING THE NATURAL ENVIRONMENT, COMMUNITIES, CULTURAL HERITAGE AND WATER USE.

Thorny Devil

OVERVIEW

The Environmental Impact Statement (EIS) for the Nolans Project comprised several detailed studies on a range of key areas including:

- Flora and fauna local to the Nolans project area, including vulnerable species such as the Central Desert Rock Wallaby and the Great Desert Skink.
- The likely social impacts of the project – how it may affect and create opportunities for communities close by, and throughout the greater Northern Territory. This area of study contemplated the employment opportunities Nolans would present, how increased income may impact communities, and the likely results of an influx of workers into the region during the project's construction and ongoing operation.
- The impact of additional trucks and other traffic on local roads, including flow-on effects for other road users and road maintenance requirements.
- Culture and heritage studies to ensure a comprehensive understanding of significant sites within or close to the Nolans project area and how best to ensure they remain protected; and how best to mitigate any impact on the area's Traditional Owners and their connections to local land, water and areas of cultural significance.
- The management of any risks associated with the naturally-occurring radiation associated with material to be mined and processed at Nolans.

- The project's water requirements, the impact of those requirements of the environment and other local water users, and the most appropriate measures to minimise the project's impact on the local water table.
- Causes, impacts and management of dust and noise associated with Nolans.
- A forward-looking assessment of the rehabilitation activities required throughout the Nolans Project's operational life, including progressive care for cleared land, plans for revegetation, and what will be required when operations cease.

Arafura seeks to ensure that the Nolans Project operates sustainably at all times. This means balancing the community, corporate, environmental and economic aspects of the project across its full lifecycle.

In preparing the Nolans EIS Arafura consulted widely, engaging with a broad range of stakeholders to ensure a diversity of opinions were heard and considered. The resulting EIS demonstrated to the Northern Territory Government and project stakeholders how the views of community views were taken into account.

The Nolans EIS was lodged with the relevant Northern Territory and Australian government agencies in mid-2016. Arafura subsequently secured all relevant environmental approvals, and in late 2022 the project's Mining Authorisation was granted – a direct reflection of the high standards established in the EIS.



Groundwater drilling south-west of the Nolans site

TRANSPORT

An important study explores the transport of an estimated 196,000 tonnes of material, including processing chemicals, to the Nolans site each year. Freight will arrive in Alice Springs by train before being trucked 135 kilometres up the Stuart Highway to Nolans. Outbound freight quantities from Nolans are significantly less at around 150,000 tonnes per annum comprised of about 135,000t phosphoric acid and 14,000t rare earths.

These movements will require several road trains transporting freight into and out of the site on a daily basis. This will be governed by a traffic management plan, a number of safety plans and emergency response procedures to ensure that transport activities are well managed and associated risks mitigated.

Chemicals will arrive at Darwin Port in bulk liquids containers and shipping containers. Sulphur will come in as a bulk product and be reloaded into shipping containers for rail transport to Alice Springs.

A logistics operation in Alice Springs will coordinate the inbound transfer of containers from rail to road trains and outbound transport of rare earth and phosphoric acid products back to Darwin for export.



Central Desert Rock Wallaby



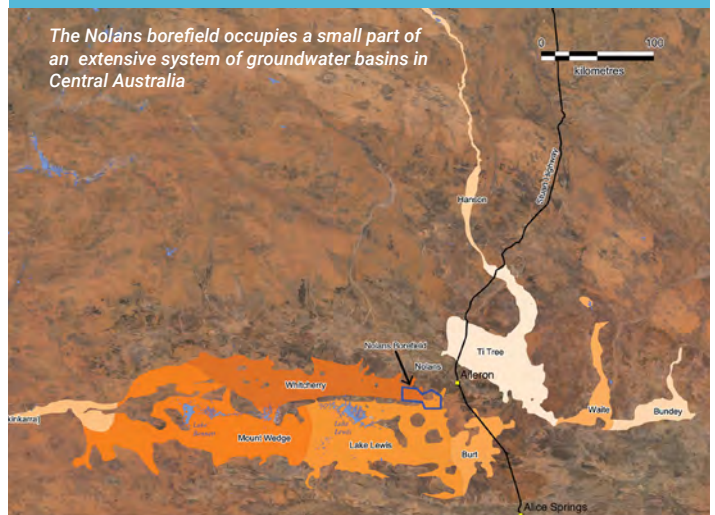
Ti Tree Rangers Nathaniel Dixon and Matthew Jungala assisting with biodiversity studies. (Photo supplied by the Central Land Council)

WATER

An Aquifer is best described as a large underground lake, with water held in permeable sediment and rocks. When the water is pumped out by a bore, aquifer water levels can drop before being replenished by rainfall and seepage.

To ensure aquifers are suitably maintained, it is critical to understand how much water they hold, the draws on their supply (including people and the environment), how quickly the aquifers are replenished by rainfall and other sources, and how much salt or other naturally occurring elements the water contains.

Arafura discovered large aquifers on Aileron and Napperby stations south-west of the Nolans site, which will provide the project with a suitable supply of water for mining and processing, as well as for human consumption. These requirements were assessed in the EIS, and final groundwater abstraction approvals were granted in March 2023.



The Nolans borefield occupies a small part of an extensive system of groundwater basins in Central Australia

Ti Tree Ranger Matthew Jungala assisting with biodiversity studies. (Photo supplied by the Central Land Council)

