



# Existing environment physical setting

The Ranger Project Area is surrounded by, but separate from, the world heritage listed Kakadu National Park.

## Physical setting and environment

Ranger mine is located 8 km east of Jabiru and 260 km south east of Darwin, in Australia's Northern Territory. The mine is located on the 79 km<sup>2</sup> Ranger Project Area (RPA).

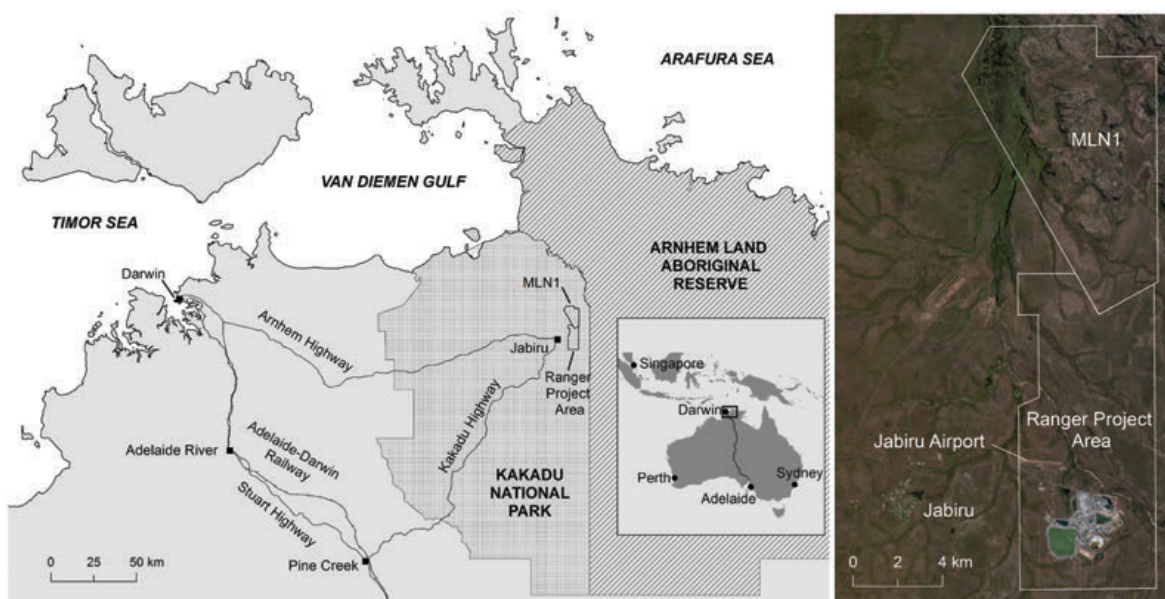
The Ranger Project Area lies within the Magela Creek catchment, surrounded by Kakadu National Park, in the Alligator Rivers Region. Kakadu National Park is a world heritage listed area and Ramsar wetland site.

The Alligator Rivers Region is dominated by a distinctly seasonal, wet-dry tropical climate. The wet season generally extends from late October to April, and the dry season from May to September. The hottest month at Jabiru Airport is October,

with a mean maximum temperature of 37.6°C, and the coolest month is July, with a mean minimum temperature of 18.3°C. The region is subject to potential extreme weather events such as tropical lows and cyclones. These events are managed through contingencies in the existing water management system at Ranger.

The current operations and location of the Project are on a plain approximately 3.5 km north of the Mount Brockman Massif, which is an outlier of the Arnhem Land Plateau, which rises over 200 m above the plain.

The Ranger mine is bounded by three ephemeral creek systems: Magela Creek to the north and east, Gulungul Creek to the west and Corridor Creek to the south. These three creeks form part of the Magela Creek catchment, which covers an area of approximately 1,600 km<sup>2</sup>. The more significant of these creek systems is Magela Creek which lies immediately east of the Project location. Magela Creek is a seasonally flowing tributary of the East Alligator River, with a catchment originating from headwaters on the Arnhem Land plateau. The Creek then flows into lowland woodland and subsequently into a large floodplain.



Geographic location of the Ranger Project Area and Ranger mine

# Existing environment physical setting



ERA

## Bioregions

Bioregions for the Australian continent have been created as part of a national classification of ecosystems. There are currently 89 bioregions and 419 sub-regions in Australia. Each region is based on similarities in climate, geology, landform, native vegetation; and species information.

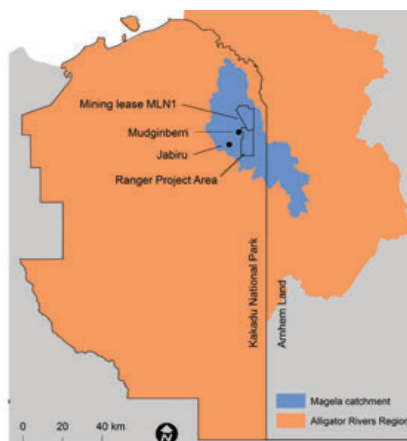
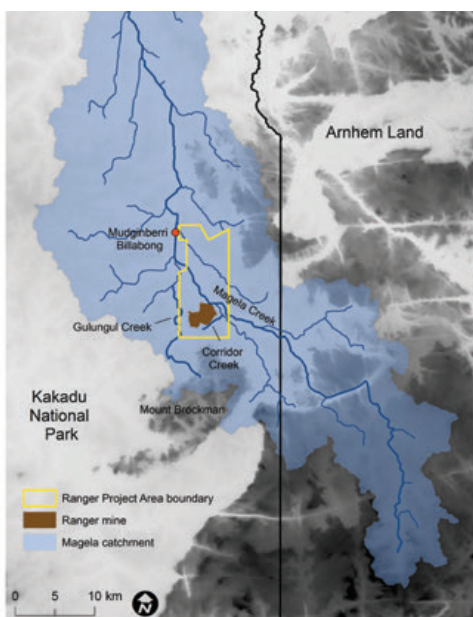
Most of the RPA lies within the northeast section of the 28,520 km<sup>2</sup> Pine Creek Bioregion. The features of the Pine Creek Bioregion include:

- a landscape broadly consisting of hilly to rugged ridges with undulating plains;
- vegetation communities that include eucalypt woodland, with patches of monsoon forest;
- major land uses that include conservation, pastoralism, intensive rural freehold blocks, horticulture, mining, and indigenous freehold; and,
- major population centres at Batchelor, Adelaide River, Pine Creek and Jabiru.

Ranger mine has been operating for more than 30 years, with extensive monitoring and research programs by the Supervising Scientist Division confirming that the environment has remained protected.

## Fast Facts

- Ranger mine is situated on the Ranger Project Area, 8 km east of Jabiru and 260 km south east of Darwin, in Australia's Northern Territory.
- The Ranger Project Area lies within the Magela Creek catchment of the Alligator Rivers Region.
- The Alligator Rivers Region is dominated by a distinctly seasonal, wet-dry tropical climate.
- Most of the Ranger Project Area lies within the northeast section of the 28,520 km<sup>2</sup> Pine Creek Bioregion, dominated by savanna (eucalypt) woodland with patches of monsoon forest.
- Ranger mine has been operating for more than 30 years with extensive monitoring and research programs by the Supervising Scientist Division confirming that the environment has remained protected.



Kakadu National Park and Alligator Rivers Region (centre)

Ranger Project Area in relation to the Pine Creek Bioregion (right), Magela catchment (left)

## Further reading:

Refer to Chapter 2 of the *ERA Ranger 3 Deeps: Draft Environmental Impact Statement*.