

## The history of bauxite

Commercial quantities of bauxite were discovered on Aboriginal lands at Weipa in Western Cape York in 1955. The discovery was made by geologist Harry Evans who was assisted by George Wilson (Piiramu), Old Matthew (Wakmatha) and Lea Wassell.

In 1961, six years after Evans's discovery, bauxite mining began on Cape York Peninsula. 1963 was the first year of commercial production, with 453,365 tonnes of bauxite mined and shipped. In 2013, the mine celebrated 50 years of operations and marked the 500th million tonne of bauxite being shipped from Weipa.

## Why mine bauxite?

The mining process is the first step in the production of aluminium. Bauxite ore is found in a layer up to four metres deep in the form of small red pebbles called pisolites. Bauxite is processed into a white powder called alumina, which is then processed at smelters into aluminium.

## Where does the bauxite go?

Weipa bauxite is sent to a number of locations including Rio Tinto's Yarwun refinery in Gladstone which uses 100 per cent Weipa bauxite. Other recipients of Weipa bauxite include the Queensland Alumina Limited refinery in Gladstone and overseas customers.



More information about  
our operations is available  
on our website  
[www.riotinto.com](http://www.riotinto.com)



## Important Rio Tinto Weipa numbers

### Community feedback hotline – free call 1800 707 633

Speak directly to a Rio Tinto Weipa representative during business hours to provide feedback or ask questions about our operations. If your call is not answered, please leave a message and we will get back to you as soon as possible.

### Power outage and general works hotline – free call 1800 820 711

A recorded message will provide you with up to date information during unexpected events such as unplanned power outages. Information about planned power outages is also recorded.

Rio Tinto

## Rio Tinto Weipa Operations



# The mining process



## 1. Pre-mining surveys

Environmental, archaeological and anthropological surveys are carried out to identify significant or sensitive environmental, cultural and heritage areas.

## 2. Exploration and mine planning

Geological samples are taken to determine the size and quality of the bauxite deposit. The geological information, along with the environmental and heritage information, is used by mine planners to work out which areas to mine.

## 3. Mining

Saw-grade timber is removed from mine areas before the remaining vegetation is cleared and the top soil removed. The bauxite is mined by loaders and transported by haul trucks to beneficiation plants.



## 4. Beneficiation

The bauxite is washed and screened at the beneficiation plants. Once washed, the ore becomes 'product' and is stored on stockpiles. Andoom product is transported to the stockpiles by train.

## 5. Shipping

Ship loaders transfer ore onto ships. Ships transport the product to refineries that turn the bauxite into alumina which is then turned into aluminium.

## 6. Rehabilitation and relinquishment

The top soil from mined areas is put back. The area is then revegetated using local native seeds and fertiliser. Ultimately, mined land will be returned to Traditional Owners.

## Our operations

Rio Tinto owns and operates the Weipa bauxite mine located on Western Cape York Peninsula.

Our operation consists of two continuous mining operations at East Weipa and Andoom, two beneficiation plants, 19 kilometres of railway to transport bauxite to the port area and two ship loaders.

Rio Tinto also operates two diesel power stations (26 and ten megawatts at Lorim Point and Andoom) supplying the mine, the Weipa town and neighbouring community of Napranum.

## Our agreements

Rio Tinto recognises that mining occurs on Aboriginal land, and three Aboriginal agreements underpin all operations and activities—the Western Cape Communities Co-existence Agreement, the Ely Bauxite Mining Project Agreement and the Weipa Township Agreement.

These agreements provide economic, education and employment benefits, as well as cultural heritage support and formal consultation processes between the company and the Traditional Owners of the land on which we operate.

## Our role in Weipa

Rio Tinto is a major contributor to the regional economy and continuously invests in local infrastructure to support the Weipa Township.

As a major employer and with responsibility for the administration and maintenance of the town, Rio Tinto Weipa makes a very significant, annual contribution to regional economic development.

We continue to invest in our regional infrastructure, and services in Weipa and across the Western Cape. Developing and investing in this infrastructure assists with maintaining the liveability of the region and secures a strong future for Cape York.