

Huntly mine transition and Pinjarra refinery production increase

Environmental assessment



Terrestrial environmental quality



Alcoa has been operating in Western Australia since 1963. Our Huntly and Willowdale mines send mined bauxite to our Pinjarra and Wagerup refineries where it's refined into alumina, the material used to make aluminium.

Aluminium plays a key role in decarbonisation. It's found in solar panels, wind turbines, electric vehicles, medical equipment and more. We continue to rely on it every day.

The assessment

We are seeking approval to transition Huntly Bauxite Mine to new operating areas and increase alumina production at Pinjarra Alumina Refinery by 5%. This requires assessment by the Environmental Protection Authority (EPA) and approval by the State and Commonwealth Governments to ensure it meets environmental standards and minimises impacts to the environment, cultural values and local communities.

Transitioning to new mine regions is essential for the continued operation of the Huntly mine and Pinjarra refinery. This project will protect thousands of ongoing local jobs, helping sustain the regional economy.

We've undertaken studies to understand the environment, how our activities might affect it and to support rehabilitation of the land. These have been used in preparing our Environmental Review Document.

EPA environmental objective aims to

maintain the quality of land and soil to ensure ecosystems remain healthy and resilient. Protect against erosion, contamination, and degradation to preserve environmental values and support future land uses.

Key terms

Terrestrial environmental quality – is the condition of land and soil, including its physical, chemical, biological, and aesthetic characteristics.

Erosion – is the process where soil is worn away by wind, water, or human activity, leading to land degradation.

Proposed activities

Alcoa's proposed mining activities that could impact terrestrial environmental quality include:

Clearing land for roads, infrastructure, and mining areas.

Managing surface water flow to prevent erosion and release of sediment.

Storing and handling hazardous material.

Closure and decommissioning of mining operations.

Potential impacts

Mining activities may impact terrestrial environmental quality in the following ways:

Increased salt deposits in the soil, which can reduce fertility and harm plants.

Disturbance of Acid Sulfate Soils that can affect soil health.

Soil and land structures eroded by wind or water once natural vegetation is removed.

Leaks or spills from hazardous materials and waste, which may contaminate soil.

Managing impacts

Alcoa is working toward the goal of no net loss of biodiversity for major expansion projects and manages potential impacts on terrestrial environmental quality through the application of the mitigation hierarchy - avoidance, minimisation and rehabilitation.

Avoid

- Transport to and dispose all waste (except treated wastewater) at licensed off-site facilities.
- Use PFAS free fire-fighting foams to prevent contamination of soil.

Minimise

- Use existing roads wherever possible.
- Limit road and infrastructure crossings over swamps and streams to reduce disturbance.
- Store chemicals in approved containers within containment areas to prevent spills.
- Refuel vehicles at designated facilities to reduce contamination risk.

- Store spill response equipment at designated facilities. Ensure all spills are reported, remediated, and managed by trained staff.

Rehabilitate

Alcoa's rehabilitation is led by a research-driven approach which means healthy and resilient jarrah forest ecosystems are being returned to where bauxite was once mined.

Managing land and soil rehabilitation includes:

- A focus on restoring higher-risk areas first, such as steep slopes and areas with salinity risks, to prevent erosion and protect water quality.
- Shaping pit slopes and breaking up compacted ground to manage water runoff and reduce erosion.



How Alcoa monitors potential impacts

Rehabilitation tracking – Monitoring of rehabilitation program to confirm effective erosion control.

Clearing limits/extent – Clearing reconciliation conducted to ensure we comply with our clearing limits and extents.



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