

# Huntly and Willowdale current mining operations

## Environmental assessment



## Inland waters

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

The Environmental Protection Authority (EPA) is reviewing some of the current mining activities at the Huntly and Willowdale mines to ensure they meet State environmental standards and minimises impacts to the environment, cultural values and surrounding communities.

While the EPA completes its assessment, Alcoa will continue to operate under an exemption granted by the WA Government – maintaining bauxite supply and supporting thousands of local jobs.

### EPA environmental objective aims to

maintain natural water flow patterns and protect the quality of groundwater and surface water to ensure ecosystems remain healthy and water resources are preserved.

### Key terms

**Inland waters** – All water found on land, including rivers, lakes, streams, wetlands, groundwater, and reservoirs.

**Public drinking water source areas (PDWSAs)** – The catchments of dams and reservoirs that provide drinking water to cities and towns. They are carefully managed to ensure the safe supply of drinking water.

**Reservoir Protection Zones** – Designated areas near drinking water reservoirs to protect water quality.

### Proposed activities

Alcoa's proposed mining activities that could impact inland waters include:

Clearing native vegetation.

Mining bauxite ore and constructing supporting infrastructure.

The application of fertilisers as part of rehabilitation within Public Drinking Water Source Areas.

Operating and maintaining heavy equipment and vehicles.

Using water for construction and mining processes.

Managing waste, contaminants, and chemical products.

Human presence within the Reservoir Protection Zone.

## Potential impacts

Mining activities may affect inland waters in the following ways:

Changes to the quality and quantity of surface water and groundwater.

Disrupting natural groundwater and surface water flow.

Increased flow of saline groundwater into local water systems.

Increased sediment in surface water from erosion.

Water contamination through spills, hazardous materials and disturbance of naturally acidic soils.

Disruptions to public drinking water supply if quality or availability is impacted.

## Managing impacts

Alcoa has operated in drinking water catchment areas for more than 60 years and is committed to maintaining our record of no impacts to drinking water supply. We manage potential impacts on inland waters through the application of the mitigation hierarchy – avoidance, minimisation, and rehabilitation.

### Avoid

- No mining within:
  - 1 km of any water reservoir.
  - Steep areas in reservoir protection zones.
  - 100 m of riparian vegetation along streams.
  - the Serpentine Pipehead Catchment.
- No new mine pit clearing within 1 km of any reservoir's maximum water level.
- No construction compounds, wastewater treatment plants, fuel farms or waste disposal within Reservoir Protection Zones.
- Safe storage of hydrocarbons and chemicals.
- Turbidity is kept under specific levels in streams that flow to drinking water reservoirs.
- Design mine pits to remain at least 2 metres above the predicted groundwater table to protect groundwater quality and flow.

### Rehabilitation

Alcoa continues to focus on high-quality rehabilitation. An independent review of our rehabilitation conducted in 2023 concluded that our rehabilitation practices “remain as sophisticated and comprehensive as for any mining operations globally”.

Managing rehabilitation for inland waters includes:

- A focus on restoring high-risk areas first, such as areas within Reservoir Protection Zones and steep slopes to prevent erosion and protect water quality.
- Shaping pit slopes and breaking up compacted ground to manage water runoff and reduce erosion.

### Minimise

- Permit required for activities near reservoirs to limit human presence in reservoir protection zones.
- Restrict hydrocarbon transport to 15,000L at Big Brook River crossing, with signage and a 30 km/h speed limit in place.
- Use PFAS-free firefighting foams

## How Alcoa monitors potential impacts

**Water monitoring** – Over 60 monitors in waterways located across Huntly and Willowdale mines measuring salinity and turbidity levels in surface water. Alcoa also monitors groundwater levels and quality through an extensive groundwater bore network.

**Clearing limits/extent** – Clearing reconciliation conducted to ensure our clearing complies with our commitments.



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