



New Zealand's Aluminium Smelter - Detailed Site Investigation Fact Sheet

Closure studies

- A multi-year process to develop a greater understanding of what specific actions are needed to ensure the New Zealand Aluminium Smelter site is remediated to the required level upon its eventual closure.
- Consultant GHD was engaged to complete a Detailed Site Investigation as part of the preliminary phase of the Closure Studies.

GHD's methodology

- A Preliminary Site investigation was conducted to assess existing information, such as the NZAS Contaminated Sites Register, to identify areas of the site most likely to be contaminated.
- GHD then collected samples of soil, groundwater, and drain sediment for laboratory analysis.
- This allows for comparison to a range of criteria and identification of areas where remediation may be required.
- Samples were gathered across 238 locations, mostly at levels 10cm and 1m below the surface.

Criteria

- The samples were assessed against a range of criteria as per the Ministry for the Environment Contaminated Land Management Guidelines based on potential future land use: industrial or recreational.

Findings

Soil	Drainage sediment	Groundwater
<ul style="list-style-type: none"> • 1% of samples did not meet the industrial land use guidelines • 9% of samples did not meet the recreational land use guidelines • The samples that exceeded guideline values were primarily from 10cm below ground level • This indicates the contamination is close to the surface and can easily be remediated • Areas of contamination are not in routine work areas for employees or contractors. The risk of individuals coming into contact with these soils is minimal and being actively managed. 	<ul style="list-style-type: none"> • Approximately two-thirds of samples collected from on-site drainage exceeded guideline values and remediation is required in these areas • Concrete barriers within the system prevent most of the sediment from discharging to coastal areas • A set of samples were taken from drain exit points. The exceedances in these samples were limited to nickel and zinc • Further testing is required to assess the impact on the marine environment from any sediment and whether any further action is needed 	<ul style="list-style-type: none"> • 83% of ground water samples exceeded guidelines within the New Zealand Drinking Water Standards and Environment Southland groundwater rules • Contaminant concentrations were highest in the central portion of the site and levels reduced with distance from this area • There is no risk to employees as NZAS does not extract any groundwater from below the smelter • Further testing is necessary to assess compliance with Environment Southland rules and understand potential impact on the marine environment

Next steps

- NZAS will be conducting further testing to better understand the areas of identified contamination and impact on the environment. We will keep releasing information so our stakeholders can see how we are progressing with our activities to remediate the site.
- We will also work with iwi and other key stakeholders, to identify options and develop plans to remediate the contaminated areas.
- Anyone with questions or concerns can contact us at NZAS.Enquiries@riotinto.com