



pure kiwi mettle

NEW ZEALAND ALUMINIUM SMELTERS LIMITED

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02 May 2024

Neal Barclay
Chief Executive
Meridian Energy Limited
(via email)

Dear Neal

Environmental Remediation Update

You have asked for confirmation as to NZAS' environmental remediation plans.

I confirm on behalf of NZAS that we are satisfied as to the likelihood of stakeholder acceptance of our environmental remediation plans, and the significant progress by NZAS on environmental remediation, addressing outstanding historic issues, and partnering with iwi.

In particular, I would highlight the following:

- NZAS' progressive MOU with Ngāi Tahu, signed in 2022, which has seen the formation of the Remediation Advisory Working Group (RAWG), between Mana Whenua and NZAS to drive a true partnership approach to remediation, and ensure iwi involvement in all decisions relating to environmental efforts at Tiwai. Recent comments from Ngāi Tahu on the success of the partnership are attached to this letter as is the original MOU announcement (see **Annexure 1**). The MOU marks a new chapter in NZAS' long-term partnering with Ngāi Tahu and provides us a substantial foundation for multi-lateral input on remediation, future planning, as well as partnering and economic development opportunities.
- Ongoing extensive monitoring, above and beyond regulatory requirements. A comprehensive review by GHD in 2023, confirmed overall low risk of ecological impacts from our operations, and assisted NZAS in identifying specific areas of focus for remediation going forward, which has also been confirmed by the RAWG as priority areas. A similar, albeit less comprehensive study by Environment Southland, had broadly similar conclusions and remediation focus areas. (the media release on the GHD report is enclosed as **Annexure 2**)

COMMERCIAL IN CONFIDENCE

- Successful repatriation (to the Tiwai smelter site) and export of all ‘Ouvea Premix’ which had been stored in the community.
- Commencement of export of Spent Cell Lining (SCL) from Tiwai to be processed in Australia and recycled into cement manufacture, with over 20,000 tonnes planned for export in the next 12 months and potential for a significant increase moving forward.
- Closure of the onsite landfill in 2022 and commencement of remediation planning for the site.
- Improved operating practices, including the maintenance of the drains (particularly removal of sediment behind the weirs etc.) to reduce contaminant flux, the implementation of better management processes for the discharge of stormwater prior to discharge and improvements to stormwater retention systems. Potential engineered solutions are being explored through our co-design commitment with Ngāi Tahu.

A current snapshot of the status of the full remediation programme is enclosed as **Annexure 3**.

For completeness NZAS is committed to removing all SCL from the site during any remediation process. This material will then be suitably processed along with any dross residues resulting from the smelting process. Furthermore, NZAS is dedicated to progressively remediating land and water contamination to meet appropriate environmental standards. The final closure solution of the landfill will form part of the overall remediation plan and planning is currently underway with our partners Ngāi Tahu on this.

I trust this satisfies your concerns and am happy to discuss these in more detail with you and your team.

Although we have more work to do, now and moving forward, we are particularly proud of the significant progress made in addressing present and historic environmental and operational matters of concern, and of the platform we have developed internally and with partners, to set NZAS up for success in remediation and sustainable operations.

Ngā mihi



Chris Blenkiron
CHIEF EXECUTIVE

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ANNEXURE 1



Te Rūnaka o Awarua



Te Rūnanga o NGĀI TAHU



MEDIA RELEASE

26 February 2024

Ngāi Tahu relationship with Tiwai a model for others

The partnership between NZAS, Rio Tinto and Ngāi Tahu is a demonstration of Te Tiriti o Waitangi partnership in action, according to Jacqui Caine, Te Rūnanga o Ngāi Tahu Group Head of Strategy & Environment, and a Trustee of Awarua Rūnaka.

Speaking at Te Rau Aroha marae in Bluff on Waitangi Day, Ms Caine shared her perspectives on how NZAS and Rio Tinto are working collaboratively with Murihiku Rūnaka and Te Rūnanga o Ngāi Tahu towards delivering against the Memorandum of Understanding (MOU) signed in 2022.

“Ngāi Tahu did not enter this relationship lightly. We wanted any relationship to be something that went beyond tokenism and nice words, to be something firmly rooted in the expression of partnership articulated in the Treaty.”

“I feel that we have been able to build a mutually beneficial relationship that is seeing substantial progress on Tiwai's site remediation, and engagement on environmental and broader community programs, to ensure the overall significance and mana of the land, the Rūnaka and our history is taken into account.”

“This relationship is nested within the Treaty of Waitangi principles of partnership, participation and protection. The MOU captures a partnership that will ensure the voice of Murihiku Rūnaka is even stronger regarding remediation and the future of the smelter. Mana whenua now participate in the discussions on plans to remove waste, conduct environmental monitoring, and remediate the Tiwai Point site, which is a key priority for mana whenua, NZAS and Rio Tinto.” Ms Caine said.

“The agreement is a commitment by the iwi to share mātauranga Māori (Māori knowledge) and kōrero tuku iho (history and traditions) relative to Tiwai to support Rio Tinto to responsibly manage and protect the environment as the future of the smelter is determined,” Ms Caine said.

She said the future of the smelter was a key concern for Awarua, Ngāi Tahu and the wider Southland economy.

“Tiwai provides jobs for our whānau, and economic activity for our region. With the relationship we as mana whenua now have with NZAS, we are confident that remediation will continue and that the future contribution will not just be economic, but also cultural, as our partnership continues to develop,” Ms Caine said.

NZAS Chief Executive Chris Blenkiron echoed these sentiments.

“The partnership with Ngāi Tahu and Awarua Rūnaka really is making a substantial difference in how we operate currently, how we both deal with our legacy over 50 years, and how we plan for a future which will embed a true and enduring partnership.

“The Treaty can often be a vexed topic, but putting its principles around partnership in action, as we have done with our relationship with Ngāi Tahu and Awarua Rūnaka shows how it can drive tangible long-term achievements for the benefits of everyone in the community,” Mr Blenkiron said.

The MOU signed in 2022 by Murihiku Rūnaka, Te Rūnanga o Ngāi Tahu, New Zealand Aluminium Smelters Limited (NZAS) and Rio Tinto Aluminium Limited established a partnership to work together on restoring the whenua (land) at the Tiwai Peninsula and the future of the Tiwai aluminium smelter beyond December 2024.

The MOU established a Remediation Advisory Working Group, with representatives from Mana Whenua and NZAS, and also initiated a NZ\$2 million Community Development Fund, to provide funding for organisations working in wellbeing, cultural, environmental, education and innovation and economic development initiatives in the Southland community.

ENDS

Media contact:

For media enquiries please contact Senior Communications Advisor, Te Rūnanga o Ngāi Tahu Crisselda De Leon-Singson, crisselda.deleon-singson@ngaitahu.iwi.nz



Te Rūnaka o Awarua



Te Rūnanga o NGĀI TAHU



MEDIA RELEASE

4 October 2022

New agreement with mana whenua marks a positive step towards a future for Tiwai Smelter

An agreement has been reached by Murihiku Rūnaka and Te Rūnanga o Ngāi Tahu with the New Zealand Aluminium Smelters Limited (NZAS) and Rio Tinto Aluminium Limited to work together on restoring the whenua (land) at the Tiwai Peninsula and the future of the Tiwai aluminium smelter beyond December 2024.

The agreement was signed on Friday at Te Rau Aroha Marae at Motupōhue (Bluff) by representatives from Murihiku Rūnaka and Te Rūnanga o Ngāi Tahu.

All parties agreed to work together on plans to remove waste, conduct environmental monitoring, and remediate the Tiwai Point site, which is a key priority for mana whenua, NZAS and Rio Tinto.

NZAS Chief Executive Chris Blenkiron said "We're proud to be working alongside Murihiku Rūnaka and Te Rūnanga o Ngāi Tahu in continuing this important mahi. Their guidance will be invaluable as we progressively remediate the site."

"This agreement reinforces the commitments we've made to remove waste and remediate the site, irrespective of the smelter's future," he said.

Murihiku Rūnaka hold mana whenua and mana moana over the region and are kaitiaki (guardians) over the whenua and moana. Murihiku Rūnaka is comprised of four Papatipu Rūnanga including Te Rūnaka o Awarua, Waihōpai Rūnaka, Ōraka Aparima Rūnaka and Hokonui Rūnanga.

Te Rūnaka o Awarua is leading the partnership on behalf of Murihiku Rūnaka and will actively engage with NZAS and all parties around remediation, cultural considerations, and future intentions.

Upoko o Te Rūnaka o Awarua Tā Tipene O'Regan has advocated for this partnership and is pleased to reach this milestone.

"I have always believed there is a future for this land. Now we can engage in responsible environmental management and look at a long-term future for Tiwai."

"It is important to note that while the remediation issue is led by Te Rūnaka o Awarua, it is also supported by other Rūnaka within Murihiku," he said.

The agreement is a commitment by the iwi to share mātauranga Māori (Māori knowledge) and kōrero tuku iho (history and traditions) relative to Tiwai to support Rio Tinto to responsibly manage the environment as the future of the smelter is determined.

Rio Tinto Aluminium Chief Executive Ivan Vella said "NZAS produces some of the lowest carbon, highest purity aluminium in the world. We are working hard to secure a longer future for NZAS so it can continue supporting global decarbonisation, and we must make sure its environmental performance matches these objectives."

"Rio Tinto is working to improve our relationship with mana whenua and to do this in a way that recognises their kaitiaki responsibilities. This partnership demonstrates how we intend to operate in Aotearoa going forward," he said.

All parties believe the region has a strong future with a range of potential new industries, technologies and renewable energy bringing new jobs and a wide range of economic benefits.

ENDS

Note to Editors

Image caption: Representatives from Murihiku Rūnaka and Te Rūnanga o Ngāi Tahu sign the agreement.

Seated L-R: Michael Stevens (Te Rūnanga o Awarua Alt Rep); Rewi Davis (Ōraka Aparima Rūnaka Rep); Cyril Gilroy (Chair Waihōpai Rūnaka); Terry Nicholas (Hokonui Rūnanga Rep); Riki Dallas (Kaihautū - General Manager Ōraka Aparima Rūnaka); Dean Whaanga (Kaiwhakahaere Awarua Rūnaka)

Standing L-R: Albert Brantley (Advisor to parties); Megan Reid (Project Manager for Awarua Working Group); Gail Thomson (Te Rūnanga o Awarua Rep); Nicole Atherton (Rio Tinto General Manager Closure Readiness)

Media contacts:

For media enquiries for Rio Tinto and NZAS please contact: Jonathan Webb, jonathan.webb@riotinto.com, 021 044 8453

For media enquiries for the Murihiku Rūnaka collective, including Te Rūnaka o Awarua, Te Rūnanga o Ngāi Tahu please contact: Belinda Milnes, belinda@sbaconsulting.co.nz 021 802 447 or Crisselda De Leon-Singson, crisselda.deleon-singson@ngaitahu.iwi.nz 021 051 6239

ANNEXURE 2



RioTinto

Media Release

Please direct all enquiries to:
simon.king2@riotinto.com

For Immediate Release
10 November 2023
Embargoed until 6am

Extensive environmental testing at Tiwai concludes low risk of human or ecological impact

New Zealand's Aluminium Smelter (NZAS) has today released a report undertaken by global professional services company GHD which concluded that there was a limited risk to marine ecology and no increased risk of health effects for people who come into contact with sediment and surface water or consume kai moana inhabiting the surrounding coastal marine area.

NZAS engaged GHD to complete extensive testing in and around the Tiwai smelter site to further build on the findings of a detailed site investigation undertaken in 2021 to establish baseline indicators for the site. NZAS is committed to further improving its environmental footprint and mitigating the impacts of the smelter.

The purpose of this report and the investigations was to understand discharges occurring from the smelter and to determine whether these were having an adverse effect on the ecology of the coastal marine area environment, or people using the coastal area for recreation and food gathering. As part of the investigation, concentrations of analytes in soil, sediment, groundwater and ocean water were compared to various regulatory criteria as per Ministry of Environment guidelines.

Given the importance of mahinga kai (food gathering) activities at or near Awarua/Tiwai peninsula to Ngāi Tahu, this work included testing of kaimoana (seafood) in the coastal marine area adjacent to the site.

The report made three key findings:

- There is no increased risk of health effects from the smelter and its operations for people who come into contact with sediment and surface water within the coastal marine area or consume seafood inhabiting nearshore areas of the coastal marine area.
- There is a limited risk to marine ecology related to discharges from the landfill. While localised effects on aquatic organisms are plausible, elevated concentrations of copper found in marine water near the landfill are unlikely to have a measurable long-term effect. Elevated copper concentrations were evident in water quality samples from numerous locations around Bluff Harbour, including other locations distant from the NZAS smelter indicating secondary sources.
- The three drains are the primary pathway for contaminant transport towards the coastal marine area. Within the vicinity of the North Drain discharge point, adverse effects to aquatic organisms are plausible, however, once discharge reaches the coastal marine area, beyond the drain water mixing zone, there is a low risk of measurable adverse long-term effects on aquatic organisms.

The studies undertaken by GHD in 2021 - 2023 support the findings of previous studies released in 1995 and 2006 that discharges from NZAS drains were having a limited impact upon marine species within the coastal marine area.

NZAS Chief Executive Chris Blenkiron said, "We are pleased with the findings of the report as they provide us with confidence that we are implementing effective actions to mitigate the smelter's environmental impact but it also provides us with clarity around where we can look to do better."

“Tiwai is more than 50 years old, and we acknowledge that our practices haven’t always met expectations but we’ve worked hard to improve our environmental record and this report confirms we’re doing the right things.”

“In particular, I was really pleased that the report found that there was no increased risk of health effects for people consuming kai moana from the surrounding coastal marine area. Food gathering from the ocean is incredibly significant to our Ngāi Tahu partners but also our wider community here in Southland.”

Spokesperson for Ngāi Tahu, Jacqui Caine said “Ngāi Tahu has welcomed the partnership with NZAS on remediating the whenua (land) and coastal environment around Tiwai Point. Protection of mahinga kai activities is of upmost importance to Awarua and Ngāi Tahu more broadly. It is reassuring to know that the kai moana in the harbour is safe to eat and that we can continue this important practice that we have done for several hundred years.”

A memorandum of understanding (MoU) was agreed in 2022 between Murihiku Rūnaka and Te Rūnanga o Ngāi Tahu with the New Zealand Aluminium Smelters Limited (NZAS) and Rio Tinto Aluminium Limited. The parties have been working closely together over the last year to build a shared vision of remediation of the site.

The Advisory Group established under the MoU works to protect both Te Ao Tūroa (natural environment) and mahinga kai activities at or near Awarua/Tiwai peninsula coastal environment. With technical support from a joint Remediation Working Group, site specific remediation criteria have been co-designed with NZAS and Rio Tinto. A plan for the remediation of the onsite drain network is currently under development.

“We are really pleased with the progress made in developing a partnership with NZAS to remediate the site. The first remediation plan we are co-designing is for the drain network. The GHD report confirms we have selected the right focus area and we are looking forward to continuing this important mahi,” Caine said

Siobhan Hartwell, Regional General Manager NZ Pacific for GHD said “Our extensive programme of investigations has helped NZAS build a detailed picture of the site and the surrounding environment. Our technical support for NZAS will help the continuing environmental improvements and remediation of Tiwai.”

A full copy of the report, including an executive summary, can be found at [Sustainability | New Zealand's Aluminium Smelter | NZAS](#)

ENDS

Background: Ongoing environmental testing and monitoring

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- As part of NZAS’ commitment to the environment, regular monitoring and testing of environmental impacts provides important indicators to ensure the measures in place are effective and further work is prioritised appropriately.
- The detailed site Investigation (DSI), completed in 2021, started to provide a baseline of site conditions.
- The 2021 DSI report recommended further testing to continue to build on knowledge of site conditions and understand any seasonal variation.
- When NZAS released the DSI we committed to keeping the community updated as work progressed and we have proactively met this commitment.
- GHD is a company with expertise in contamination assessment and remediation and have specialist skills in environmental testing and monitoring.
- This GHD report was an important part of the work undertaken by the Advisory Group established to enable Te Rūnaka o Awarua and NZAS to work together to progress remediation priorities and criteria.

NZAS is a joint venture company owned by Rio Tinto (80%) and Sumitomo Chemical Company of Japan (20%).

Contact: Simon King (021) 2425723

REMEDIATION AND BY-PRODUCTS

ANNEXURE 3

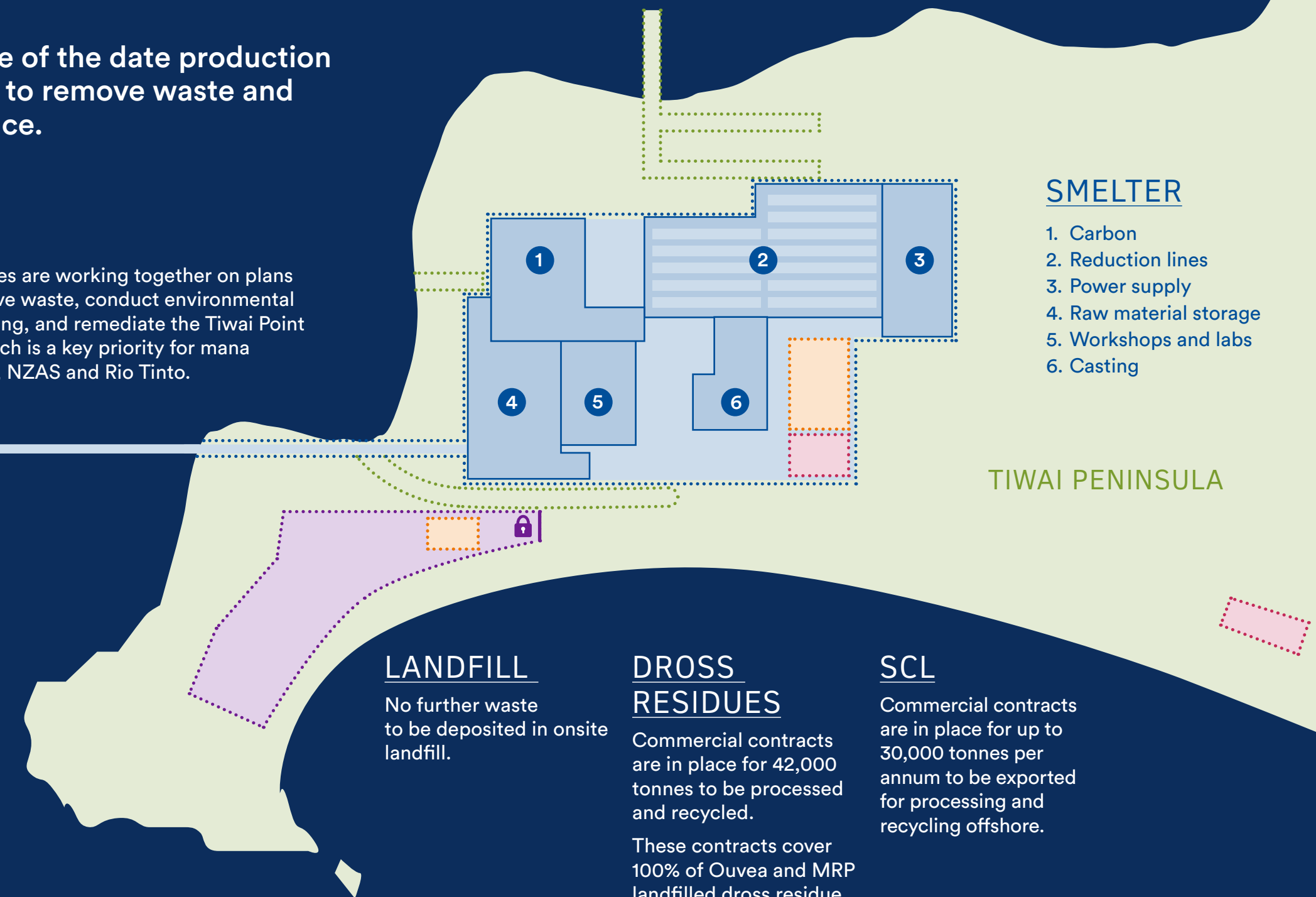
VERSION FOUR – STATUS AS AT 31 OCTOBER 2023

We will remediate the site, irrespective of the date production ceases, and work is already underway to remove waste and improve our environmental performance.

NGĀI TAHU PARTNERSHIP

Murihiku Rūnaka and Ngāi Tahu with NZAS and Rio Tinto have an agreement to work together on restoring the whenua at the Tiwai Peninsula and the future of the Tiwai aluminium smelter beyond December 2024.

All parties are working together on plans to remove waste, conduct environmental monitoring, and remediate the Tiwai Point site, which is a key priority for mana whenua, NZAS and Rio Tinto.



SMELTER

1. Carbon
2. Reduction lines
3. Power supply
4. Raw material storage
5. Workshops and labs
6. Casting

TIWAI PENINSULA

LANDFILL

No further waste to be deposited in onsite landfill.

DROSS RESIDUES

Commercial contracts are in place for 42,000 tonnes to be processed and recycled. These contracts cover 100% of Ouvea and MRP landfilled dross residue.

SCL

Commercial contracts are in place for up to 30,000 tonnes per annum to be exported for processing and recycling offshore.

Key:

- Smelter
- Landfill
- Dross Residues
- SCL
- Drains



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PROGRESSIVE REMEDIATION OBJECTIVES

(agreed with Awarua Representatives on Advisory Group):

SPENT CELL LINING (SCL)



Remove all SCL from the Tiwai peninsula, to be recycled for alternative industrial use by 2029.

DROSS RESIDUES



Return all Ouvea stored in the community back to NZAS site. Process and remove all dross residues from the Tiwai peninsula, to be recycled for alternative industrial use by 2029.

LAND & WATER CONTAMINATION



Progressively remediate the site to protect Te Ao Tūroa (natural environment) and mahinga kai (food gathering) activities at or near Awarua/Tiwai peninsula coastal environment.

ONSITE LANDFILL



Develop a long-term pathway for the closure of the landfill with an initial focus on seeking reuse and recycling options for material in the landfill to align with our waste philosophy.

CULTURAL HERITAGE



Identify, protect and preserve wahi tapu, wahi taonga and other sites of significance at Tiwai Point.

REMEDIATION TIMELINE



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2022

2023

2024–2030

SPENT CELL LINING (SCL)

220,000 tonnes of SCL stored on site (approximately)



17,000 tonnes of SCL exported (target)

- ✓ 5,500 tonnes of SCL exported
- ✓ Sampling/characterisation of SCL pad material



30,000 tonnes of SCL exported (target)

- On-site facility:**
- ✓ Pre-Feasibility study completed.
 - ✓ Funding approved to finalise study work.
 - ✓ Consent application development started.

- Export:**
- 2,000T planned to be exported in Q4.



Stored SCL removed by 2029 (target)

DROSS RESIDUES

55,000 tonnes of dross residue to be processed

- 21,500 tonnes of Ouvea
- 20,000 tonnes of MRP (landfill)
- 13,500 tonnes of Haysom's (landfill)



3,000 tonnes of dross exported (target)

- ✓ 100% (24,800 tonnes) of Ouvea stored in community returned to site
- ✓ 7,800 tonnes of Ouvea exported



8,000 tonnes of Ouvea exported (target)

- ✓ All remaining Ouvea will be exported by end of 2023
- ✓ 1,800 tonnes of MRP dross residue (landfill) recycled YTD
- Sampling of Haysom's Dross Residue.



Stored dross residues processed and removed by 2029 (target)

LAND & WATER CONTAMINATION

We have shared **20 years** of groundwater monitoring results from the SCL pad & landfill along with the results of our Detailed Site Investigation



Further testing to increase understanding of contamination sites

- ✓ Additional five rounds of environmental testing (based on results of DSI)
- ✓ Extensive sampling within the Coastal Marine Environment
- ✓ Additional 50 groundwater monitoring bores installed

Actions to prevent further contamination to soil and groundwater

- ✓ By-products storage facility constructed
- ✓ Ceased wet washing of reduction cell shells and superstructures
- ✓ Improvements to washdown facility



Address possible contamination sources

- Commence progressive remediation**
- ✓ Remediation Advisory Working Group (RAWG) established with Ngai Tahu
 - ✓ RAWG co-design the standard and criteria for progressive remediation
 - Draft remediation plan created for the first area of land to be remediated
 - Draft remediation plan for the drain network and assess options for future open drain design



Continue progressive remediation

LANDFILL

Existing landfill volume approx. **807,000m³**

Potential landfill materials that could be reused / recycled:

- Dross residues – c. 33,500 tonnes
- Carbon fines – c. 100,000 tonnes



Reduction of waste

- ✓ Ceased depositing any waste in NZAS landfill from May 2022
- ✓ Extensive environmental assessments within and around the landfill including groundwater monitoring, ecological assessments, water, soil, marine sediment and marine biota sampling



Closure study for landfill

- ✓ RAWG supported strategy change to submit a short term 5 year consent for landfill to provide time to develop appropriate long term closure design.
- ✓ 5 year consent submitted to ES.



Commence closure execution for landfill