TTR's Taranaki VTM Project
Information Memo – June 2025

TTR South Taranaki Bight VTM Iron Sands Project

Opportunity to deliver a $1 billion long term export industry

- Trans-Tasman Resources (**TTR**) 3.2 billion tonne vanadium rich titanomagnetite (**VTM**) iron sand resource located over 22km offshore in the South Taranaki Bight (**STB**)[1] is a world class metals discovery capable of delivering sustainable jobs; much-needed infrastructure investment in Taranaki and Whanganui; taxes and royalties to the Crown, at no cost to New Zealand taxpayers, with a minimal, confined and short-term impact on the STB marine ecosystems.

- MBIE briefing for the incoming Minister for Resources, 27 November 2023[2]:

  "Iron sand along the west coast of the North Island sitting in 20-50 metres of water could supply iron for steel making, vanadium for battery storage and titanium for clean energy technology.

  MBIE estimates an 'in the ground' value of Taranaki iron sand at NZ$100 billion.

  Additional iron sand deposits of up to NZ$275 billion."

- **New Zealand's 'one-stop-shop' Fast-track Approvals Act 2024** ("**Fast-track Act")** became law on 23 December 2024. TTR's Taranaki VTM Project in the STB is one of the major mining projects included in the schedule of projects for consideration under the Act by an expert panel for final approvals.

- **The 11 mining projects listed on Schedule 2 of the Act, including TTR's Taranaki VTM Project, will support the Government's aim to double the value of mineral exports to $3 billion by 2035.**

  NZ Prime Minister Christopher Luxon in his 23 January 2025 State of the Nation Speech[3] stated "*mining needs to play a much bigger role in the New Zealand economy*".

  "Fast-track will supercharge economic growth, enabling major investments and growth in energy, transport, aquaculture, and a range of other sectors – but we can go further."

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[1] Maiden Vanadium Mineral Resource Statement Manuka Resource Limited ASX release 1 March 2023

[2] MBIE Briefing paper to Incoming Minister for Resources 27 November 2023

[3] https://www.beehive.govt.nz/speech/state-nation-2025

"In regions like Taranaki and the West Coast there are big economic opportunities – higher incomes, support for local business and families, and more investment in local infrastructure."

- These encouraging sentiments were followed up by the NZ Resources Minister Shane Jones in a speech[4] he delivered at Oceana Gold's Waihi mine on 31 January 2025, signalling a new direction for the growth of the NZ minerals sector and the resources friendly policy of his government and announced the finalised NZ Critical Minerals List[5] and the country's Minerals Strategy to 2040[6].

  "We have updated the goal of doubling our exports to $3 billion by 2035 from the previous goal of $2 billion. Statistics NZ reports that mineral exports for the financial year ending June 2023 totalled $1.46 billion and our submitters were clear – we needed a more ambitious goal."

  "This Government is taking an active, deliberate and co-ordinated approach to harnessing the potential of our natural resources to take us from 'open for business' to 'doing business'."

- The Critical Minerals List, alongside the Minerals Strategy for New Zealand to 2040 and the GNS Report on the country's potential economic mineral deposits released on 29 August 2024, all include offshore Taranaki VTM deposits containing vanadium and titanium in the STB controlled 100% by TTR.

- The New Zealand government has identified TTR's world-class vanadium rich iron sands project as one of national significance that has the ability to contribute to New Zealand's economy and export earnings and to the government's resource objective of doubling the value of New Zealand's mineral exports to $3 billion by 2035.

- Fast-track approval is subject to compliance with the EEZ Act that includes comprehensive environmental safeguards to protect the STB environment and is not a shortcut to avoid environmental best practice and compliance with 109 operating conditions and comprehensive management plans approved by EPA.

- TTR has, and will, meet this test by complying with its environmental conditions and monitoring and reporting obligations to operate with independent experts stating:

  Dr Alison MacDiarmid Regional Manager NIWA Hawera March 2024:

  "The proposed mining area and adjacent areas in the STB are one of the best studied shallow exposed shelf marine environments in Aotearoa New Zealand with a wealth of studies generated by the applicant [TTR] that add to a body of existing information. The information is the best available and sufficient for me to give my expert opinion on the effects of the proposed mining operations and resulting sedimentation on biota in the STB." and

  "In light of the Supreme Court's findings, I have considered whether granting consent, subject to the proposed conditions, will avoid material harm, and will favour caution and environmental protection in relation to the effects of proposed mining operations and resulting sedimentation on biota in the STB, including ecological effects on marine mammals. ***In my opinion it will****."*

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[4] https://www.beehive.govt.nz/speech/new-direction-minerals-sector-grow-economy

[5] https://www.beehive.govt.nz/sites/default/files/202501/202501%20New%20Zealand%27s%20Critical%20Minerals%20List.pdf

[6] https://www.beehive.govt.nz/sites/default/files/202501/202501%20A%20Minerals%20Strategy%20for%20New%20Zealand%20to%202040.pdf

The development of one of the world's largest known drilled deposits of strategic metals along the west coast of Taranaki

- The Taranaki VTM project plans to harvest NZ's substantial iron sands resource in the STB to produce critical minerals needed to transition to net carbon zero
- The project will produce iron ore concentrate for export and other critical minerals, such as vanadium and titanium, needed for clean energy transition
- It is located up to 36km offshore within NZ's Exclusive Economic Zone (EEZ), in waters ranging between 20 to 50m deep
- TTR plans to export 5Mt of iron sands a year worth about $1 billion in annual export earnings
- Iron is used in construction, EVs, wind towers, solar farms and power transmission infrastructure
- Vanadium is used for large scale (+50Mw VRFBs) utility storage batteries, rebar and essential steel alloys
- Titanium is widely used in spacecraft, paints, paper, plastics, white goods, alloys, satellites, electronics, medical implants, building products and solar storage
- TTR is seeking a 35-year consent, with the actual harvesting activity taking place over a 20-year period
- The remainder of the consent period will be used for marine monitoring & research, establishing and decommissioning the project
- There is potential for NZ to be the world's third largest producer of high value vanadium and the largest in the western world

Boost to regional employment, education and skills training opportunities in Taranaki[7]

- The project will deliver strong economic benefits to the Taranaki region
- A New Plymouth Head Office would employ 35 to 40 people
- A training institute and logistics base would be established in Hawera
- 305 direct high value jobs
- Generate total of 1,125 jobs including in services and support activities in Taranaki region
- Boost Taranaki's annual GDP by $222 million
- $240 million spend per annum in Taranaki region on employment, services and supply
- Grants for community and cultural activities

Major economic benefits and importance for NZ

- The project has the potential to contribute to government's stated aim to double the mining sector's export value to more than $3 billion over 10 years
- More than 1,365 jobs will be created nationwide across a range of sectors
- Boost NZ's annual GDP by $265 million
- Royalties in the order of $55 million a year would be generated
- The NZ government will benefit from more than $135 million annually from corporate taxes generated by the project
- Foreign exchange earnings of US$495 million year (NZ$855m)
- No infrastructure or investment required by regional authorities or central government

[7] NZIER Economic Impact Assessment 12 March 2025

Significant capital investment in technology, infrastructure and long-term marine research

- US$602 million (NZ$995m) capital investment in leading edge marine technology mineral recovery vessels and processing equipment
- Brings investment in universities, grants, scholarships and government institutions minerals and metallurgical research capabilities
- Supply and maritime logistics bases in Ports Taranaki and Whanganui
- Over 30 years of marine research and environmental monitoring in STB

Project complied with comprehensive environmental safeguards to operate embedded in the EEZ Act

- The environmental effects are managed by a comprehensive set of EPA approved 109 operating conditions and detailed management plans to operate and sustainably manage the resource, and protect the marine environment from any permanent adverse effects
- Harvesting top 5m on average and confined to the immediate dredging area of less 0.3km^2
- The modern seabed harvesting process is all natural, with no chemicals or toxins used
- The plume generated by returning the iron sands to the sea floor is largely negligible
- Plume effect 0.5 to 1.5mg/L suspended sediment concentration (SSC) in the ocean. Safe drinking water standards allows 5mg/L SSC.
- The plume will have no impact on marine mammals, whales, dolphin, fish or coastal areas, beaches or food gathering
- Seabed continuously rehabilitated and fully recolonised and recovered in less than two years
- TTR expects to be held accountable to high environmental and other outcomes

The STB's vanadium rich titanomagnetite deposits have significant carbon footprint advantages

- TTR's proposed mineral recovery operation will be a major contributor to low carbon "green steel" production by input into electric arc furnaces (**EAF**) to make steel (Glenbrook EAF will reduce emissions by 1Mt or 1% NZ's total emissions)
- STB operation produces less than half the carbon emissions per tonne concentrate compared to other iron sand and hard rock sources of iron ore, vanadium and titanium mined elsewhere in the world
- TTR's carbon intensity per tonne of concentrate ±62kgCO_2/t, is less than half its land-based competitors (average ±120-250kgCO_2/t)[8]
- TTR's deposits have been developed by nature to leave the titanomagnetite sand ready for direct recovery and shipping without the need for large-scale emission intensive land-based mining and processing operations and extensive transport infrastructure

Relationship with Tangata Whenua acknowledged with all Taranaki iwi and their relationship with STB

- All South Taranaki iwi including, but not limited to, Ngāti Ruanui, Ngā Rauru Kitahi and Ngāruahine are recognised by TTR
- TTR has committed to form a Kaitiakitanga Reference Group (**KRG**) with Ngāti Ruanui, Ngā Rauru Kitahi and Ngāruahine
- TTR will establish a Technical Reference Group (**TRG**) that includes Te Tai Hauāuru Regional Fishing Forum, the KRG, community knowledge and "matauranga māori" issues.
- Undertake the Kaimoana Monitoring Programme (**KMP**) in STB with and including, but not limited to, Ngāti Ruanui, Ngā Rauru Kitahi and Ngāruahine
- Preference for marine monitoring, research and employment opportunities for South Taranaki iwi

[8] Siecap Memo Iron Ore Emissions Data Analysis 26 November 2020

Wide spread support for Taranaki VTM project including but not limited to:

- The NZ government has committed to expanding the country's minerals footprint
- Attorney General's office and Crown Law intervention to Supreme Court in 2021
- EPA's submission to Supreme Court in 2021
- Department of Conservation did not oppose the environmental consent applications in 2016
- TTR has an operational agreement with Sanfords Fishing, the major quota blue fin fisher in FMA8
- TTR has an operational agreement with oil and gas company, Beach OMV, the operator of the Kupe and Mauri oil fields
- NIWA has undertaken extensive marine research
- National and International marine experts have conducted research on the environmental impact and modelling of effects and peer reviewed the marine science and research
- New Zealand Royal Navy in their article on seafloor mineral recovery (RNZN Journal Vol 2 July 2021)
- Majority of Kiwis from polling in Taranaki (Pauline Colmar Research 2013)

TTR and Offshore Wind Energy

- TTR has written to Offshore Wind Energy partners and offered to meet and discuss how both projects could co-exist. None has responded to date.
- Co-operation and consultation required to enable both projects to co-exist in the region
- There are synergies that could be gained from working together
- There does not need to be a choice between harvesting iron sands and offshore wind energy
- TTR's expert geotechnical report concludes mineral recovery activity in the STB will be no detriment to the future deployment of oil and gas jack-up rigs or, by implication, offshore wind tower installations

TTR Fast-track approvals and project execution

- Taranaki VTM Project was included in Schedule 2 of the Fast-track Approvals Act 2024 to be considered for approval by an expert panel
- TTR lodged its Fast-track application and supporting documentation with EPA on 15 April 2025 and accepted as Complete on 15 May 2025
- Fast-track team now appoints an Expert Panel to assess the project and applies conditions to operate
- Fast-track expert panel planned to commence mid-July 2025 with process anticipated to take around three (3) months
- Final project approvals will be followed by completion of bankable feasibility study (BFS) and financing (9-12 months) followed by a two year vessel and onboard processing plant construction and commissioning phase to deliver concentrates for export
- TTR holds granted mining permit MMP55581 over the iron sands resource
- Funding via ASX platform equity and Australian, Hong Kong and London resource fund debt