



TTR's Taranaki VTM Project Information Memo – November 2024

TTR South Taranaki Bight Vanadium Iron Sands Project

Opportunity to deliver a \$1 billion long term export industry

- Trans-Tasman Resources (**TTR**) 3.2 billion tonne vanadium rich titanomagnetite resource located over 22km offshore in the South Taranaki Bight (**STB**) 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:

“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.”

- The NZ government is committed to expanding the country's minerals footprint and using more of its own resources.

Hon Shane Jones said in response to a question in Parliament on September 18, 2024:

“Sadly, far too many New Zealanders have been deluded by misinformation in respect of minerals. Minerals, including vanadium, located in inordinately large content and quantities off the coast of Taranaki, will add not only to the climate change journey but they represent a new source of great wealth.

“Sadly, we’ve had a situation where misinformation has overcome facts, but these decisions will be made on the basis of economic rationalism, science and technology.”

- TTR applied in April 2024 for the Taranaki VTM Iron Sands Project to be considered for Fast Track approval

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

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 VFBs) utility storage batteries, rebar and essential steel alloys
- Titanium is widely used in spacecraft, paints, paper, plastics, white goods, alloys, satellites, electronics, 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 South Taranaki

- 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
- 300 direct high value jobs
- 170 jobs in services and support activities in Taranaki
- \$250 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 double the mining sector's export value to more than \$2 billion over 10 years
- More than 1600 jobs will be created nationwide across a range of sectors
- Royalties in the order of \$50 million a year would be generated
- The NZ government will benefit from more than \$130 million annually from corporate taxes generated by the project
- Foreign exchange earnings of US\$460 million year (NZ\$760m)
- No infrastructure or investment required by regional authorities or central government

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

- US\$600 million (NZ\$995m) high technology mineral recovery vessels
- 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

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

- The environmental effects are managed by a comprehensive set of 109 conditions and management plans to operate and sustainably manage the resource, and protect the marine environment from any permanent adverse effects
- Harvesting top 5m average and confined to the immediate dredging area of less 0.3km²
- 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 (SS). Safe drinking water standards allows 5mg/L SS.
- 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 (Glenbrook EAF reduces emissions by 1Mt or 1% NZ's)
- 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 $\pm 62\text{kgCO}_2/\text{t}$, is less than half its land-based competitors (average $\pm 120\text{-}250\text{kgCO}_2/\text{t}$)
- 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
- Forming the Kaitiakitanga Reference Group (**KRG**) with Ngāti Ruanui, Ngā Rauru Kitahi and Ngāruahine
- TTR establishing 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

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 approvals and project execution

- TTR applied in April 2024 for the Taranaki VTM Iron Sands Project to be considered for Fast Track approval
- Waiting on first list of projects to go through Fast Track process and expert panels
- TTR holds granted mining permit over the iron sands resource
- Funding via ASX platform equity, Australian, Hong Kong and London resource fund debt
- Project won't be sold
- MBIE regulatory approval required for any change of control on mining and exploration permits under Overseas Investment Act 2005