

Response ID ANON-URZ4-5FY6-Y

Submitted to Fast-track approval applications  
Submitted on 2024-05-03 15:37:20

Submitter details

Is this application for section 2a or 2b?

2A

1 Submitter name

Individual or organisation name:  
TiGa Minerals and Metals Limited

2 Contact person

Contact person name:  
Robert Brand

3 What is your job title

Job title:  
CEO and Director

4 What is your contact email address?

Email:  
s 9(2)(a)

5 What is your phone number?

Phone number:  
s 9(2)(a)

6 What is your postal address?

Postal address:  
  
Gulf Accountants  
4 Blake Street, Surfdale  
Waiheke Island 1081  
New Zealand

7 Is your address for service different from your postal address?

Yes  
  
Organisation:  
Anderson Lloyd  
  
Contact person:  
Alex Booker  
  
Phone number:  
s 9(2)(a)  
  
Email address:  
s 9(2)(a)  
  
Job title:  
Partner  
  
Please enter your service address:

Level 3, Anderson Lloyd House  
70 Gloucester Street  
Christchurch Central City  
Christchurch 8013

## Section 1: Project location

### Site address or location

Add the address or describe the location:

#### Northern Block

- Address: State Highway 6, 3261 Coast Road and Burke Road, Barrytown Flats, Greymouth
- Legal descriptions: Lot 2 DP 423442, RS 2841, RS 3250, RS 2840, Lot 1 DP 412689, RS 2847 and Section 5 Block V Waiwhero SD

#### Central Block

- Address: 3067 Coast Road and State Highway 6, Barrytown, Greymouth
- Legal descriptions: Part RS 2639\*, RS 2932\*, RS 2931, RS 2930, Lot 1 DP 2719, RS 2929, Part RS 2928, RS 2927, Lot 1 DP 3548, Section 7 Block V Waiwhero SD, Section 8 Block V Waiwhero SD and Section 4 Block V Waiwhero SD

#### Southern Block

- Address: Cargill Road and Warren Road, Barrytown, Greymouth
- Legal descriptions: RS 4033, RS 3316, RS 2933, Part RS 2639\* and RS 2932\*

#### Rapahoe MSP

- Address: Seven Mile Road, Rapahoe, Greymouth
- Legal descriptions: Lot 1 DP 2628 and Section 1 SO 341681

\*Note that these legal descriptions straddle the Central and Southern Blocks.

### File upload:

Map - Barrytown Flats - TiGa.pdf was uploaded

### Upload file here:

Map - Rapahoe MSP - TiGa.pdf was uploaded

Do you have a current copy of the relevant Record(s) of Title?

Yes

### upload file:

Combined Records of Title - TiGa.pdf was uploaded

Who are the registered legal land owner(s)?

Please write your answer here:

Nikau Deer Farm Limited - RS 3250, Lot 2 DP 423442, RS 2841, Section 7 Block V Waiwhero SD, Section 8 Block V Waiwhero SD, Section 4 Block V Waiwhero SD, Section 5 Block V Waiwhero SD, RS 2847 and Lot 1 DP 412689

Birchfield Barrytown Limited - RS 2840

Barrytown Farms Limited - Lot 1 DP 335367, Lot 1 DP 2178, Part RS 2639, RS 2932, RS 2931, RS 2930, RS 2929, Part RS 2634, Part RS 2635, Lot 1 DP 2719, Part RS 2928, RS 3316, RS 4033 and RS 2933

Birchfield Coal Mines Limited - Section 1 SO 341681 and Lot 1 DP 2628

Moir Farms Maimai Limited - Lot 1 DP 3548 and RS 2927

Detail the nature of the applicant's legal interest (if any) in the land on which the project will occur

Please write your answer here:

TiGa holds mining permit MP60785 over the Northern, Central and Southern Blocks on the Barrytown Flats. Agreements for access have been reached with all landholding parties which include:

- Nikau Deer Farm Limited
- Barrytown Farms Limited
- Birchfield Barrytown Limited
- Moir Farms Maimai Limited

A lease has been agreed for the Rapahoe MSP with Birchfield Coal Mines Ltd.

## Section 2: Project details

What is the project name?

Please write your answer here:  
Barrytown Mineral Sands Project

What is the project summary?

Please write your answer here:

TiGa proposes to:

- (a) establish and operate a mineral sands mine to obtain ilmenite, garnet and other minerals (including zircon and gold) on the Barrytown Flats;
- (b) construct associated infrastructure including an onsite 24/7 processing plant (over an area of approximately 2ha up to 15m height) and associated facilities;
- (c) establish and operate a secondary processing Mineral Separation Plant (MSP) at Seven Mile Road, Rapahoe, Greymouth; and
- (d) carry out a minimum average of 50 truck movements per day between the processing plant and MSP and/or Greymouth Port. Carry out truck movements to transport raw materials to the processing plant or transport these materials by pumping.

What are the project details?

Please write your answer here:

TiGa proposes to undertake mineral sands mining and processing to obtain ilmenite, garnet and other minerals over three stages across three resource blocks (all covered by Mining Permit MP 60785) on the Barrytown Flats. The targeted minerals are fixed in location within strandline deposits formed by tidal and wave action over many thousands of years along the Barrytown Flats. The deposit is considered world class with a unique mineral suite that produces two core product streams, ilmenite and garnet, and two by product streams, zircon and gold. These minerals have rising international demand as countries move to a low emission carbon economy and produce more renewable energy.

The mine sites will produce Heavy Mineral Concentrate (HMC) which will be transported to and processed at a processing plant – a Wet Concentrator Plant (WCP). The WCP will remain fixed in location. Transport of material between resource blocks to the WCP can be done via freight trucks, but TiGa is actively pursuing the potential to pump the material via pipelines. The HMC from the WCP will then be further processed at an offsite MSP to produce a high-value export product or transported to the Greymouth Port. Mining will primarily occur on agricultural production land (where mining is an anticipated activity in the Grey District Plan).

Mineral extraction will not occur within 20m from coastal lagoons and neighbouring property boundaries. The processing plant area will be 3.5ha in area including the mine access road and all settling pond infrastructure. The total disturbed area of the mine will not exceed 8ha in each mining area at any one time and the mining depth will not exceed 9m.

Pre-mining preparation will occur over approximately 6 months and will include establishing screening bunds, drains, a Mine Water Facility, a Clean Water Facility, a WCP, offices and staff facilities, access roading (including culverts) and an ore stockpile. Mining will then progress in strips, or panels, in a sequence across the mining site. Returned materials will be shaped to fit the final landform requirements prior to being top dressed (with the topsoil carted directly from the front of the mining path). Vegetative cover (sowing of grass) is established, and the area is removed from the disturbed area once stabilised.

Final closure of each mine site following progressive rehabilitation will include filling water treatment ponds using bund material, converting final areas to wetlands (for the Northern Resource Block) and native planting, de-constructing and removing buildings (for the Northern Resource Block) and final contouring and blending of the site to reinstate it to the former agricultural production use with similar drainage patterns.

The MSP will be contained within a large shed in close proximity to the rail line on the Rapahoe site. The Rapahoe MSP will add significant value to the Project in enabling the HMC from TiGa's mines to be processed to a final product for direct sale to manufacturers. TiGa is partnering with the iwi owned research institute the New Zealand Institute for Minerals to Materials Research (NZIMMR) to develop the potential of TiGa's final product.

The Barrytown Mineral Sands Project has been many years in the making – with drilling and testing initiated by kiwi entrepreneurs and investors over a decade ago, and thousands of drill samples (to JORC standard) completed. Over the last 3+ years, TiGa has undertaken JORC drilling, environmental baseline monitoring and surveys, and onsite trials of its innovative water management system.

Describe the staging of the project, including the nature and timing of the staging

Please write your answer here:

TiGa is applying for a 30-year consent to allow for all pre-mining works, mining and final rehabilitation. This time period is necessary to provide commercial certainty for the level of investment. TiGa intends to stage the Project across this period, but the stages will overlap. This will mean preparation works will begin on subsequent stages before mining is complete in earlier stages. This will enable a more consistent mining rate across the whole Barrytown Mineral Sands Project. Rehabilitation work will be completed progressively. Final coastal, riparian and wetland planting (and associated fencing) will occur at the end of mining of each Stage, but will continue to be monitored and maintained (including with pest control) while mining proceeds to the next stage. Staging is proposed as follows:

- Stage 1: Northern Block and the Rapahoe MSP
- Stage 2: Central Block
- Stage 3: Southern Block

Stage 1

- Stage 1 includes establishing the WCP, mining 63ha of land at 3261 Coast Road and then mining land at Burke Road. Mining at 3261 Coast Road would occur over five years at a mining rate of 1.1 million tonnes per year producing 250,000 tonnes of HMC per year. Mining at Burke Road would occur over approximately four years. Stage 1 activities will extend beyond the five-year mining period, including the continued operation of the WCP for Stages 2 and 3.
- The construction and establishment of the Rapahoe MSP utilises separate land and resources to mining so it can establish concurrently with the establishment of mining at 3261 Coast Road. The MSP will process HMC for the period of mining across the 30-year Project.

## Stage 2

- The Central Block will also be mined at a rate of 1.1 million tonnes per year producing 250,000 tonnes of HMC per year. Mining will occur over 9 years.

## Stage 3

- Mining will occur at approximately the same 1.1 million tonnes per year rate over a period of 9 years.
- During Stage 3, TiGa will also implement the Maher Swamp Enhancement Programme, involving the planting and restoration of areas around Maher Swamp.

What are the details of the regime under which approval is being sought?

Please write your answer here:

- Resource consent under the Resource Management Act 1991
- Wildlife permit under the Wildlife Act 1953
- Archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014

If you seeking approval under the Resource Management Act, who are the relevant local authorities?

Please write your answer here:

West Coast Regional Council and Grey District Council

What applications have you already made for approvals on the same or a similar project?

Please write your answer here:

An application from West Coast Regional Council and Grey District Council with regard to mining, the WCP and ancillary facilities at 3261 Coast Road (within the Northern Block) has recently been granted (the Standard Consent). The application received over 350 submissions, including submissions in support from Ngāti Waewae and Development West Coast. A hearing before a Council-appointed panel of commissioners was held in February-March 2024 and was well-attended by the community. TiGa proffered numerous alterations to the consent conditions to address key issues throughout this process. In granting consent, the Council-appointed Hearings Panel commented that TiGa's approach was "cooperative and sensitive to the environmental issues arising". These conditions have been carried through to the wider Barrytown Mineral Sands Project and have informed the baseline assessments for subsequent mining blocks.

The Panel released their decision to grant the Standard Consent on 29 April, but it is subject to a resource consent appeal period (ending 20 May). The Standard Consent will either be included for re-authorisation within the Fast-Track process or, if no appeals on the Standard Consent are received, withdrawn from the scope of the Fast-Track application.

Is approval required for the project by someone other than the applicant?

Yes

Please explain your answer here:

Overseas Investment Office approval is required for the Project due to the value of the investment. OIO approval will be sought contemporaneously to the fast-track approvals process.

If the approval(s) are granted, when do you anticipate construction activities will begin, and be completed?

Please write your answer here:

TiGa has already progressed significant work on project design, procurement and funding. Finalisation of these matters would occur as soon as possible following granting of the approvals. Stage 1 site works would commence within 6-months of the granting of Fast-Track approval. Completion of the Project overall (including final rehabilitation of the mine sites) would occur within 30 years of commencement.

## Section 3: Consultation

Who are the persons affected by the project?

Please write your answer here:

- West Coast Regional Council
- Grey District Council
- Te Rūnanga o Ngāti Waewae
- Adjoining land owners

Detail all consultation undertaken with the persons referred to above. Include a statement explaining how engagement has informed the project.

Please write your answer here:

As a resource application hearings process has already been undertaken for the Standard Consent, there has been a high-level of engagement. There was a high level of agreement between council peer review experts and the Applicant experts as part of the Standard Consent. The Hearings Panel granting the Standard Consent agreed that the process had left "no stone unturned".

Ngāti Waewae submitted in support of the Standard Consent and supports the Barrytown Mineral Sands Project being considered a "Category A" listed project (see attached letter). Outcomes from the consultation for the Standard Consent have been incorporated into the Project design and conditions. Engagement with Ngāti Waewae is highly valued and TiGa expects to enhance the engagement and consultation to date as TiGa moves through the process to ensure that mana whenua views are incorporated into the Project. TiGa has also committed to a Memorandum of Understanding with Ngāti Waewae and the Paparoa Wildlife Trust. The MoU aims to improve biodiversity through predator control and other conservation activities as well as improving understanding of the tāiko through further research with Mātauranga Māori central to this work. For completeness, a Te Rūnanga o Ngāti Waewae Pounamu Management Plan is in place, which solely deals with the management of pounamu in the takiwā of Ngāti Waewae. Pounamu will not be extracted during the mineral sand process, and will be returned as oversized material.

To enable discussions with the community, TiGa arranged a public meeting at the Barrytown Hall, and drop-in sessions in Greymouth and Barrytown with company representatives. These opportunities for engagement were advertised in advance through the Councils' websites, TiGa's social media and print media. Through all of this engagement, TiGa spoke about its broader site plans and made numerous alterations to the proposal and consent conditions in response to community concerns.

Examples of alterations made include:

- Altering the water management system so that water from different catchments is not mixed - as advised by Ngāti Waewae.
- Volunteering a condition so that truck movements do not occur during drop-off and pick-up times for Barrytown School – as requested by the Barrytown School Board of Trustees.
- Making changes to avoid adverse effects on the tāiko and Korora – as advised by experts and including:
  - limiting mining and trucking to only day-time hours;
  - offering passenger transport for shift workers (to reduce lights from light vehicle use);
  - removing all windows from the WCP building;
  - using sensors, timers and a maximum light temperature in accordance with guidelines; and
  - adding pre-mining Korora surveys and a penguin fence trigger condition.
- Avoiding trucking product north from the site on the State Highway and on Sundays – as requested by members of the Barrytown and Punakaiki communities.
- Adding parties to the Community Liaison Group – as requested by members of the Barrytown community.

The information obtained during this engagement has informed the baseline work for the balance of the Project and alterations to designs will also be carried over.

Engagement is intended to be ongoing.

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Ngati Waewae Fast Track letter of support to TIGA.pdf was uploaded

Describe any processes already undertaken under the Public Works Act 1981 in relation to the land or any part of the land on which the project will occur:

Please write your answer here:

N/A

#### Section 4: Iwi authorities and Treaty settlements

What treaty settlements apply to the geographical location of the project?

Please write your answer here:

All the Project sites are located within the takiwā of Te Rūnanga o Ngāti Waewae which are runanga of Ngāi Tahu. The relevant Treaty settlement relating to the proposal is the Ngāi Tahu Claims Settlement Act 1998. There are no particular geographical aspects of the Ngāi Tahu Settlement which relate to the location of this project.

Are there any Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019 principles or provisions that are relevant to the project?

No

If yes, what are they?:

Are there any identified parcels of Māori land within the project area, marae, and identified wāhi tapu?

No

If yes, what are they?:

Is the project proposed on any land returned under a Treaty settlement or any identified Māori land described in the ineligibility criteria?

No

Has the applicant has secured the relevant landowners' consent?

No

Is the project proposed in any customary marine title area, protected customary rights area, or aquaculture settlement area declared under s 12 of the Māori Commercial Aquaculture Claims Settlement Act 2004 or identified within an individual iwi settlement?

No

If yes, what are they?:

Has there been an assessment of any effects of the activity on the exercise of a protected customary right?

No

If yes, please explain:

Upload your assessment if necessary:

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## Section 5: Adverse effects

What are the anticipated and known adverse effects of the project on the environment?

Please describe:

Effects of mineral sands mining on the environment have been assessed by independent experts. The assessment of effects is based on comprehensive baseline work including at least two years of water monitoring, radioactivity measuring of 2274 ore samples and two years of baseline terrestrial and aquatic ecology surveys for the Standard Consent site. Initial monitoring work and baseline and other technical work for the balance mining sites is completed, but detailed studies are ongoing. There will be extensive environmental baseline assessment at the time the mining moves to the next stage.

Based on this extensive level of information, the adverse effects of mineral sands mining are assessed as acceptable. The effects are:

- Landscape and visual amenity – effects are managed through the disturbance area being limited (8ha) at any one time, bunding and planting of native vegetation around all wetland areas identified as significant, coastal areas where the site is visible to the public and along the majority of riparian streams. The mining occurs on agricultural production land for a relatively short period before being restored to the former agricultural use. This reduces the period in which there is a visual impact.
- Noise – is managed through bunds, housing of the plant and setbacks from boundaries. The Barrytown Flats contain noise from the nearby surf which masks noise from the sites.
- Traffic – effects primarily relate to the generation of heavy truck movements transporting the HMC. The mine sites utilise State Highway 6 which is considered Regionally Significant Infrastructure where use of this road for industry is encouraged. A Traffic Management Plan requires driver safety training and enables a management response to safety concerns.
- Archaeology – is managed through an Accidental Discovery Protocol condition.
- Land stability – is managed through pre-mining geotechnical reporting which is certified to ensure ground conditions are suitable and pit wall stability is achieved. The relatively short mining periods reduces the risks from earthquakes occurring during mining in the void.
- Water bodies and groundwater – effects are avoided through site-specific water management systems. Water quantity changes from earthworks and surface water takes are managed within the mine site, including through injection bores and infiltration trenches. A monitoring ring-fence is installed at the boundaries to ensure there are no effects on nearby waterbodies, including wetlands. Water quality is also managed through the water management system, including through the use of flocculants, clarifications and settlement. Consequently, water quality can be maintained at or above the existing NPS-FM attribute bands for all water quality indicators, and not exceed ANZG 95% species protection guidelines for metals and metalloids. All of these elements are included in a well-designed Water Management Plan.
- Ecology – effects on vegetation, avifauna, wetlands and stream habitats are appropriately managed. The mine sites are working pasture so tend to have limited habitat value and species presence. Effects on species in surrounding waterbodies are managed through the water management system ensuring there are no adverse effects on these water bodies. Along the Barrytown Flats, the key species are the tāiko (Westland petrel) and the Korora (little blue penguin). Based on engagement with tāiko experts, lighting effects causing fatalities can be avoided through adherence to guidelines, managing mining and trucking hours, use of sensor lights and shielding and lighting colours. Effects on Korora can be managed through dog surveys, setbacks from nests and a penguin fence if required. All these measures are contained in a well-designed Avian Management Plan. In granting the Standard Consent, the Hearings Panel considered TiGa's proposed measures in relation to terrestrial ecology to be "comprehensive and robust". The Project will also have positive benefits for ecology including the Maher Swamp Enhancement Programme, a new wetland at 3261 Coast Road, pest control and the work undertaken under the MoU with Ngāti Waewae and the Paparoa Wildlife Trust.
- Cultural effects – Ngāti Waewae submitted in support of the Standard Consent application and support the use of the fast-track for the Barrytown Mineral Sands Project. Ngāti Waewae have actively engaged in the consent conditions proposed with respect to water quality and the accidental discovery protocol. Engagement is ongoing.
- Dust – can be managed to avoid off-site effects through an Erosion and Sediment Control Plan and a Dust Management Plan.
- Hazardous substance storage – fuel tanks will have secondary containment and certification will be managed under the Hazardous Substances and New Organisms Act 2006.
- Radiation – sampling has demonstrated the effects are negligible, but radiation will be monitored daily. The HMC is not radioactive under the Radiation Safety Act 2016 so this does not apply.

The Rapahoe MSP will be established where ancillary mining activities already take place. Consent is required for building height, site coverage, transportation, noise and being a non-rural activity in the Rural Environmental Area. The known and anticipated effects are:

- Noise – which will be managed through enclosing the MSP in a building, utilising existing bunding and upgrading and sealing internal roads.
- Traffic – which will be managed through upgrading and sealing internal roads and configuring the MSP to ensure safe and efficient movement of vehicles within the site.
- Radiation – will be managed in compliance with the Radiation Safety Act 2016.

The Hearings Panel's conclusion on the effects of the Standard Consent was that the potential adverse effects would likely be no more than minor and any residual adverse effects did not weigh against a grant of consent. The conditions and comprehensive management plans that applied through that consent process have been incorporated on the advice of the experts in the Barrytown Mineral Sands Project.

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## Section 6: National policy statements and national environmental standards

What is the general assessment of the project in relation to any relevant national policy statement (including the New Zealand Coastal Policy Statement) and national environmental standard?

Please write your answer here:

- National Policy Statement for Freshwater Management (NPS-FM) – considerable thought has been given by TiGa and the technical advisors to the appropriate management of freshwater to avoid adverse effects on, and to preserve the health of, freshwater in the receiving environment of the mine sites. TiGa's water management approach gives effect to the hierarchy of obligations set out in Objective 2.1, which is confirmed through Ngāti Waewae's support for the Standard Consent process. The same approach applies to the The Project. The Project is consistent with policies 6 and 13, which seek to promote restoration of wetlands and reversal of degradation of freshwater ecosystems – achieved through the provision of riparian planting and the creation of an additional wetland area which will increase habitat and provide for enhanced connectedness between existing water bodies. The Project also seeks to protect river extent and values (Policy 7), and habitats of indigenous freshwater species (Policy 9) and trout (Policy 10).
- National Environmental Standards for Freshwater (NES-F) – creates a consent pathway for mineral extraction and ancillary activities in regulation 45D(6). The Project meets the consent pathway because it will have regionally significant benefits (as demonstrated through an economics assessment by Sense Partners for just the Standard Consent, and confirmed by a Council economic peer review), there is a functional need for the mine to locate where the resource is located and the effects management hierarchy has been applied to technical design and assessment of effects.
- New Zealand Coastal Policy Statement (NZCPS) – mineral sands mining must locate within the coastal environment to access the resource contained within historical sand dunes and produce the economic and social benefits (Objective 6 and Policy 6). Significant adverse effects on elements of the coastal environment, including indigenous biodiversity (Policy 11) and natural character (Policy 13), will be avoided and other adverse effects will be appropriately managed. The water discharged to water bodies in the coastal environment will not cause a significant increase in sedimentation (Policy 22) and will not contain contaminants (Policy 23). Natural hazard risks from sea level rise, storm events and earthquakes have been assessed by technical experts (geotechnical and coastal) to be appropriately managed through technical design (Policies 24-27).
- National Policy Statement for Indigenous Biodiversity (NPS-IB) – Significant Natural Areas have been identified in the proposed Te Tai o Poutini Plan (TTPP) over parts of the Stage 1 sites. These SNAs have not yet been confirmed through a hearings process and parts overlay land notified as Mineral Extraction Zone under the TTPP. TiGa has ensured the Project will avoid the effects listed in cl. 3.10(2) and manage all other adverse effects on those areas. TiGa will meet the overall objective (cl. 2.1) to maintain indigenous biodiversity so that there is no overall loss, including to the tāiko and Korora as described in the effects description.

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## Section 7: Eligibility

Will access to the fast-track process enable the project to be processed in a more timely and cost-efficient way than under normal processes?

Yes

Please explain your answer here:

The fast-track will enable the project to be approved and ready for the activities to commence in a more timely and efficient way than under the standard resource consent process. The key efficiency of the fast-track for the Project is to enable all mining sites and the MSP to be consented together which enable rolling stages of development. While the Standard Consent has been granted, this is likely to be appealed to the Environment Court.

What is the impact referring this project will have on the efficient operation of the fast-track process?

Please write your answer here:

The Standard Consent process has resulted in a significant level of information being prepared and management approaches tested through peer reviews and public submissions. This includes technical reports, proof of resource and legal analysis. The same conditions of consent managing effects and technical expert assessed setbacks apply to all mined areas. Baseline monitoring, greatly informed by the Standard Consent, is being carried out over the Project area with initial assessments made. There will be at least 8 years of data obtained (which will continue to inform management plans) by the time mining moves beyond the Standard Consent area. Technical work is continuing for the Rapahoe MSP. The Project is ready to go and suited to the fast and efficient operation of the fast-track process.

Has the project been identified as a priority project in a:

Local government plan or strategy

Please explain your answer here:

• Te Whanaketanga Te Tai Poutini West Coast Strategy 2050 – which identifies 'Realising our Natural Resources' as a priority project. In identifying natural resource extraction as a priority, the strategy states:

"Te Tai Poutini has an abundance of natural resources that form the backbone of our regional economy. To secure our long term economic prosperity and resilience, we need to actively support the growth of emerging industries and strengthen our economic drivers by focusing on adding value. By focusing on a more circular economic approach, we are able to increase the value of our products and deliver better outcomes for the environment. Our economic activity must actively protect and give back to the natural environment that supports our prosperity. Te Tai Poutini has untapped potential in the green economy space – from the unrealised value of our natural resources to the knowledge economy potential that exists from our strengths in conservation and biodiversity restoration."

The Project will utilise the West Coast's high-value mineral resources to be used in green technology such as renewable energy generation. This falls squarely within the focus of the West Coast's 2050 strategy.

• Minerals and Petroleum Resource Strategy - seeks to support New Zealand's transition to a carbon neutral economy by 2050, and recognises the importance of titanium in relation to cleantech. The project involves the extraction of minerals which will be used for clean/green technologies which could support New Zealand's transition to a carbon neutral economy, includes a significant number of mitigation measures to ensure that the potential effects on the environment, ecosystems and biodiversity will be minor in nature, which is consistent with this Strategy.

Will the project deliver regionally or nationally significant infrastructure?

Not Answered

Please explain your answer here:

No, however, TiGa intends to upgrade the electricity transmission lines to 33 kV between Rapahoe township and 3261 Coast Road at a likely cost of \$5 million (offered as a condition of consent and confirmed as feasible). This will enable electrification of the WCP there and also allows capacity for other users to connect to the electricity grid.

The Project will require investment in the regional rail network and the ports to transport the mineral product. Through the export process, the project will support the re-development of the West Coast's ports and the introduction of a coastal shipping system both domestically and internationally.

Will the project:

address housing needs

Please explain your answer here:

Yes, indirectly - while the Project is not an urban development project, TiGa recognises that this development will bring in a significant number of jobs to the area and those employees need to be housed. TiGa has been engaging with the Hagley Group who are developing a 127-section development plan for Kaiata, and a 41-section development plan for Paroa. It is anticipated that TiGa will underwrite this development and therefore be able to ensure residential units are available for its employees.

Will the project deliver significant economic benefits?

Yes

Please explain your answer here:

The Standard Consent alone has been assessed by two independent economic experts, including the council peer reviewer, as having regionally significant economic benefits arising from:

- Export revenue increasing the Grey District's exports by around 37.8% per year and the West Coast region's exports by around 7.1%.
- Generating around \$33.7 million of additional GDP per year once fully operational which would lift the Grey District's GDP by 3.8% and the West Coast region's GDP by 1.5%.
- Resulting in direct employment of 57 full time equivalent jobs, and a further 80 indirect jobs supported elsewhere in the economy. This would see employment in the Grey District increase by 2.0% and employment in the West Coast region rise by 0.9%. These would be high-value jobs, at an average of around \$116,000 per job compared to the regional median wage of \$53,730.
- Generating approximately \$33 million in government royalties, business tax and employees' incomes over the life of the project.

Expanding the mining activity to the balance of the Project will prolong this level of economic contribution and will extend the period of benefit for the region by approximately 25 years.

Will the project support primary industries, including aquaculture?

Yes

Please explain your answer here:

The Project is a primary industry activity and in investing in the infrastructure around primary industries (such as roads, rail and ports) will support the growth of primary industries. The MSP will further support the mineral extraction industry by providing an opportunity to increase the value of the export material and return more of that value to the New Zealand mineral extraction industry. Note also that the rehabilitation of the mining sites will enable the land to return to the current agricultural production use.



Will the project support development of natural resources, including minerals and petroleum?

Yes

Please explain your answer here:

The Project is a mineral extraction activity. Again, the development of infrastructure for the extraction, processing and transport of HMC and finished mineral products will be beneficial to the growth of the mineral extraction industry as a whole. The Project also supports the diversification of the West Coast mineral industry.

Will the project support climate change mitigation, including the reduction or removal of greenhouse gas emissions?

Yes

Please explain your answer here:

While it is acknowledged the project will produce greenhouse gas emissions, this will be minimised through the electrification of the WCP and the use of an existing local contract trucking company. The upgrade will make network capacity available to other users between Rapahoe and 3261 Coast Road which supports a reduction in the production of greenhouse gas emissions. TiGa will use minibuses for transporting employees to site (reducing private vehicle reliance).

Ilmenite is used to make titanium, which has a range of uses including solar and wind power generation components, components of the high-tech energy, manufacturing and transport industries. Garnet is used in high tech manufacturing industries (in waterjet cutting) and large steel fabrication (in abrasive blasting). These have applications in the renewable energy sector such as the manufacturing of wind turbines. For New Zealand and the world to transition to renewable energy and reduce greenhouse gas emissions, minerals such as ilmenite and garnet are needed to construct technology required for this transition.

Will the project support adaptation, resilience, and recovery from natural hazards?

No

Please explain your answer here:

However, having the heavy machinery on-site can mean these are available to be used in local hazard emergencies (e.g. road slips) as has occurred on the West Coast previously.

Will the project address significant environmental issues?

Yes

Please explain your answer here:

The Project will diversify the West Coast economy and help buffer against any boom-and-bust cycles of other traditional West Coast industries. Demand for ilmenite and garnet has experienced steady growth which is only expected to increase given the products these minerals are used in. This, combined with a total project timeline of 30 years, will make a significant contribution to the diversification and resilience of the West Coast economy and employment. The significance of TiGa's proposal to the West Coast was aptly summarised in the Hearings Panel's conclusion when granting the Standard Consent:

"The West Coast's available mining areas are small, given the levels of public ownership of natural resources in the region. The high incidence of special natural resources on the West Coast means any mining operation likely to receive consent must work within carefully framed and robust parameters to achieve directive policy in national, regional, and district plan requirements. We consider that if a proposal can achieve these ideals and significantly support regional development, then it should be approved. This is also the kaupapa Ngāti Waewae encouraged the Panel to adopt."

The Project's contribution to the manufacturing of renewable energy technology will support the response to climate change issues.

Is the project consistent with local or regional planning documents, including spatial strategies?

Yes

Please explain your answer here:

The key planning documents are:

- Operative Grey District Plan - has a particularly enabling policy framework and generally seeks to provide for activities, subject to avoiding, remedying or mitigating the adverse effects of such activities. The Rural Environmental Area covers every part of the Grey District outside of townships, and extractive activities are an anticipated part of the rural environment.
- Proposed Te Tai o Poutini Plan – is currently at the hearings stage and most provisions do not have legal effect. 3261 Coates Road is zoned in the special purpose Mineral Extraction Zone which enables mineral extraction. The other sites are zoned General Rural Zone which anticipates mineral extraction and ancillary activities.
- West Coast Regional Land and Water Plan - seeks to sustainably manage the West Coast's natural and physical resources. The objectives and policies relating to land management, surface water quality and quantity and groundwater are most relevant to the Project. In general terms these policies seek to avoid, remedy or mitigate adverse effects on the life supporting capacity of ecosystems, natural character and values of fresh water bodies, protection of existing water uses. The management plans and conditions will ensure these matters are managed and monitored so that they are consistent with

these objectives and policies.

- West Coast Regional Air Quality Plan - is broken into chapters based on the nature of the air discharges. The objectives and policies of Chapter 7 - Dust seek to protect human health and ecosystems, and avoid adverse effects associated with dust emissions. The Project is consistent with these objectives and policies as a Dust Management Plan is proposed to be required as a condition of consent. This will ensure that during infrequent dry/windy periods, dust will be adequately managed such that human health, property, structures and ecosystems are protected.
- West Coast Regional Policy Statement - gives effect to the New Zealand Coastal Policy Statement but predates the NPS-FM, and needs to be considered in this context. The key policy direction in both the NPS-FM and the NZCPS is to avoid adverse effects on natural character, wetland and river extent and values, water quality, and threatened and at risk indigenous species in waterbodies and the coastal environment. The Project will be consistent with the higher order document policy direction, as these adverse effects are avoided through project design, water management and erosion and sediment control methods, and operational parameters.

Anything else?

Please write your answer here:

Does the project includes an activity which would make it ineligible?

No

If yes, please explain:

## Section 8: Climate change and natural hazards

Will the project be affected by climate change and natural hazards?

No

If yes, please explain:

The Project is set back from the MHWS and will occur in a relatively short-term period. TiGa has instructed a coastal expert who has assessed that the sea level rise over the next 100 years will not adversely impact the Standard Consent.

The 3261 Coast Road site has been assessed as having natural protection from wave action and the effects of sea level rise in the form of a MSGB (Mixed Sand Gravel Beach), composite beach form, a wide sandy beach apparent at low tide with a steep gravel bund, natural barrier at the top of the beach. The coastal expert also concluded that the risk of a maximum amplitude wave over the time period of the mine is negligible. A geotechnical expert concluded that the risk of extreme earthquake (a M8 event) and coastal inundation are both considered Low with moderate consequential damage with no specific mitigation required.

## Section 9: Track record

Please add a summary of all compliance and/or enforcement actions taken against the applicant by any entity with enforcement powers under the Acts referred to in the Bill, and the outcome of those actions.

Please write your answer here:

TiGa has not been the subject of any compliance or enforcement actions by any entities with enforcement powers under the Acts.

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## Declaration

Do you acknowledge your submission will be published on [environment.govt.nz](https://environment.govt.nz) if required

Yes

By typing your name in the field below you are electronically signing this application form and certifying the information given in this application is true and correct.

Please write your name here:

Robert Brand

Important notes