REPORT

Tonkin+Taylor

Taharoa Ironsands Mine - Central and Southern Blocks Mining Project

Substantive Application

Prepared for
Taharoa Ironsands Limited
Prepared by
Tonkin & Taylor Ltd
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Executive summary

This substantive application is made under the Fast-track Approvals Act 2024 (**FTAA**) on behalf of Taharoa Ironsands Limited (**TIL**) to continue mining operations within the Central and Southern Blocks of the Taharoa Mine and in the adjacent coastal marine area (**CMA**), on the west coast of the North Island. The 'Central and Southern Block Mining' Project is listed in Schedule 2 of the FTAA and TIL is the 'authorised person' in respect of the Project.

TIL seeks all necessary approvals to enable the continuation of mining activities including resource consents for a term of 35 years, a Wildlife Act Approval and an Archaeological Authority.

Mining operations at the site have been ongoing since 1973 and access New Zealand's largest known deposit of titanomagnetite ironsand, which is exported to China and Japan for use in steel production. The site is situated on Māori freehold land and operated with the support of the landowners, – The Proprietors of Taharoa C Block Incorporated (and in the CMA).

The site is within the rohe of Ngāti Mahuta ki Tai (Ngāti Mahuta ki te Hauāuru), and the application acknowledges the significance of the land and waterways to the landowners and broader mana whenua.

The Central and Southern Block Mining Project delivers significant regional and national benefits (both economic and social), which are central to the purpose of the FTAA. TIL is the largest single exporter by tonnage in New Zealand and contributes $316 million in annual export revenue. The Project will support 350 full-time equivalent jobs and continue regional spending, with the mine having generated $1.2 billion in regional spending since 2017. TIL also provides, at its election, the ongoing provision of housing, infrastructure and essential services to the Taharoa Village which is closely tied to the mine. The continuation of mining operations is clearly important to the economic and social wellbeing of the local and regional community.

This application follows a lengthy consenting history. In July 2020, TIL lodged a resource consent application under the Resource Management Act 1991 (**RMA**) to reconsent activities the Central and Southern Blocks and the adjacent CMA. That application was heard by an independent panel in August 2024, resulting in the grant of consents for mining above the water table, with a 20-year term. The panel determined that mining below the water table was outside the scope of the application, despite this activity having occurred historically and in reliance on TIL's existing resource consents. TIL subsequently appealed the decision to the Environment Court, seeking to resolve scope limitations and address conditions that were considered unworkable and inconsistent with the established principles for the imposition of consent conditions. Following the enactment of the FTAA and the listing of the Central and Southern Blocks Mining Project in Schedule 2 of the FTAAA, TIL elected to pursue a substantive application under the FTAA rather than complete the RMA process. The RMA appeal remains on hold - the relevant resource consent application will be withdrawn upon acceptance of this application and the appeal will therefore be discontinued.

Preparation of this application has been informed by a long history of mining and managing environmental effect at the site, as well as the earlier RMA consenting process. The substance of the application has already been tested, and adjustments have already been made, through the RMA process and subsequently, to address various matters and feedback from Waikato Regional Council, relevant iwi, hapū, adjacent landowners, and relevant statutory agencies. Consultation undertaken prior to submitting this application has further helped shape the application. As a result, TIL's proposed conditions of consent are well advanced.

The resource consent component of the application seeks the necessary resource consents for mining near and within wetlands under the National Environmental Standard for Freshwater (**NES-F**), harvesting of pine forest under the National Environmental Standard for Commercial

Forestry (**NES-CF**), and various water abstraction, discharge, and coastal activities under the Waikato Regional Plan (**WRP**), Waikato Regional Coastal Plan (**WRCP**), and Proposed Waikato Regional Coastal Plan (**PWRCP**). Within the Proposed Waitomo District Plan, the site is zoned Rural Production where quarrying activities are a permitted activity.

The application includes a comprehensive assessment of environmental effects. Overall, when incorporating the proposed set of mitigation and offsetting measures, the actual and potential adverse effects of the application are considered to be no more than minor. Many of the mitigation measures proposed are already in operation at the mine. Key mitigation and offsetting measures include:

- maintaining a 100 m buffer from the Mean High-Water Springs (**MHWS**) and a 30 m buffer around wetlands and streams;
- implementing flow augmentation in the Mitiwai and Wainui Streams during low-flow conditions to maintain ecological values;
- offsetting the loss of seven moderate-value wetlands with the creation of 8.3 hectares of wetland designed to achieve a net ecological gain;
- dust emissions will be managed through a tiered alert-level system and stabilisation of exposed surfaces;
- erosion and sediment control measures will be implemented in accordance with regional guidelines; and
- tailings will be placed and rehabilitated progressively, and pest plant and animal control will be undertaken.

These mitigation measures are supported by monitoring programmes and proposed conditions of consent to ensure ongoing compliance and environmental protection. As noted above, the proposed conditions of consent are refined, have been carefully considered, are reasonable and practicable, and no more onerous than necessary.

Although no lizards were found during site surveys, a Wildlife Authority is sought on a precautionary basis to capture, temporarily hold and relocate any lizards identified prior to site clearance works. The application also acknowledges that undetected lizards may be incidentally killed during works. An Archaeological Authority is sought to potentially modify or destroy known and unknown archaeological sites (primarily middens) within the application area.

Importantly, the FTAA requires that the benefits of a project be weighed against its adverse effects. Under section 85(3), a Panel may decline an application only if one of more of the adverse effects are sufficiently significant to be out of proportion to the regional or national benefits. In this case, the adverse effects are well mitigated (or offset) and are not significant. The substantial benefits of the Project outweigh the potential adverse effects.

This application satisfies the statutory requirements of the FTAA. It proposes the continuation of a long-standing operation that delivers substantial economic, social, and cultural benefits. The application is consistent with the purpose of the FTAA, which is to facilitate infrastructure and development projects which have significant regional or national benefits. These benefits are not outweighed by the potential adverse effects of the project.

1 Introduction

1.1 Overview of TIL's substantive application

Taharoa Ironsands Limited (**TIL**) operates an ironsand mine and an associated shipping and export business at Taharoa, on the West Coast of the North Island, approximately 8 km south of Kawhia Harbour. The mine has been in operation since it was first established by the (then) National Government in 1973. The current owners of the mine originally acquired the business, alongside the Māori landowners, the Proprietors of Taharoa C Block Incorporated (**Taharoa C**) in 2017.

The mine is predominantly situated on Māori freehold land owned by Taharoa C (legally described as Taharoa C Block) and accesses the largest known ironsand deposit in New Zealand. Ship-loading facilities, including a ship-loading pipeline and single buoy mooring (**SBM**), are located in the coastal marine area (**CMA**) adjacent to the mine. These facilities are legally defined as Taharoa Port.

The mine is made up of blocks – with the largest blocks being the Central and Southern Blocks, totalling approximately 911 hectares. This application, known as the Central and Southern Mining Blocks Project, is (in short) to enable the continuation of mining activities within the Central and Southern Blocks of the mine (**site**) and associated activities in the CMA.

The Central and Southern Block are clearly demarcated - two streams that traverse the site and outlet to the Tasman Sea demarcate the boundary between the Central and Southern Blocks. The Central Block is located to the south of the Mitiwai Stream and to the north of the Wainui Stream, which runs from Lake Taharoa to the Tasman Sea. The Southern Block is located to the south of the Wainui Stream and extends to the southern boundary of the site, near the Waiohipa Stream.

The central processing plant is located on the Central Block adjacent to the Wainui Stream. The Wainui Stream is currently dammed to provide a reservoir from which freshwater is taken for use in mining and shiploading activities. The ship-loading pipelines originate at the central processing plant and traverse the CMA to the SBM located offshore. The Taharoa Port Operations Centre is located on the Central Block adjacent to the main vehicle access route through the site.

The infrastructure and facilities located within the Central and Southern Blocks and the CMA support excavation activities within the Central and Southern Blocks and on various other blocks of the Mine.

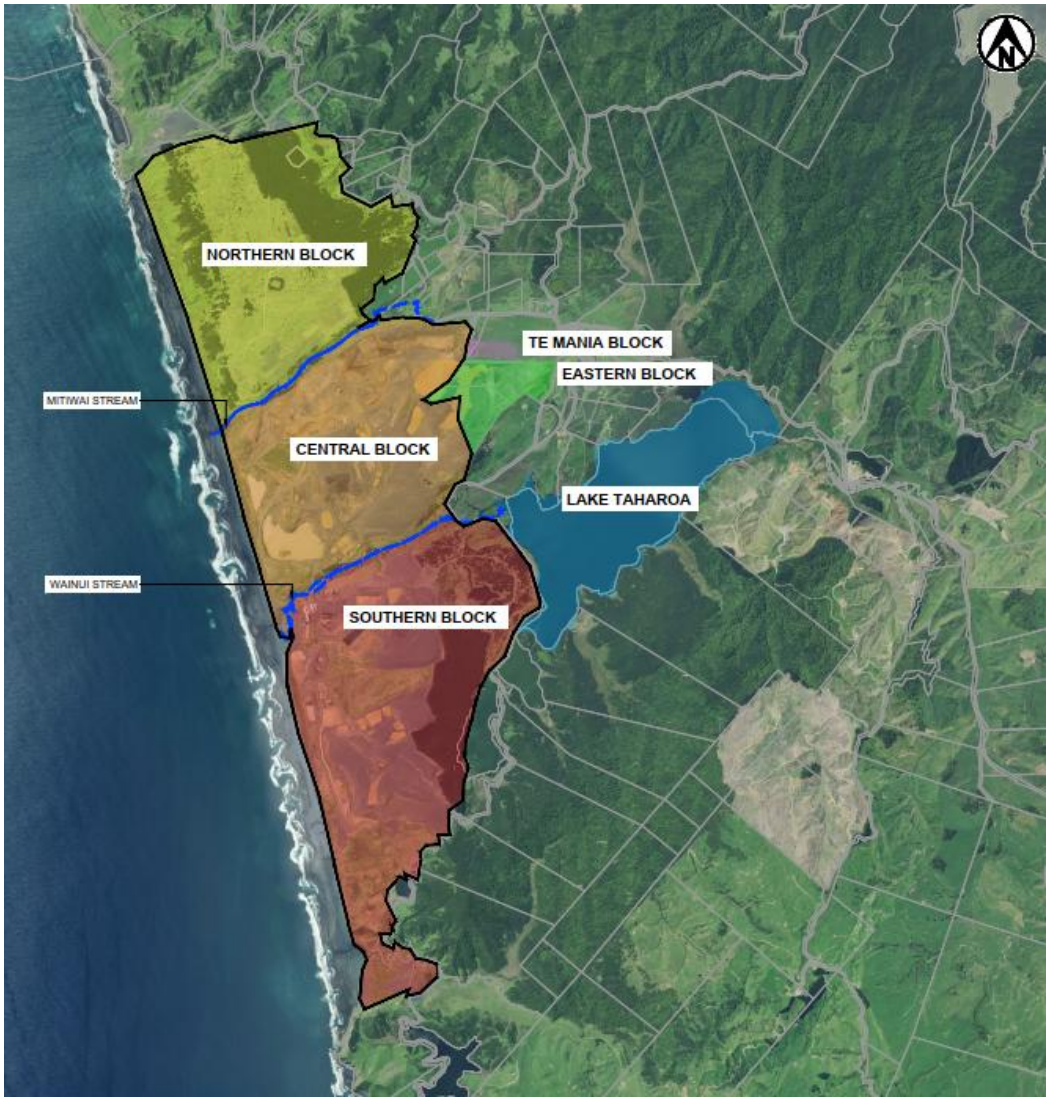

Figure 1.1: Location of Mining Blocks at Taharoa Mine

The site is zoned Rural Production in the Proposed Waitomo District Plan (which is currently at the appeals stage of the process and is largely treated as operative under section 86F of the RMA). Within this zone, 'quarrying activities' [1] are a permitted activity. The mine is listed in Schedule 1 of the Rural Production Zone chapter as a rural production site and of regional significance as a significant mineral resource.

The mining, shipping and export process undertaken by TIL generally involves:

- Vegetation, topsoil and overburden removal;
- Extraction and processing of ironsand above and below the water table;
- Mixing of ironsand into a slurry and pumping of the slurry through a seabed pipeline to a bulk carrier ship moored to a Single Buoy Mooring (SBM) 3.5kms offshore within the Taharoa Port;

[1] **Quarrying activities** are defined as "the extraction, processing (including crushing, screening, washing, and blending), transport, storage, sale and recycling of aggregates (clay, silt, rock, sand), the deposition of overburden material, rehabilitation, landscaping and cleanfilling of the quarry, and the use of land and accessory buildings for offices, workshops and car parking areas associated with the operation of the quarry". **Quarry** is defined as a location or area used for the permanent removal and extraction of aggregates (clay, silt, rock or sand). It includes the area of aggregate resource and surrounding land associated with the operation of a quarry and which is used for quarrying activities.

- Pumping of the slurry into a ship ("shiploading") and associated dewatering; and
- Tailings disposal and rehabilitation of mined areas.

Resource within the Central and Southern Blocks of the mine is projected to provide a minimum of 20 years of ironsand supply for export, if mined at a continuous rate – after which excavated areas will be finally rehabilitated and closed. The mining infrastructure and facilities in the Central and Southern Block, including processing and ship-loading infrastructure and facilities, and the water source, will also provide support future extraction from the Central and Southern Blocks, and other blocks of the mine, for the next 35 years.

To continue operating the mine, TIL requires new approvals. TIL's operation is currently authorised under a suite of resource consents held by TIL from the Waikato Regional Council (**WRC**) granted in 2006. The suite of regional consents expired on the 31 December 2020 and TIL is currently operating pursuant to section 124 of the Resource Management Act 1991 (**RMA**), under its existing but expired consents. An application to replace these resource consents was lodged with Waikato Regional Council (**WRC**) in July 2020 (**2020 RMA Application**). The application was determined by an Independent Hearing Panel appointed by Waikato Regional Council in 2024 (**2024 RMA Hearing Panel Decision**). This decision is currently under appeal to the Environment Court.[2] As explained in more detail below, the Independent Hearing Panel granted the necessary resource consents to enable 'dry mining' (i.e. only mining which does not interact with groundwater) but declined to grant the necessary resource consents for mining that interacts with groundwater on the basis of a scope issue with the application. This is despite this activity having been undertaken since the mine was first established, including in reliance on the existing but expired consents. TIL appealed parts of the 2024 RMA Hearing Panel Decision – firstly, to not grant the necessary consents for mining below groundwater, and secondly, the conditions which significantly impeded the ability of the mine to continue operating.

TIL now seeks to utilise the FTAA process to obtain all necessary resource consents (and approvals), subject to workable conditions that recognise the operational reality of ironsand mining. It has used the resource consent conditions from the 2024 RMA Hearing Panel Decision as a starting point, to streamline consideration of this application to key outstanding issues. TIL will continue to rely on its existing consents in the meantime.

This report forms TIL's substantive application under the Fast-track Approvals Act 2024 (**FTAA**) for the Central and Southern Blocks Mining Project.

This Project is a listed project in Schedule 2 of the FTAA with the following description:

Authorised person: *Taharoa Ironsands Limited*

Project name: *Central and Southern Block Mining*

Project description: *Continue existing mineral sand extraction, including land preparation works, constructing a water supply reservoir, extracting ironsand material using dry and wet-mining techniques, processing extracted material, and transporting raw and processed material*.

Approvals sought: *This substantive application includes applications for approvals relating to the RMA, Wildlife Act 1953 (**Wildlife Act**) and Heritage New Zealand Pouhere Taonga Act 2014 (**HNZPT Act**).*

This report has been prepared in fulfilment of section 43 and Schedule 5, Schedule 7 and Schedule 8 of the FTAA, on behalf of TIL.

[2] The appeal will be withdrawn once the Environmental Protection Authority confirms this substantive application is complete and within scope (section 46(2) of the FTAA).

1.2 Authorised person and property details

Table 1.1 below sets out the details of the authorised person and application site.

Table 1.1: Authorised person and property details

Authorised person	Taharoa Ironsands Limited
Owner of application site	The Proprietors of Taharoa C Block Incorporated
Occupier of application site	Taharoa Ironsands Limited
Site address / map reference	Taharoa Road, Taharoa (Refer to Figures 3.1 and 3.2) Location of the mooring buoy and end of shiploading pipeline in the CMA is NZTM 1745860mE, 5773436mN.
Site area	The title area is 1311 ha and the application area is approx. 911 ha
Record of Title reference	SA34B/688
Legal description	Taharoa C Block
Regional and District Council / Plans	Waikato Regional Council: Waikato Regional Plan/Waikato Regional Coastal Plan/Proposed Waikato Regional Coastal Plan Waitomo District Council: Waitomo District Plan/Proposed Waitomo District Plan
Address for service during processing	MinterEllisonRuddWatts PO Box 105 249 Attention: Stephanie de Groot and Holly-Marie Rearic Phone: 021 929 296, 021 201 1113 Email: Stephanie.deGroot@minterellsion.co.nz Holly-Marie.Rearic@minterellsion.co.nz
Address for service during implementation and invoicing	Taharoa Ironsands Limited P O Box 308 Wellington 6140 Attention: [redacted] Phone: to be provided separately Email: [redacted] Invoices to also be directed to: [redacted]

We attach the Fast-track Approvals Substantive Application Form in **Appendix A**, and a list of the owners and occupiers of land adjacent to Taharoa C Block in **Appendix B**.

1.3 Summary of approvals required

In accordance with section 42(4)(a), (h) and (i) of the FTAA a substantive application may seek one or more of the following approvals;

- *A resource consent that would otherwise be applied for under the Resource Management Act 1991;*
- *A wildlife approval as defined in clause 1 of Schedule 7; and*
- *An archaeological authority described in section 44(a) or (b) of the Heritage New Zealand Pouhere Taonga Act 2014 that would otherwise be applied for under that Act.*

This application is seeking all of the approvals listed above. These are listed in sections 1.3.1 – 1.3.3 below. More detailed information on why each approval is required is contained in section 5 of this report. It is our understanding that no additional approvals including additional resource consents are required beyond those specified in this report. However, if further matters are identified post-lodgement, these should also be considered as forming part of the application.

A mining permit pursuant to the Crown Minerals Act 1991 is not required because the minerals on the site are not reserved to the Crown, and accordingly, the Crown Minerals Act 1991 does not apply.

1.3.1 Resource consents that would otherwise be applied for under the Resource Management Act 1991

The resource consents sought as part of this application are set out below. Taking a 'bundling' approach, resource consent is sought under the National Environmental Standard for Freshwater 2020 (**NES-F**), the Waikato Regional Plan (**WRP**), the Waikato Regional Coastal Plan (**WRCP**) and the Proposed Waikato Regional Coastal Plan (**PWRCP**) as a **discretionary activity.** The resource consent required under the National Environmental Standard for Commercial Forestry 2017 (**NES- CF**) is a **restricted discretionary activity**. As this activity can be undertaken independently of the proposed mining activities, this activity should be assessed separately (i.e. not bundled).

A term of 35 years is sought for all resource consents. As outlined within this application, appropriate conditions are proposed to manage the on-going effects of the mining activity, and a 35-year term is therefore appropriate. This is further explained in section 8.4 below.

Given that the consents will authorise the continuation of existing activities, the default FTAA lapse period of two years is sought as the lapse period for all resource consents, with the exception of the consent sought for (i) discharge of mining process water and water containing contaminants to ground as a result of incidental discharges from iron sand mining and (ii) forestry harvesting under the NES-CF. For those consents a lapse corresponding with the duration of the consent is sought (35 years) to recognise the intermittent nature of the activity (for the incidental discharge consent) and the uncertainty that exists with regards to the date of harvest of the pine forest.

A summary of the applicable resource consents is set out in the sections below. As outlined above, this application is for all consents required for the project, even if not specifically listed below.

1.3.1.1 National Environmental Standard for Freshwater 2020

Table 1.2 outlines the resource consents that are required under the NES-F for earthworks and land disturbance within 100 m of a wetland, to mine seven existing natural inland wetlands with moderate value, to undertake monitoring and potential water level augmentation within nineteen retained natural inland wetlands and to establish a wetland offset within an existing natural inland wetland.

Table 1.2: Resource consents required under the NES-F

Regulation reference / description	Activity status
Regulation 45D(1) - Vegetation clearance within, or within a 10 m setback from a natural inland wetland for the purpose of the extraction of minerals and ancillary activities.	Discretionary

Regulation reference / description	Activity status
Regulation 45D(2) – Earthworks or land disturbance within, or within a 10 m setback from a natural inland wetland for the purpose of the extraction of minerals and ancillary activities.	Discretionary
Regulation 45D(3) - Earthworks or land disturbance outside a 10 m, but within a 100 m, setback from a natural inland wetland is a discretionary activity if it— (a) is for the purpose of the extraction of minerals and ancillary activities; and (b) results, or is likely to result, in the complete or partial drainage of all or part of the wetland.	Discretionary
Regulation 45D(4) - The taking, use, damming, or diversion of water within, or within a 100 m setback from, a natural inland wetland for (a) the purpose of the extraction of minerals and ancillary activities; and (b) there is a hydrological connection between the taking, use, damming, or diversion and the wetland; and (c) the taking, use, damming, or diversion will change, or is likely to change, the water level range or hydrological function of the wetland.	Discretionary
Regulation 45D(5) - The discharge of water into water within, or within a 100 m setback from, a natural inland wetland where (a) the discharge is for the purpose of the extraction of minerals and ancillary activities; and (b) there is a hydrological connection between the discharge and the wetland; and (c) the discharge will enter the wetland; and (d) the discharge will change, or is likely to change, the water level range or hydrological function of the wetland.	Discretionary

1.3.1.2 National Environmental Standard for Commercial Forestry 2017

Table 1.3 outlines the resource consents that are required under the NES-CF to harvest the plantation forest in the east of the Southern Block.

Table 1.3: Resource consents required under the NES-CF

Regulation reference / description	Activity status
Regulation 35(1) – Earthworks in any red zone where the permitted activity thresholds specified in regulation 24(2)(d) are exceeded.	Restricted Discretionary
Regulation 71(1)(a) – Harvesting in any red zone of Land Use Capability Class 8e.	Restricted Discretionary
Regulation 97(7) – Discharge of sediment into water or onto land.	Restricted Discretionary

1.3.1.3 Waikato Regional Plans

Table 1.4 outlines the resource consents that are required under the WRP, the WRCP and the PWRCP.

Table 1.4: Summary of resource consents required under the Waikato Regional Plans

Rule reference / description	Activity status
Waikato Regional Plan	
Rule 3.3.4.23 – taking of surface water that is a non-qualifying s14(3)(b) take.	Discretionary
Rule 3.5.4.5 – any discharge of a contaminant into water, or onto or into land that is not specifically provided for by any other rule.	Discretionary
Rule 3.5.11.8 – the discharge of stormwater to surface water.	Discretionary
Rule 3.6.4.10 – damming of water, diversion, taking and discharging of water and the use or alteration of any associated structure that was lawfully established.	Controlled
Rule 3.6.4.11 – the diversion and any consequent discharge of water from a diversion where the activity was lawfully established.	Controlled
Rule 3.6.4.13 - the diversion and subsequent discharge of water which does not comply with Rules 3.6.4.6 – 3.6.4.8 and 4.2.9.1 – 4.2.9.3.	Discretionary
Rule 5.1.4.15 – soil disturbance activities in High-Risk Erosion Areas.	Discretionary
Rule 5.2.5.3 – the discharge of overburden onto or into land and any subsequent discharge of contaminants into water or air.	Discretionary
Waikato Regional Coastal Plan	
Rule 16.3.6 – the discharge of water from stormwater structures into the CMA.	Controlled
Rule 16.6.13 – any activity in the CMA involving, in any 12-month period, disturbance to the foreshore or seabed and involving the deposition of material on the foreshore or seabed in quantities greater than 50,000 m^3.	Discretionary
Rule 16.4.8 – the erection, placement, use of or occupation of space by a swing mooring of a vessel outside of any Zoned Mooring Areas.	Discretionary
Rule 16.4.24 – the erection, placement, use of, occupation of space by, extension, reconstruction, alteration, removal or demolition of a structure in the CMA.	Discretionary
Rule 16.6.3 – the use of motorised vehicles in the CMA for any purpose which does not comply with the conditions for a permitted activity in Rule 16.6.2.	Discretionary
Proposed Waikato Regional Coastal Plan	
Rule DD-R6 - use of vehicles in the CMA for shiploading purposes.	Discretionary
Rule DD-R22 - deposition of up to 75,000 m^3 per day of iron sand slurry water into the CMA during shiploading operations.	Discretionary
Rule MO-R5 - operate, maintain and replace existing mooring in the CMA for the purpose of shiploading.	Discretionary
Rule STR-R13 - operate, maintain and replace the existing pipelines '1' and '2' in the CMA for the purpose of shiploading, including a 500 m extension to pipeline '2'. This includes associated occupation.	Discretionary

Rule reference / description	Activity status
Rule WD-R8 – the discharge of contaminants into the coastal marine area not identified as permitted, controlled or restricted discretionary elsewhere in this plan.	Discretionary
Rule WD-R18 - the discharge of stormwater to the coastal marine area not otherwise provided for.	Discretionary

1.3.2 Wildlife approval that would otherwise be an offence under the Wildlife Act 1953

A general Wildlife Approval to capture, temporarily hold and relocate, and potentially kill native lizard species is sought in relation to works associated with mining of the Central and Southern Blocks of the Taharoa C Block.

1.3.3 An archaeological authority that would otherwise be applied for under the Heritage New Zealand Pouhere Taonga Act 2014

A general Archaeological Authority is sought in relation to works associated with mining of the Central and Southern Blocks of the Taharoa C Block.

The Authority application also includes an application for approval of an archaeologist to carry out the activity to be authorised under the Authority.

1.3.4 Technical reports

The technical reports prepared for the application are listed below.

- Hydrology Assessment prepared by Josh Mawer (Senior Hydrologist) and Jonathan Williamson (Principal Hydrologist and Managing Director) Williamson Water & Land Advisory
- Terrestrial Ecology – Wetlands and Vegetation Assessment prepared by Hamish Dean, Principal Ecologist at SLR Consulting
- Freshwater Ecology Assessment prepared by Dr Keren Bennett, Technical Director of Freshwater Ecology at SLR Consulting
- Terrestrial Ecology – Fauna Assessment prepared by Dr Hannah Mueller, Director and Principal Ecologist at Phoenix Ecology Limited
- Hydrogeology Assessment (Groundwater Effects) prepared by Asanka Thilakerathne (Environmental Scientist), Jake Scherberg (Senior Hydrologist and Technical Leader) and Jonathan Williamson (Principal Hydrologist and Managing Director) at Williamson Water & Land Advisory
- Archaeological Assessment prepared by Glen Farley, Doug Gaylard and Jennifer Low, archaeologists at Clough and Associates Limited
- Preliminary Site Investigation prepared by Wendy Whitley, Environmental Consultant at Enviser Limited
- Coastal Processes Assessment prepared by Dr Edward Paul Beetham, Senior Coastal Geomorphologist at Tonkin & Taylor Limited
- Geotechnical Assessment prepared by Cameron Lines, Director, Baseline Geotechnical Limited.

- Air Quality Assessment prepared by Cameron Brown, Air Quality Engineer at Pattle Delamore Partners Limited
- Marine Ecology Assessment prepared by Dr Pete Wilson, Senior Coastal Scientist at SLR Consulting
- Noise Assessment prepared by Darran Humpheson, Technical Director, acoustics at Tonkin & Taylor Limited
- Discharge Dispersion Modelling report prepared by Mariana Cussioli, Coastal Oceanographer at MetOcean Solutions / MetService
- Marine mammals report prepared by Deanna Clement, Team Leader – Marine Mammal Ecology at Cawthorn Institute

2 Fast-track Approvals Act 2024 Requirements

Section 43 of the FTAA sets out the requirements for a substantive application. These matters are addressed below.

2.1 Form and manner approved by the Environmental Protection Authority

Section 43(1)(a) requires that the substantive application is lodged in the form and manner approved by the Environmental Protection Authority. We attach the Fast-track Approvals Substantive Application Form in **Appendix A**. The remainder of the information is contained within or attached to this report.

2.2 Consistency with the purpose of the Fast-track Approvals Act

Under section 43(1)(b)(i) of the FTAA, a substantive application must explain how the Project is consistent with the purpose of the Act.

Schedule 5, clause 17(1)(a) sets out the criteria for assessment of a resource consent application. Schedule 7, clause 5(a) sets out the criteria for assessment of an application for a Wildlife Approval. Schedule 8, clause 4(1)(a) of the FTAA sets out the criteria for consideration of an application for an archaeological authority.

Each of these clauses provides a hierarchy of considerations for assessment of an application. The purpose of the FTAA is to be given the greatest weight when considering each application.

The purpose of the FTAA as set out in section 3 is:

> *"…to facilitate the delivery of infrastructure and development projects with significant regional or national benefits".*

Black ironsand has been mined at Taharoa since the 1970s. The deposit of ironsand at the Taharoa Mine covers 1300 hectares, with an estimated reserve of 300 million tonnes, the largest deposit in New Zealand. The sand contains titanomagnetite, a mineral composed or iron and titanium. The sand is excavated and processed on-site at Taharoa, and titanomagnetite is then exported as a slurry, primarily to China and Japan where it is used for the manufacture of steel.

An Economic Assessment of the benefits of the Central and Southern Block Mining Project has been prepared by Sense Partners and is attached to this report as **Appendix C**. The economic assessment records that the mine has been in operation for 52 years and that the mine uses a tested business model and proven technologies, which makes assessing the economic benefits of the mine more certain.

Existing data and conservative estimates of costs, export volumes and revenue clearly evidence that mining of the Central and Southern Blocks will have on-going significant regional and national economic benefits. These include the following:

- Taharoa Ironsands Limited is the largest single export company in the Waikato region and is the country's largest single exporter by gross tonnage. The operation currently returns $316 million export revenue annually.
- Priced in today's dollars, the export contribution of the mine to the New Zealand economy to date exceeds $5 billion, with planned export sales of $14 billion to 2055.
- The mine generates tax revenue that has provided the New Zealand government with [redacted] in the last eight years under the current ownership, which is significant on a national scale.

- Since May 2017, the mine has generated spending on regional goods and services of $1.2 billion and is expected to generate an additional spend of $9 billion, or $298 million per year, over the next thirty years. Principal inputs into the operation over the past seven years include domestic capital spending of over $140 million and direct purchases of labour inputs of $208 million.
- The mine is a significant contributor to the regional labour market, indirectly employing 350 full-time employees in the local area.
- Given the remoteness of the location, the mine provides extraordinary opportunities for Māori development in the region. The mine's location enables tāngata whenua to connect to labour markets without relocating and losing connection to the land.
- The scale of these national and regional benefits distinguishes the mining operation as making a substantive contribution to the economy overall.

The benefits summarised above are explained in more detail in **Appendix C**.

For these reasons the Central and Southern Block Mining Project was recognised as having regional and national significance and was listed in Schedule 2 of the FTAA.

Granting the approvals sought by TIL will enable the Projects' benefits to be realised and will achieve the purpose of the FTAA.

Importantly, the FTAA requires that the benefits of the Project must be weighed against the potential adverse effects/impacts (post mitigation) of allowing ongoing mining activity on the Central and Southern Blocks. Under section 85 of the FTAA a Panel must decline an approval if the adverse impacts of the Project are sufficiently significant to be out of proportion to the Project's regional or national benefits. In order to be out of proportion to these significant benefits, the adverse effects/impacts would need to be extremely significant. As set out in this report, this is not the case as the overall level of (post-mitigation) adverse effects are, at worst, low.

2.3 Ineligible activities

Under section 43(1)(c) of the FTAA, a substantive application must demonstrate that the proposal does not involve any ineligible activities. This application is not for an ineligible activity as defined in section 5 of the FTAA. Although it is located on identified Māori land (section 5(1)(a)(i)), the owners of the land have provided agreement in writing to the proposed activity [3]. This agreement is contained in **Appendix D**.

Further, the application site does not involve any of the following:

- A customary marine title area;
- A recognised customary rights area;
- Māori customary land;
- An aquaculture activity;
- An access arrangement under sections 61 or 61B of the Crown Minerals Act 1991;
- Occupation of the CMA that is prevented by the RMA;
- Land subject to Schedule 4 of the FTAA;
- Reserve land held under the Reserves Act 1977;

[3] The Proprietors of Taharoa C Incorporation

- A prohibited activity under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012;
- Sections 15B or 15C of the RMA;
- A decommissioning activity under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012; or
- An offshore renewable energy project.

2.4 Information requirements

Section 43(2) of the FTAA states that if the substantive application is for a listed project, it must contain the information required by section 13(4)[4] (with relevant modifications). Section 43(3) of the FTAA also references the information requirements in the relevant Schedules[5]. Table 2.1 outlines the location of the required information within this application.

Table 2.1: Location of required information

FTAA Section	Summary of Information Required	Location within Application/Information
13(4)(a)	Description of proposal and activities.	Section 4
13(4)(c)	Ineligible activities.	Section 2.3
13(4)(d)	Description/map of the project area.	Section 3 and **Appendix J**
13(4)(e)	Commencement and completion dates for construction where relevant.	As outlined in sections 1.4 and 4 of this report, mining is proposed to continue and regional resource consents are sought for 35 years.
13(4)(f)(i)	Nature and timing of stages.	Section 4
13(4)(h)	Adverse effects.	Section 8.1
13(4)(i)	Prohibited activities.	The application does not include any prohibited activities.
13(4)(j)	Affected persons.	Section 6
13(4)(k)	Consultation.	Section 7 **Appendix Y** and **Appendix Z**
13(4)(l)	Treaty settlements.	Section 2.6
13(4)(m)	Public Works Act 1981 processes.	Not applicable.
13(4)(n)	Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019.	Not applicable.

[4] Other than sections 13(4)(b), (f)(ii) and (iii) and (g).
[5] Clauses 5 to 8 of Schedule 5, clause 2 of Schedule 7 and clause 2 of Schedule 8.

FTAA Section	Summary of Information Required	Location within Application/Information
13(4)(o)	Māori land, marae, and identified wāhi tapu within the project area.	**Appendix D**
13(4)(p) – 13(4)(r)	Ministerial determinations.	TIL as applicant is not seeking a determination from the Minister.
13(4)(s)	Applicant's legal interest.	**Appendix E** (Record of Title) Section 2.7
13(4)(t)	Outline of legal authorisations required.	Section 5
13(4)(u)	Previous applications and decisions.	Section 2.8
13(4)(v)	Climate change and natural hazards.	Section 2.9
13(4)(w)	Application by more than one person.	Not applicable
13(4)(x)	Summary of compliance and enforcement actions.	Section 2.10
13(4)(y)	Information requirements in Schedule 5, clause 2.	Refer below.
Schedule 5 – clause 2	Assessment against national policy statements, nation environmental standards and the New Zealand Coastal Policy Statement.	Sections 5.1, 8.3
Schedule 5 – clause 5(1)(a)	Description of the activity.	Section 4
Schedule 5 – clause 5(1)(b)	Description and map of the site with required information.	Section 3 and **Appendix J**
Schedule 5 – clause 5(1)(c)	Confirmation of compliance with section 46(2)(a), (b) and (d).	TIL confirm compliance with these sections.
Schedule 5 – clause 5(1)(d)	Name and address of site owner/occupier and owner/occupier of land adjacent to site.	Section 1.2 and **Appendix B**
Schedule 5 – clause 5(1)(e)	Description of other activities.	Section 4
Schedule 5 – clause 5(1)(f)	Description of any other consents or designations required for the project.	No other consents or designations are required.
Schedule 5 – clause 5(1)(g)	Assessment against section 5, 6 and 7 of the RMA.	Section 8.2

FTAA Section	Summary of Information Required	Location within Application/Information
Schedule 5 – clause 5(1)(h) and 5(2) and 5(3)	Assessment against statutory documents in subclause (2).	Section 8.3
Schedule 5 – clause 5(1)(i)	Treaty settlements.	Section 2.6
Schedule 5 – clause 5(1)(j)	Customary marine title groups.	Section 7.5
Schedule 5 – clause 5(1)(k)	Proposed conditions	Section 8.5 and **Appendix BB**
Schedule 5 – clause 5(1)(l)	Notice under section 30(3)(b)	Section 7.3 and **Appendix MM**.
Schedule 5 – clause 5(4)(a) and (b)	Assessment of effects on the environment to include the information and matters in clauses 6 and 7 (see rows below for the requirements in clauses 6 and 7).	Section 8.1
Schedule 5 – clause 5(5)(a)	Permitted activities.	Section 5.1.8
Schedule 5 – clause 5(5)(b) and (c)	Customary marine title planning document and areas subject to bylaws made under the Fisheries Act 1996.	Not applicable
Schedule 5 – clause 5(6)	Māori land in multiple ownership.	**Appendix D**
Schedule 5 – clause 6	Information required to assess environmental effects.	Section 8.1
Schedule 5 – clause 7	Matters to be covered in assessment of environmental effects.	Section 8.1
Schedule 7 – clause 2	Information requirements for wildlife approval.	**Appendix KK**
Schedule 8 – clause 2	Information requirements for archaeological authority.	**Appendix O and Appendix X**

2.5 Priority project

The Project is not a priority project in terms of section 43(1)(h) of the FTAA.

2.6 Treaty settlements

Section 13(4)(l) of the FTAA requires a list of any Treaty settlements that apply to the project area, and a summary of the relevant principles and provisions in those settlements.

There are two Treaty settlements that apply to the mine area as outlined below:

i. Waikato-Tainui Deed of Settlement signed 22 May 1995 recorded in the Waikato Raupatu Claims Settlement Act 1995.
ii. Maniapoto Deed of Settlement signed 11 November 2021 recorded in the Maniapoto Claims Settlement Act 2022.

2.6.1 Waikato-Tainui Treaty Settlement

The Waikato-Tainui settlement was valued at $170 million and included the return of land, cash payments, right of first refusal and relativity mechanisms. A key component of the settlement was the formal apology from the Crown acknowledging its wrongdoing.

The settlement area is shown below.

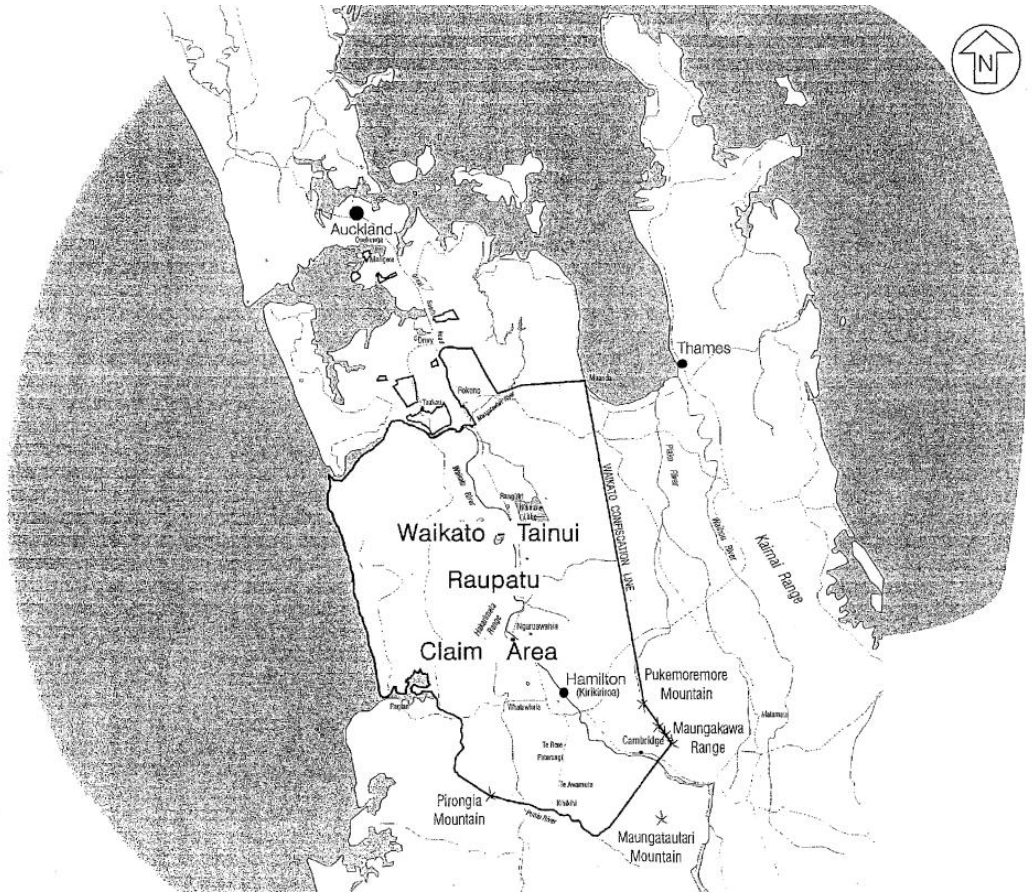

Figure 2.1: Waikato-Tainui Raupatu Claim Area (Source: Waikato-Tainui Raupatu Deed of Settlement)

There are no direct implications of this settlement to the application, including because there are no statutory acknowledgements in the Settlement Act that apply.

2.6.2 Ngati Maniapoto Settlement

The Ngati Maniapoto Settlement is recorded in the Maniapoto Claims Settlement Act 2002 and includes a statutory acknowledgement area which includes the coastal area adjacent to Taharoa C Block and the Mitiwai and Wainui Streams.

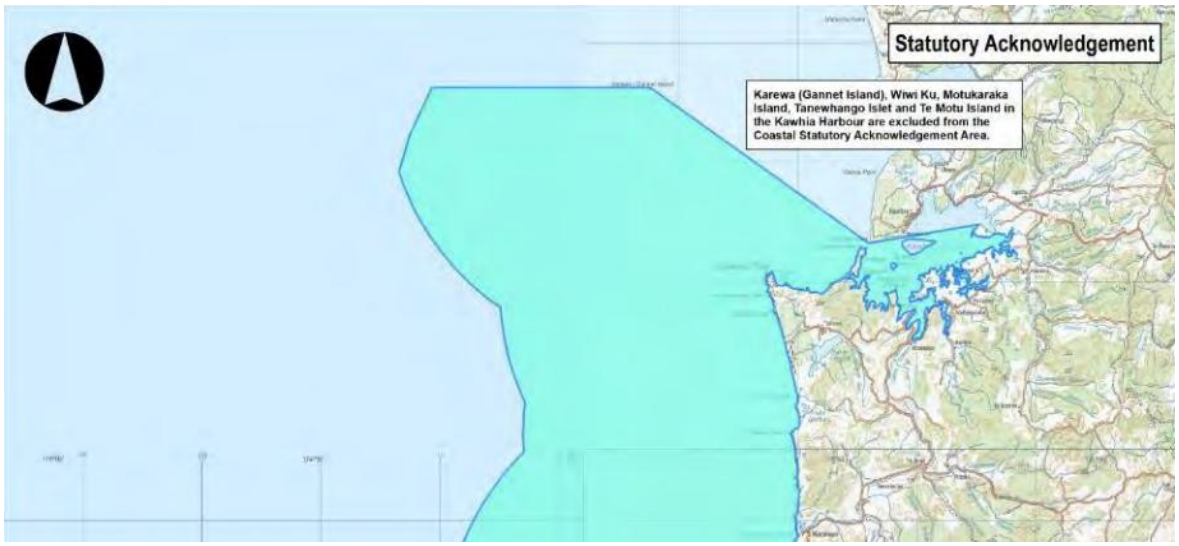

Figure 2.2: Ngati Maniapoto Coastal Statutory Acknowledgement Area (Source: www.waitomo.govt.nz)

The Deed of Settlement outlines that Ngati Maniapoto has a strong historical association with the coast from Waipingao Stream to Kawhia Harbour. The area contains important pa, kainga and wahi tapu along the coastline, along with fishing grounds. There are historical walking tracks through the Taharoa area.

The Maniapoto Deed of Settlement grants Ngāti Maniapoto participation in resource management processes for activities affecting Ngā Wai o Maniapoto including joint management agreements and planning document participation. In terms of this application, regard must be had with respect to Ngati Maniapoto's Environmental Management Plan.

A full assessment of the application against the Ngati Maniapoto's Environmental Management Plans is contained in section 8.3.10 of this report.

Ngati Maniapoto were invited to consult with TIL in respect to this application, as detailed in section 7 of this report, however no response was received.

For completeness we note that Te Nehenehenui[6] has a Joint Management Agreement with Waikato District Council and Waikato Regional Council (JMA). The JMA relates to RMA planning processes, including preparation, review, change or variation of RMA planning documents (rather than the resource consenting process). The JMA contains general principles pertaining to working in good faith, co-operation and co-management in that context. Te Nehenehenui were invited to consult with TIL in respect of this application, as detailed in section 7 below, however no response was received.

2.7 The applicant's legal interest in the land

Section 13(4)(s) of the FTAA requires information about the applicant's legal interest in the land. As noted above, Taharoa C Block is owned by Taharoa C, a Māori Incorporation under the Te Ture

[6] The post-governance settlement entity for Ngāti Maniapoto.

Whenua Māori Act 1993. A copy of the Record of Title for Taharoa C Block is attached to this report at **Appendix E**.

TIL has the right to undertake its operations on the site under a lease agreement with Taharoa C Block. The lease of Taharoa C Block was established by deed dated 1 March 1971 between the Taharoa C and New Zealand Steel Mining Limited (now TIL). Under this agreement, New Zealand Mining Limited was granted exclusive rights to mine and extract ironsands from the land at Taharoa C Block, for a term of 70 years.

The lease has been subject to a number of variations since it was first established in 1971. A variation dated 27 July 1979 permitted Taharoa C to undertake forestry operations on part of the leased land, while preserving the mining rights granted under the Lease. A further variation was made on 1 July 2012, to extend the lease by an additional 20 years (to 31 March 2062).

Taharoa Mining Investments Limited acquired NZSML in 2017, along with its legal interest in the ironsand operations on Taharoa C Block and it has continued to operate under the lease since 1 May 2017.

2.8 Previous and existing approvals

Section 13(4)(u) of the FTAA requires information regarding whether activities that are involved in the project have been the subject of an application or decision under a 'specified Act', including details of that application and the outcome of the decision and reasons for it.

TIL currently undertake mining activity on the Central and Southern Blocks of Taharoa C Block and associated activity in the CMA under a suite of now expired resource consents pursuant to the RMA (a specified Act in the FTAA) granted by the WRC in 2006.[7] The resource consents are listed in Table 2.2. As outlined earlier, TIL is currently operating in reliance on these resource consents pursuant to section 124 of the RMA.

Table 2.2: WRC consents held by TIL (now expired) for mining operations on the site

Description of activity	Type	Consent ref.	Expiry date
Discharge up to 75,000 m^3 per day of iron sand slurry water into the Coastal Marine Area during shiploading operations	Discharge to water	100899	31/12/2020
Discharge up to 32,600 m^3 per day of stormwater and process wastewater into the Coastal Marine Area	Discharge to water	100900	31/12/2020
Undertake iron sand mining operations and associated land disturbance activities including construction of dredge ponds, access roads, iron sand stockpiles and ancillary buildings	Land use consent - Land disturbance	100902	31/12/2020
To dam and divert the Wainui Stream for the purpose of creating a water supply reservoir for iron sand mining operations	Water permit - dam	100903	31/12/2020

[7] The resource consents did not explicitly authorise mining below groundwater / the water table, although this was the primary method of mining when the consents were granted.

Description of activity	Type	Consent ref.	Expiry date
Place a rock weir in the bed of the Wainui Stream and to divert water through a fish pass channel located adjacent to the Wainui Stream	Water permit - diversion	100904	31/12/2020
Take up to 27,200 m^3 of water per day from a water supply reservoir created by the damming of the Wainui Stream, for the purpose of loading iron sand onto ships	Water permit – surface water take	100905	31/12/2020
Take up to 75,000 m^3 of water per day from a water supply reservoir created by the damming of the Wainui Stream, for the purpose of loading iron sand onto ships	Water permit – surface water take	100906	31/12/2020
Discharge up to 2,100 m^3 of settled stormwater and washdown water per day into the Wainui Stream from the area containing the administration building, stores compound and workshops	Discharge to water	100908	31/12/2020
To discharge process water into the ground as a result of iron sand mining operations	Discharge to land	100909	31/12/2024
To discharge mine overburden onto land for the purpose of rehabilitating mined areas	Discharge to water	100910	31/12/2020
Operate, maintain and replace existing pipeline in the Coastal Marine Area for the purpose of shiploading	Coastal permit – bed disturbance	111002	31/12/2020
Operate, maintain and replace existing mooring in the Coastal Marine Area for the purpose of shiploading	Coastal permit – bed disturbance	100901	31/12/2020
To construct, maintain and use a 500 m extension to pipeline No 2 in the CMA at Taharoa, including associated occupation and disturbance	Coastal permit – structure, use and occupation	122562	31/12/2020
To replace/reconstruct, maintain and use existing pipeline No 2 in the CMA at Taharoa, including associated occupation, disturbance and vehicle use	Coastal permit – structure, use and occupation	122563	31/12/2020
To place and use a mooring buoy and associated structures in the CMA at Taharoa, including future reconstruction/replacement and associated occupation and disturbance	Coastal permit – structure, use and occupation	122564	31/12/2020
The use and occupation of the CMA at Taharoa by existing pipeline No 1	Coastal permit – use and occupation	122565	31/12/2020
To discharge up to 75,000 m^3 per day of shiploading water including freshwater and fine sediment to water in the CMA at Taharoa during shiploading operations	Coastal permit – discharge to water	122566	31/12/2020

Description of activity	Type	Consent ref.	Expiry date
To discharge up to 32,600 m^3 per day of stormwater and process wastewater to water in the CMA at Taharoa	Coastal permit – discharge to water	122567	31/12/2020

TIL's 2020 RMA Application was heard in August 2024 and a decision was issued in 2024. A copy of the 2024 RMA Hearing Panel Decision and conditions is attached in **Appendix F**.

The 2024 RMA Hearing Panel Decision granted the resource consents sought for mining above groundwater, subject to conditions, for a duration of 20 years. The resource consents granted excluded the necessary resource consents for mining below the groundwater which were considered to be outside of the scope of the 2020 RMA Application.

This decision left TIL with a suite of resource consents that were at odds with its existing and historical operations and unworkable for the on-going operation and expansion of the mine. A summary of the key issues in the 2024 RMA Hearing Panel Decision and TIL's response to them is enclosed as **Appendix G**. TIL therefore appealed the 2024 RMA Hearing Panel Decision to the Environment Court. It appealed some of the conditions imposed by the Hearing Panel and its decision not to grant the necessary resource consents for mining below groundwater. A copy of TIL's notice of appeal is attached in **Appendix H**.

Shortly after TIL's notice of appeal was filed, the FTAA was enacted, and TIL's Central and Southern Mining Block Project was listed in Schedule 2. TIL determined that it would be more efficient for it to lodge a Fast-track application for all necessary approvals required in respect of the Central and Southern Blocks of the Mine and associated activities in the CMA, than it would be to work through the RMA appeals process. In applying for the necessary resource consents as part of this application, TIL has been careful to address the scope issue that gave rise to significant issues with the 2020 RMA Application.

The appeal is currently on hold while TIL prepares and files this application for lodgement with the EPA.

In accordance with section 94 of the FTAA, TIL's 2020 RMA Application will be withdrawn and the appeal will be withdrawn, once this substantive application has been accepted pursuant to section 46(2) of the FTAA.

Once accepted for processing, TIL will be authorised to continue to rely on its existing resource consents under section 95(2) of the FTAA which provides that an existing approval (being a right under section 124(3) of the RMA to continue operating under a resource consent) is treated as remaining in force until any appeals that relate to the approval have been exhausted or have expired.

2.8.1 Key differences between the previous application and this application

The key differences between the 2020 RMA Application and this FTAA substantive application are:

- The FTAA application includes mining activities within 100 m of a wetland, but not closer than 30 m to the wetland. The 2020 RMA Application did not. The FTAA application also includes mining of seven of the lower value wetland areas and to potentially alter the hydrology of and discharge water into other retained wetlands. The 2020 RMA Application did not. The relevant resource consents are therefore sought under the NES-F.
- This application also seeks consents under the NES-CF to harvest approximately 60.6 ha of radiata pines trees from the eastern side of the Southern Block.

- Without prejudice to its position that mining which interacts with groundwater is authorised by TIL's existing resource consents, and that the scope of its 2020 RMA Application included the necessary resource consents required to continue this activity, this application seeks additional resource consents under the Waikato Regional Plan to explicitly authorise mining activities that interact with groundwater, as follows:
  - i to divert groundwater; and
  - ii to take and use surface water from a dredge pond as a result of the extraction of sand; and
  - iii to discharge mining process water and water containing contaminants from a mining dredge into water within a dredge pond.

Additionally, TIL identified a number of issues with the conditions imposed by the Hearing Panel that considered the 2020 RMA Application, including (but not limited to) the consent term, boundary and wetland setbacks, rehabilitation requirements, stock fencing and water sampling requirements. These conditions were the subject of TIL's Environment Court appeal. TIL has since identified other aspects of the conditions imposed by the Hearing Panel that were unclear, are inconsistent with this application or raise implementation issues. This application seeks to address these issues.

2.8.2 Other relevant resource consents

TIL also hold separate resource consents from WRC and Waitomo District Council for mining of (i) the "Eastern Block" granted in 2018 (mining now completed and rehabilitation underway), and (ii) the "Te Mania Extension" adjoining the Eastern Block granted in 2022 (mining yet to commence), and (iii) a small area in the Northern Block known as "Pit 1" granted in late 2024 (mining currently in progress). Refer to Figure 1.1 which shows the locations of these blocks.

Mining at these locations relies on the infrastructure and facilities, including the water take and processing and ship-loading infrastructure and facilities located within the coastal marine area and Central and Southern Blocks. This application seeks to continue this practice – whereby extraction activities undertaken on blocks outside of the Central and Southern Block are supported by the infrastructure, facilities, water take, discharges and coastal shipping infrastructure and facilities located in the Central and Southern Blocks.

TIL also holds a resource consent for the culverted crossing of the Mitiwai Stream which was granted in January 2025 and resource consents to take and use water to support the Taharoa Village and to manage the Village's wastewater system. These consents are separate from and not within the scope of this application.

2.9 Climate change and natural hazards

Section 13(4)(v) of the FTAA requires a description of whether and how the project would be affected by climate change and natural hazards. These matters are commented on below.

According to the Hydrology Assessment by Williamson Water and Land Advisory (**Appendix I**), which assesses the potential effects of the proposed water take and dam on the Wainui Stream, projected climate change impacts in the Taharoa area are largely neutral, with only a 2% decrease in annual rainfall projected for the period 2041-2060. Summer rainfall is projected to decrease by approximately 5%, while winter rainfall is projected to increase by approximately 2%. Overall, the number of wet days (>1 mm of rainfall) is projected to increase only slightly in the future. These very minor projected rainfall changes mean that the existing water management measures at the mine, which have proven to be largely effective in managing the effects of rainfall events, remain appropriate.

As the site is a coastal sand mine, it is by its nature inherently vulnerable to coastal erosion. The operation retains setbacks from Mean High Water Springs (MHWS) and perennial water bodies of 100 m and 30 m respectively. Mined areas are stabilised and rehabilitated. These measures have and will continue to be effective at mitigating the effects of coastal erosion.

2.10 Compliance matters

Section 13(4)(x) of the FTAA requires a summary of compliance or enforcement actions (if any), and the outcome of those actions, taken against the applicant under a specified Act.

We have provided a summary below of compliance and enforcement actions taken against TIL, along with confirmation that the matter has been resolved or an update on the current status.

No compliance or enforcement action has been taken against TIL under the Wildlife Act 1953 or the Heritage New Zealand Pouhere Taonga Act 2014.

In general, TIL has a good compliance history, especially for the size of the operation and the harsh / challenging coastal environment in which it operates. The compliance or enforcement actions set out below are one-off events which have all been remedied, and steps have been taken to ensure that a similar incident does not occur again.

Table 2.3: Compliance History

Compliance or enforcement matter	Date	Outcome/Commentary
TIL was issued a Formal Warning (EAC6079) for the discharge of contaminants (diesel into the Wainui Stream).	2019	In response to this warning, an interceptor has been installed to reduce the risk of spills and the fuel storage area has been relocated. No further action was taken against TIL in respect of this incident. We note that a Formal Warning is not a statutory form of enforcement provided for under the RMA – however, it is a compliance tool that WRC seeks to use under its Enforcement Policy for "low level breaches" or for an environmental effect or potential effect that is "minor or trivial in nature". WRC does not take any further action in respect of the breach.
TIL was issued a Notice of Direction, an Abatement Notice (EAC9649) by WRC and was convicted of an offence for the unauthorised discharge of sediment laden water to land which may enter water following the cyclone events in January 2023.	Decision on 05/03/2025	These compliance measures were related to a single one-off incident that occurred during an unprecedented rainfall event. In addition, TIL understood that the pipes through which the discharge occurred was lawful. TIL has taken steps to ensure that an incident of this nature will not occur again. This includes agreeing with WRC, and now applying to update its existing resource consent, to enable it to discharge excess process water and stormwater to the CMA, without that being coincident with ship-loading events. This will allow it to discharge excess water that cannot be managed on-site. TIL has also permanently removed the overflow pipes which enabled the discharge to occur and provided an alternative emergency overflow solution to prevent another similar incident.
TIL was issued an abatement notice by WRC	24/01/2024	In 2024 TIL was issued an abatement notice in relation to a one-off discharge of dust in December 2023 which was

Compliance or enforcement matter	Date	Outcome/Commentary
in relation to a discharge of dust		considered by the Council to be offensive and objectionable. TIL took this notice seriously and responded in a constructive manner – it prepared an interim dust management programme which it has implemented while the 2020 RMA Application and this application continue to be processed.
TIL was issued two Formal Warnings by WRC in relation to dust discharges from the mine, one in alleged breach of the RMA and the other for the contravention of EAC9649.	21/02/2024	TIL has contended the issuing of these notices on the basis that they have been improperly issued and there was no breach of the RMA or EAC9649. It remains in ongoing discussions with WRC in relation to these warnings. We note that a Formal Warning is not a statutory form of enforcement provided for under the RMA – however, it is a compliance tool that WRC seeks to use under its Enforcement Policy for "low level breaches" or for an environmental effect or potential effect that is "minor or trivial in nature". WRC does not take any further action in respect of the breach.

For completeness we note that Taharoa Mining Investments Limited was convicted of an offence in 2017 for the unlawful discharge of diesel into the Wainui Stream following the accidental discharge of diesel into the stormwater network during maintenance works. This is a separate legal entity to the authorised person, TIL. In any event, in its sentencing decision, the District Court noted that the discharge arose in the process of fixing a faulty generator - a contractor reconnected the generator without realising that the on/off valve was on. As noted above, an interceptor has been installed to reduce the risk of spills, and the fuel storage area has been relocated.

3 Environmental setting

3.1 Site location and description

The Taharoa Ironsands Mine is located on the west coast of the North Island approximately 8 km south of Kāwhia and 45 km to the northwest of Te Kuiti as shown on Figure 3.2 and Figure 3.2 below. The site is virtually uninhabitable because it lies on an extremely inhospitable stretch of coastline exposed to the sea and extreme westerly winds.

Figure 3.1: Site location (Source: Google Earth Pro 2020)

Figure 3.2: Site location 2 (Source: Google Earth)

As explained above, the site is separated into two Blocks, the Central Block (between the Mitiwai Stream and the Wainui Stream) and the Southern Block, the area to the south of the Wainui Stream – see Figure 3.3 below. A map of the Project area is attached as **Appendix J**.

The site is currently operated as a mine and has been for the past 50+ years. It is currently occupied by buildings and ancillary infrastructure (mining machinery, pipelines, ironsand stockpiles etc) – see typical Photograph 3.1 to 3.6 below.

To the east: The Central Block adjoins a former mine area known as the Eastern Block. This is outside of Taharoa C Block and has already been mined (under separate resource consents). The Central Block also adjoins the Te Mania Extension which is a small block to the east that is yet to be mined (and will be mined under separate resource consents). The Eastern Block and Te Mania Extension are privately owned. The Eastern Block is owned by the David John Keepa Kupa Whanau Trust and the Roy Wetini Whaanau Trust, who TIL consulted with as part of this application, as set out in **Appendix Y** and **Appendix Z.** The Te Mania Extension is owned by Stephen Grant Te Maahau King, Roybn Ngaroma Maikuku, Te Mare Michelle Nerai-Tuaupiki, Kenneth David Riddell and Leo John Tauapiki.

Taharoa Village is also located to the east of the mine and is intrinsically linked to the mining, shipping and export business. The significance of the Mine to the local community is detailed in section 3.2 of this report. TIL has heavily invested in the village; it relies on TIL not only for employment, but for the provision of essential services and other support that it provides to the community.

To the west: The coastline and offshore environment adjacent to the site are unmodified apart from the permanent presence of the shiploading pipelines and SBM tethering infrastructure on the seafloor, and the presence on the sea surface of the SBM itself. Due to the site's coastal location it is able to operate efficiently, without the need to haul product by truck.

To the south-east: The south-eastern boundaries of both Blocks adjoin a dune lake and wetland system comprising Lake Taharoa, Lake Numiti, and Lake Rotoroa. There are large areas of exotic plantation forestry on the eastern side of Lake Taharoa while the remainder of the lake(s) catchment is steep hill country, predominantly covered in bush with some areas cleared in pasture. The Central and Southern Blocks form only a very small part of the catchment of the adjacent lakes, with the site largely sloping west to the coast.

The south-eastern boundary of the Southern Block adjoins Lake Rototapu and Lake Piopio and associated wetlands. To the north: There is an additional block within Taharoa C Block called the Northern Block (which is outside of the scope of this application). Apart from the small Pit 1 area adjacent to the Mitiwai Stream, mining has not occurred to date on the Northern Block which as a result has a generally more undisturbed and natural character (being a largely desolate dune environment) than the remainder of the site[8].

To the south: The Waiohipa stream intersects the southern boundary of the site.

[8] The surface of the Northern Block has been extensively modified by forestry plantation and felling operations.

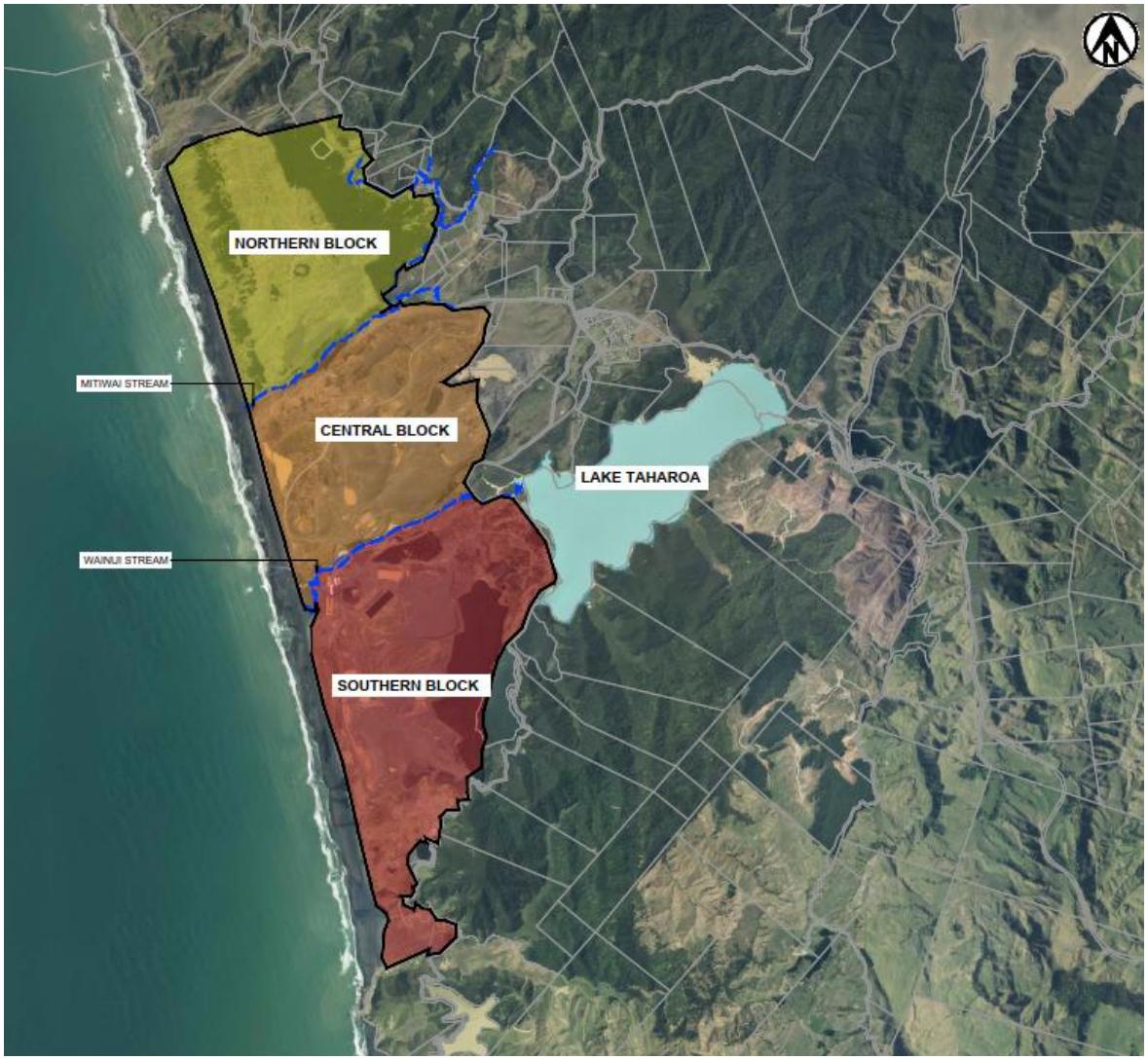

Figure 3.3: Location of Northern, Central and Southern Blocks at Taharoa Mine

Photograph 3.1: Examples of the infrastructure associated with ironsand mining at Taharoa Mine

The photographs below are aerial images showing the Central and Southern Blocks of the Mine from different viewpoints.

Photograph 3.2: Aerial views of the site, looking south

Photograph 3.3: Aerial views of the site, looking south

Photograph 3.4: Aerial view, looking south over Lake Taharoa

Photograph 3.5: Taharoa coastal view looking south along the Central and Southern Blocks (from the Port Operations Centre)

Photograph 3.6: View up Wainui Stream towards the dam

3.2 Status of land

The land is Māori freehold land in accordance with section 4 of the Te Ture Whenua Māori Act 1993[9] which is included as 'identified Māori land' in the FTAA.

3.2.1 Cultural environment and history

The hapū with mana whenua[10] within the Taharoa rohe is Ngāti Mahuta ki Tai, also known as Ngāti Mahuta ki te Hauāuru.[11] This is agreed by all parties who have been consulted on and engaged with in relation to this application. The ancestors of Ngāti Mahuta arrived in Aotearoa on the Tainui waka and made first landfall on the east coast before reaching the Kāwhia Harbour.

[9] Land, the beneficial ownership of which has been determined by the Māori Land Court by freehold order, shall have the status of Māori freehold land.
[10] As acknowledged by Waikato-Tainui
[11] The additional designations "ki tai" and "ki te hauāuru" translate to "of the coastal area" and "of the west" respectively.

The name Ngāti Mahuta originates from the ancestor Mahuta, son of Hekemaru (of Te Arawa and Tainui descent), and Heke-i-te-rangi (also of Tainui descent).

Ngāti Mahuta is the largest hapu of Waikato-Tainui, comprising Ngāti Mahuta ki Uta (inland) and Ngāti Mahuta ki Tai (of the coast).

While Ngāti Mahuta is formally recognised as a hapu of Waikato-Tainui, some hapu members hold genealogical links to Ngāti Maniapoto who have also had a historic influence in the Taharoa area, as do Ngāti Toa. The boundary of Ngāti Mahuta ki te hauāuru extends from the north in Kāwhia to the south in Taharoa, and out to Gannet Island in the sea.

There are three marae connected to Ngāti Mahuta ki Tai; Maketuu Marae – the principal marae which is in Kāwhia, Te Kooraha Marae which is in the farming areas of Taharoa heading towards the coast, and the youngest of the three marae, Aaruka which is situated in Taharoa village.

Maketuu, Te Kooraha, and Aaruka marae are part of a collective of Tainui marae that play a role in the smooth operation of iwi within Tainui, especially regarding the Kīngitanga with the annual Poukai (Kīngitanga celebration) held at Maketuu Marae as well as the Koroneihana celebration (Māori Monarch's Coronation) held at Te Kooraha Marae on the 21 August every year.

The Taharoa rohe holds deep cultural and spiritual significance to Ngāti Mahuta as tāngata whenua. Māori tribal connections with Taharoa and the site are founded on relationships formed out of occupation, settlement and use of the ancestral landscape over hundreds of years. The area is rich in kōrero tuku iho, traditional knowledge passed down through generations and includes numerous urupā (cemeteries) such as Te Wharangi.

Over approximately two months in 1822 the dunes of Taharoa were a battle ground where the Waikato iwi lead by Potatau Te Wherowhero and Ngāti Toa lead by Te Rauparaha clashed. The outcome was that although defeated, Te Rauparaha and his people were allowed to escape and travel south along the coast to Taranaki and further south to Wellington, eventually settling into a new area, including Kapiti Island

Following this, Te Wherowhero left commanders-in-chief such as Kiwi Te Roto (Kiwi Te Pihopa) with a branch of Ngāti Mahuta people as sentinels to occupy and protect the lands at Kāwhia and Taharoa. This group settled in the valleys and fished in the lakes, streams and inlets away from the site.

Ngāti Mahuta ki Tai have a spiritual connection to Mitiwai Stream, the black sands, and the western winds. The Mitiwai in particular is considered important to cultural practices such as kānga wai preparation and symbolic of transformation and resilience.

Ngāti Mahuta ki te hauāuru descendants continue to uphold their role as kaitiaki of the land and waters inherited from their ancestors and continue to advocate for the protection of their whenua, wai, moana, and taonga for future generations.

3.2.2 Site ownership

The site has never been subject to confiscation (raupatu) by the Crown. Hapu members have had uninterrupted ownership of the whenua, and ability to exercise customary practices upon it and in the waterways and lakes in the Taharoa area since they originally settled in the wider area, mostly around Kāwhia in 1826.

In the Māori Land Court sitting of 15 May 1957, the decision was made to surrender the land that now encompasses the site for mining purposes under the Mining Act 1956. At that time, the land was held in 80 different titles and it was decided to combine the site into one title which would contain the mining activity (thereafter legally described as Taharoa C Block).

The land is owned by Taharoa C, a Māori incorporation incorporated by the Māori Land Court under the Māori Affairs Amendment Act 1967 representing over 2,000 shareholders and landowners. The incorporation beneficiaries are predominantly comprised of Ngāti Mahuta hapū members. Many beneficiary whanau have established family trusts in their own right. No person is entitled to hold shares in Taharoa C unless they can trace their whakapapa to the site. A number of those trusts also own other land in the Taharoa area, adjoining or adjacent to Taharoa C Block.

Until 2017, ironsand mining at the site was undertaken by New Zealand Steel Mining Limited (NZSML), which held a mining lease from the landowner. The mine was first established by NZSML, which was wholly owned by the then National led government. It was established by the government at the time when it was trying to improve New Zealand's economic crisis following a series of oil shocks in the 1970s. In 2016, NZSML announced that it proposed to close or sell the mine (with closure indicated as the most likely option) citing that it was not prepared to invest additional substantial capital needed to ensure a long-term and viable mining operation. Despite the significant investment required to save the mine, and poor market conditions, and challenges in taking on significant charter liability, TIL assumed control on 1 May 2017.[12]

TIL is owned by Melrose Private Capital Ltd and Taharoa Mining Investments Ltd. It is authorised to mine the site under the lease agreement with Taharoa C.

3.2.3 Taharoa Village and local community

Until the late 1960's, Taharoa was a very isolated community with no road access. Through the commencement of mining operations in the early 1970's, Taharoa Village was established.

As explained in more detail below, the mine provides income for local iwi, employment opportunities, and significant support for Taharoa Village, which is almost solely reliant on the Mine's employment and onflow of business for the wellbeing of the community and its economic vitality. These benefits will continue to be enabled by the Project.

As at the date of this application, TIL own 75 houses on leased iwi-owned land which it offers to families of the staff at Taharoa Mine at its own discretion for minimal rent. TIL owns and maintains the community hall, school, shop, two large sports facilities, and the fire brigade in the Taharoa Village. TIL also owns and maintains the majority of the infrastructure and services that support the village, including the provision of water and wastewater services and the local rubbish collection service. In addition to these core services, TIL also supports the local community through initiatives such as operating a local bus service, subsidising freight for services for village store, and facilitating community access to the mine's petrol and diesel supplies.

Over 70% of the mine's workers are from Ngāti Mahuta hapū and TIL have a wider social and economic role in the community by providing subsidised medical, life and health disability schemes to its employees and educational grants for secondary school travel and boarding Historic mine layout

The mine infrastructure (dam, export pipeline and pumping facilities, utilities and heliport etc) was originally established when the mine was opened in 1972. At the time, the mine operations relied on a floating dredge to extract the raw product, and treatment was undertaken on the floating dredge. Export of refined ironsand occurred in the same manner as it is today.

Mining commenced in the Southern Block, with the dredge starting just to the east of the administration buildings (near the Wainui Stream) and worked eastwards towards Lake Taharoa. Mining then continued in a southerly direction, but moving east-west to extract the resource

[12] The resource consents for the mine were subsequently transferred into the name of Taharoa Ironsands Ltd.

from the majority of the Southern Block. The dredge placed tailings behind it as it progressed through the area.

In 2000, the floating dredge had extracted all of the ironsand in the Southern Block that it was able to access, and preparations were made to shift the dredge to the Central Block. Moving the dredge was a significant project, involving the creation of a temporary dry dock, purpose-built heavy-duty roads and, at the time, was the heaviest equipment moved by land transport in New Zealand.

Once established, the dredge commenced mining operations in the Central Block, largely operating in the central part of the Block. In 2016-217, a new 'dry mining' methodology commenced, which utilised standard earthwork equipment to push the raw ironsand into a 'Dry Mining Unit' (**DMU**) which mixed the sand with water to form a slurry, which was pumped to a newly constructed on-land treatment plant. Both mining methods operated concurrently for a time until the existing dredge was decommissioned. New, smaller dredgers continued to operate on the site, pumping the extracted Ironsand to the main treatment plant.

Up until 2018, the operation accessed the surficial ironsand deposit, known as the Mitiwai formation (Paparoa and Nukamiti sands). The Mitiwai formation sands are easily accessible and have little or no overburden but do have some interbedded clay layers. The bulk of the resource in the Mitiwai sands has been mined, and in 2021, mining operations shifted focus to the deeper Te Ake Ake sands of the Waiau formation. This high-grade deposit is found at depth, sitting below the Mitiwai formation and an underlying layer of silts and clays. The deeper deposits of the Te Ake Ake formation lie below the groundwater level. Mining the Te Ake Ake formation involves removing the silt and clay layer and extracting the ironsand via the use of dry mining methods and a floating dredge plant.

Other mining operations have occurred concurrently with the Te Ake Ake operation. These are in the Eastern Blocks (outside the Taharoa C Block and subject to separate consents) – where mining is complete, and targeted mining of small areas of resource, typically areas that previous operations overlooked, such as along the southern side of the Wainui Stream and the ridgeline/dune edge on the southern side of the Mitiwai Stream. Due to the improvements in treatment technology, some areas of old tailings are also being re-mined.

In addition to the extractive activities, TIL maintains a series of water collection, storage and treatment ponds and canals, a network of slurry and water pipes, treatment plants (central spirals processing and mobile cleaner and rougher plants), product stockpiles, export infrastructure and associated maintenance and operations facilities.

Key features of the mine as described in sections 3 and 4 of this report are shown below in Figure 3.4.

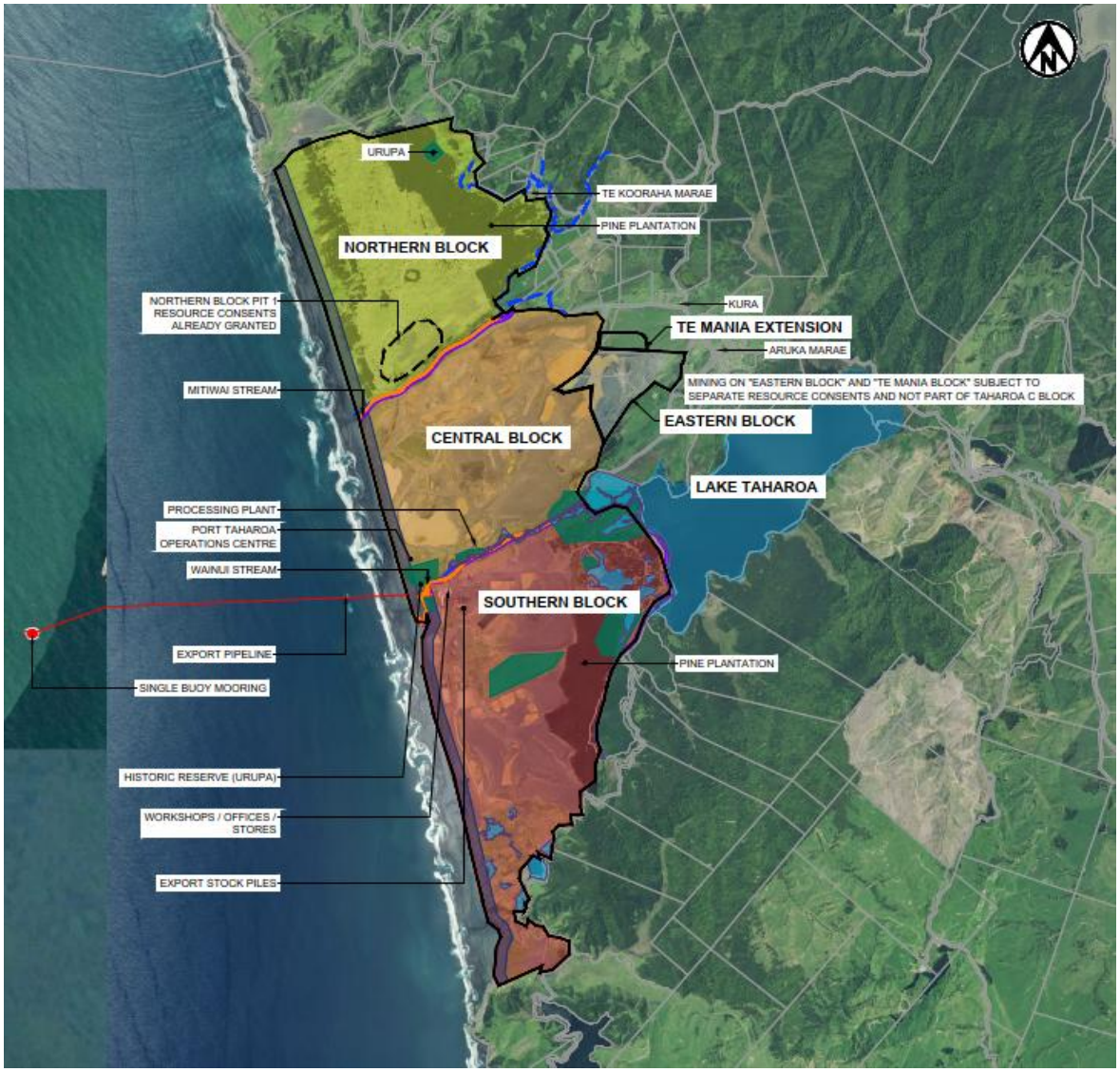

Figure 3.4: Taharoa Mine – Key Features

3.3 Dune systems

There are two dune systems described in the Terrestrial Ecology – Wetlands and Vegetation Assessment (**Appendix K**), active sand dune and stable sand dune. Historically the majority of the site was active sand dune with limited vegetation cover, which are those dunes on which sand is being actively moved by wind, or there is the possibility that dry, exposed sand may be susceptible to further wind action. The extent of active dunes on the site has been considerably reduced by human activity and is now restricted to a narrow strip of between 20 and 50 m wide along the whole length of the beach. In total there is approximately 3.4 ha of active sand dune within the Taharoa C Block along the coastal fringe, although there is additional area of dune system outside the property boundary.

Stable sand dunes are those that are vegetated and no longer subject to windblown sand or coastal processes. Much of the formerly active sand dune has been at various times mined and then stabilised through planting of mostly exotic vegetation. These highly modified dunes cover most of the site, but they have been modified to the point that they are unrecognisable and while they are made up of sand, they no longer have the landform or the vegetative cover typical of

either active or stable sand dunes. There are areas of less modified stable dune along the coast, but it is very difficult to define the edge of the natural versus the modified dune system.

3.4 Lakes

The lakes within the area are described in the Freshwater Ecology Assessment (**Appendix L**) and are mentioned the Terrestrial Ecology – Fauna Assessment (**Appendix M**). The lakes are outlined below.

The site is located west of the Taharoa Lakes, which is a chain complex of three interconnected lakes including the largest Lake Taharoa which is approximately 224 ha in area, and the smaller lakes Numiti and Rotoroa to the southwest. A contributing catchment of approximately 38 km^2 provides surface water inflows via a number of small streams to the lakes.

The Lake Taharoa shoreline (through to the Wainui Stream) that coincides with the mine site is fenced, as is the shoreline of Lake Numiti. That fence encompasses the 30 m buffer zone. The remainder of the eastern boundary of the mine site is also fenced, as is the majority of the coastal margin (at the 100 m CMA setback). Other fencing exists around the Wainui Stream (the entire Māori reserve area at the Wainui Stream is fenced) and with the neighbouring blocks to the North and east of the Mitiwai Stream.

As described in the Terrestrial Ecology – Wetlands and Vegetation Assessment (**Appendix K**), the lake margins ecosystems comprise raupō-(harakeke) reedland with a few areas of lower turf vegetation or *Isolepis prolifera,* and submerged macrophytes in deeper water. These areas are subject to regular fluctuations in water level associated with natural variations and the normal operating range of the water takes. The majority of the lake margins are outside of the Taharoa C Block and will not be directly impacted by mining works.

At the southern end of the site are Lakes Piopio and Rototapu, both of which are located immediately adjacent to but outside of the site. Both lakes are open bodies of water surrounded by diverse assemblages of wetland plant species and are fenced to prevent access by livestock.

3.5 Streams

The Wainui Stream and the Mitiwai Stream flow through the site. As noted above, the Wainui Stream forms the boundary between the Central and Southern Blocks and the Mitiwai Stream forms the northern boundary of the Central Block with the Northern Block adjacent (refer to Figure 3.3). The streams are described in the Freshwater Ecology Assessment (**Appendix L**) and the Terrestrial Ecology – Fauna Assessment (**Appendix M**) as summarised below.

3.5.1 Wainui Stream

The Taharoa Lakes discharge via the Wainui Stream, within the site, that flows out to the Tasman Sea. It is classified as 'Significant Indigenous Fisheries and Fish Habitat class' under the WRP water classification.

A dam structure was installed on the Wainui Stream in the 1970's to create a reservoir for the mine's water take for use in mining operations. The dam is located approximately 200 m upstream of the stream outlet to the Tasman Sea and includes a fish pass for migratory fish species (refer to section 3.5.3 below).

The Wainui Stream leaves Lake Taharoa as an open, uniform channel within surrounding wetlands, following a shallow, incised, flooded gully bed bounded by marginal raupō, to the impounded area above the dam. The short section of stream below the dam (approximately 250 m in length) has a narrower channel, with scattered rocks present in addition to the sand dominated substrate. The rocks and weir added to this downstream area provide a greater

diversity of instream habitats than is present upstream of the dam. The fish communities present above and below the dam are generally indicative of the natural range of fish that could be expected from the catchment in the absence of the dam. Based on the diverse range of fish present within the stream, the overall ecological value of the Wainui Stream is assessed in the Freshwater Ecology Assessment (**Appendix L**) as high.

3.5.2 Mitiwai Stream

The northern extent of the Central Block is bounded by the Mitiwai Stream which is classified as 'Surface Water' under the WRP water classification. The Mitiwai Stream runs in an approximate south-westerly direction toward the coast. The stream headwaters originate in the hills to the northeast of the site amongst mixed land use, with some tributaries lined with native bush and others surrounded by rural activities.

Adjacent to the Central Block the stream is set in a deep gully with steep-sided banks that rise to approximately 30–40 m in height. Within the site, the lower reaches of the stream run through sand dunes that support a vegetative community of scrubby, low stature specimens dominated by exotic taxa. Upstream of a vehicle crossing that provides access to the Northern Block and Te Kooraha Marae, remnant plantation pine trees and wildling pines are scattered along the gully slopes and less commonly along the gully bed near the stream, undergrown with pasture grasses.

An additional culverted stream crossing was recently installed a short distance upstream of the existing crossing. Both crossings are now utilised, the new crossing for mine traffic, with the original crossing retained for access to Te Kooraha Marae.

The lower reaches of the Mitiwai Stream connect with the upper reaches of the catchment for native migratory fish species. Several of the Mitiwai Stream tributaries in the upper catchment have a "natural state" water quality classification under the WRP and flow through a canopy of native bush.

Taking into consideration the diversity of the fish and macroinvertebrate communities, instream habitat features and the role the lower waterway plays in the wider ecological context, the overall ecological value of the Mitiwai Stream where it crosses the site has been assessed in the Freshwater Ecology Assessment (**Appendix L**) as moderate to high.

3.5.3 Dam and fish pass in Wainui Stream

Shortly after the commissioning of the mine in 1972, a fish pass was installed to allow fish to bypass the dam in the Wainui Stream. Several modifications have been made to the fish pass since 1972 to facilitate the passage of migratory fish species. The fish pass is divided into three stages – entry downstream of the dam, the ladder structure below the dam, and the exit upstream of the dam. Downstream of the dam a rock weir has been constructed across the stream to create a pool to encourage and direct migratory fish into the fish pass.

Fish migrating up the Wainui Stream gain entry to the pass below the rock weir, then pass through a 0.3 m wide flume to a resting box. There are 19 resting boxes spaced at regular intervals and interconnected by similar baffled flumes. The series of flumes that zig-zag alongside the stream, extend to the lower side of the dam at which point a 0.6 m diameter steel pipe passes the 25 m through the dam to the reservoir.

On the reservoir side of the dam, the pipe is joined to the wooden stage of the fish pass by a baffled pass and rest box structure. The flumes of this stage are enclosed but the resting boxes remain open for light and air. The opening of the water intake to the fish pass, upstream of the dam, is slung in a fiberglass encased polyurethane float that allows the complete structure to rise and fall according to reservoir levels. A residual flow, regulated by the floating intake on the fish

pass, is maintained through the fish pass. A galvanised fish trap can be installed over the fish pass where it opens to the reservoir to monitor the passage of migratory fish species.

In early 2010 the fish pass underwent a major upgrade to comply with the conditions of a resource consent (then held by New Zealand Steel) that required the placement of a rock weir in the bed of the Wainui Stream and the diversion of water through a fish pass channel adjacent to the Wainui Stream. In particular, the fish pass upgrades aimed to enhance the ability of fish to successfully find and negotiate the entrance to the fish pass. Substantial work was also undertaken to improve fish passage through the upstream section of the pass and into the head-pond.

The dam includes a large vertical box outlet structure located just upstream of the dam. This connects to two large culverts under the dam, which discharge to the Wainui Stream. Flow into the box structure is controlled by weir structures on each side of the box structure. Flat, sharp crested weirs are present on three sides, and these operate in normal to high flows. The western side has two low-level v-notch weirs, which provide flow in lower lake level conditions.

The dam and fish pass, and associated infrastructure are regularly checked for weed build up as it can cause damage to the water intake screens which keep aquatic life, weed and debris from being sucked into the gland water system. This is required to avoid damage to the multistage pumps and seal failures which result in significant operational downtime and repair costs.

3.6 Wetlands

Wetlands at the site are described in the Terrestrial Ecology – Wetlands and Vegetation Assessment (**Appendix K**) and are summarised as follows.

- Some of the wetlands within the site have been induced as a result of mining activity over the years, others are modified natural wetlands.
- In total 17.54 ha of natural inland wetlands (as defined in the National Policy Statement for Freshwater Management 2020 (**NPS-FM**)) have been identified within the Central and Southern Blocks, with a much larger area outside the site boundary.
- The adjacent natural wetlands generally comprise raupō-dominated lacustrine and palustrine wetlands on the margins of Lakes Taharoa, Numiti, Rotoroa, and Rototapu but there are also areas of coastal seepage at the mouths of the Mitiwai and Wainui streams and in the south of the site.

It should be noted that the wetlands within the site, primarily the induced wetlands, may not exist or would be significantly changed in the conceptual 'existing environment' where TIL's existing consents have expired, mining under those consents has ceased and the site has been rehabilitated.

3.7 Groundwater

Groundwater monitoring by Williamson Water and Land Advisory (WWLA) has been undertaken to inform the project, and this is outlined in the Hydrogeology Assessment (Groundwater Effects) contained at **Appendix N**. As per the assessment, the overall trend is that groundwater flow in the Taharoa C Block originates from the higher altitudes in the north, east and south and generally flows westwards towards the ocean, with localised convergence into stream channels. Steeper gradients occur where there is steeper terrain and low-permeability materials such as within greywacke outcropping areas, while the water table profile is significantly flatter in the plains where the mine is located.

3.8 Terrestrial species and habitat

The terrestrial vegetation, fauna and habitat at the site are described in the Terrestrial Ecology – Wetlands and Vegetation Assessment (**Appendix K**) and the Terrestrial Ecology – Fauna Assessment (**Appendix M**) and are summarised below.

No Threatened or At-Risk[13] plant species have been recorded at the site. There are a number of pest plants as listed in the Waikato Regional Pest Management Plan, however their incidence is relatively low. Excluding the actively mined areas, the ecological value of the terrestrial habitat on the rest of the site has been assessed as at least moderate (**Appendix K**). This is in part because of the connectivity of the site and its size, but also because it supports a range of Threatened and At-Risk bird species, and long-tailed bats.

The fauna and fauna habitat at the site are described in the Terrestrial Ecology – Fauna Assessment (**Appendix M**). Surveys undertaken to inform this assessment found that long-tailed bats are present in and around the site. Bat recordings indicate that bats utilise the habitat in and around certain parts of the site including the pine forest plantation, a limited number of individual trees within the site, wetlands within the site, and the lake, stream and wetland margins within and adjacent to the site.

A total of 46 bird species were found. In terms of the New Zealand Threat Classification List, two species were Threatened - Nationally Critical (grey duck, Australasian bittern), one Threatened - Nationally Vulnerable (Caspian tern), one Threatened – Nationally Increasing (New Zealand dotterel), five At Risk - Declining (red-billed gull, fernbird, New Zealand pipit, marsh crake, spotless crake), and three At Risk – Recovering (pied shag, New Zealand dabchick, variable oystercatcher). The site habitat was assessed as unsuitable for supporting native arboreal gecko populations. No native/invasive skinks or katipō were found at the site.

From a terrestrial ecology perspective, the site includes the following habitat types:

- Open grassland habitat that is used by bird species such as New Zealand pipit, and could be used by skinks;
- Pine plantation forest that is used by long-tailed bats for foraging and potentially roosting;
- Wetland and lake margin areas (located largely outside of the proposed mining area) that is used by wetland species including Australasian bittern;
- Stream margins that are used by long-tailed bats for foraging, and potentially roosting in mature trees along the streambank; and
- Dune vegetation that is used by bird species such as New Zealand dotterel and could provide habitat for skinks and Katipō.

The ecological value of the bat habitat (wetlands, lake margins, stream margins and pine plantation forest) is assessed as very high as long-tailed bats are present and have a threat classification status of Threatened – Nationally Critical. The ecological value of avifauna habitat is assessed as very high given the New Zealand pipit, New Zealand dotterel and wetland bird species and habitat are present at the site and are in close proximity to proposed mining activity. The ecological value of herpetofauna and katipō are assessed as high - respectively based on their conservation status and potential presence.

[13] New Zealanad Threat Classification System – Department of Conservation.

3.9 Archaeology

The archaeological features within the Central and Southern Blocks are described in the Archaeological Assessment (**Appendix O**[14]) and are summarised below.

There are 88 recorded archaeological sites within the Central and Southern Blocks, the majority of which were identified in site records that have not been updated since the 1970's. These archaeological sites consist primarily of midden/oven deposits, with the next most common sites being pit/terrace sites. There are also three working areas, two pā sites, one horticultural site, one burial site, and one unknown site.

An archaeological field survey was undertaken in April 2025 where the survey team visited the recorded locations of the archaeological sites. The field survey identified one additional site (R16/572) consisting of four – five terraces clustered around the peak of a prominent hill in the south of the Southern Block.

Based on the results of the field survey for the overall mine site, 58 of the (now) 89 recorded sites are considered to be destroyed by historic land use (prior to TIL's operation of the mine) or erosion, one has a missing record but has likely been destroyed, 18 sites are considered to be at least partially intact, and the status of the remaining 12 sites is not known. The sites of unknown status are primarily recorded as being in locations within the site that would not be affected by mining, such as on the edges of streams, and were not able to be identified during the survey. In all, 30 sites are either intact or partially intact, or their status is unknown, and they may still be present.

Of the total sites described above:

- There are 35 recorded sites in total within the Central Block. Of the five that still remain 4 have an unknown status and one site appears to be partially intact (R16/117 – midden/shell). All five sites are situated either within reserves or adjacent to the coast or Wainui Stream.
- There are 54 recorded sites in total in the Southern Block. The field survey divided this Block into Northern and Southern Zones.
    - In the Northern Zone there are a total of 40 recorded sites. Of these, there are eight sites that are at least partially intact and the status of 5 is unknown.
    - The Southern Zone has the greatest preservation with only 2 of the 14 recorded sites having been destroyed. In this zone there are eight sites intact and the status of four is unknown. The relationship of these sites and the proposed areas for mining is discussed in section 8.1.10 of this report.

The Proposed Waitomo District Plan lists two sites located within the Central Block, outside of the proposed future mining areas, as outlined below in Table 3.1. This part of the Proposed Waitomo District Plan is treated as operative.

Table 3.1: Proposed Waitomo District Plan - Sites and areas of significance to Māori

Reference	Category	Values Summary
SSM074-A	Wāhi tupuna	(Ancestral location) – This term symbolises life and the oral narratives of the local tribal guardians (people). As a landmark it is valued for its holistic association with the local tribal custodians as a collective, through the generations.

[14] Note that this assessment is also contained in Appendix X - Archaeological Authority Application Bundle.

Reference	Category	Values Summary
SSM113-A	Takotoranga	This site is associated with ancestral burial practices. Values and significance - this is an ancient burial site and is associated with tapu or sacred burial practices. This site is particularly significant to, and under the guardianship of the local tribal custodians.

3.10 Land contamination

A Preliminary Site Investigation (**PSI**) prepared by Enviser in general accordance with the Ministry for the Environment's Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand (revised 2021) has been prepared for the site and is attached to this report as **Appendix P**. The PSI identifies that a number of HAIL[15] activities have been undertaken on the site, however, no soil disturbance activities are proposed within the HAIL areas. On this basis it should be noted that the Resource Management (National Environmental Standard for Assessing and Managing Contaminated Soil to Protect Human Health) Regulations 2011(**NES-CS**) is not applicable. An additional, separate, resource consent will be required to disturb these areas of potential or actual contamination, should any future works be proposed in these areas

3.11 Coastal environment

The coastal environment is described in the Effects on Coastal Processes Assessment attached as **Appendix Q**. The report describes the coastal environment as follows:

The open coastal environment in this location is known to be an energetic and dynamic coastal environment, characterised by large waves, storms, and frequently changing coastal landforms. The Taharoa coast is part of a large littoral drift zone that is influenced by sediment delivery to the CMA from four major rivers (Mokau, Awakino, Marokopa and Waikato) and three major harbours (Kawhia, Aotea, Raglan) within 100 km of the site. The combination of suspended sediment from river and estuary sources, and re-suspension by high energy waves results in a generally turbid CMA on the Waikato west coast.

The Taharoa Port sits within the West Coast North Island Marine Mammal Sanctuary as noted in the Marine Mammals Report completed by the Cawthron Institute. The sanctuary was established by DOC in 2008 as a part of the Hector's and Māui dolphin Threat Management Plan. The boundaries of the sanctuary extend 12 nautical miles from MHWS and from Maunganui Bluff in Northland to Taputeranga Marine Reserve on the south coast of Wellington. Within the sanctuary boundaries restrictions are placed on seabed mining activities and acoustic seismic survey work.

[15] Hazardous Activities and Industries List, Ministry for the Environment.

4 Description of proposed works

Whilst the process to extract, process and export the ironsand does vary depending on the nature of the deposit being mined at the time, it follows the same broad steps. These are described in the following sections in the order they are usually undertaken. TIL propose to continue to undertake mining activity following this process, except where noted.

4.1 Vegetation and topsoil removal

Vegetation and topsoil are removed separately from any underlying material to allow appropriate reuse in rehabilitation phases. Vegetation is removed with earthworks machinery and is stockpiled outside of the proposed future mine paths/areas. This typically involves:

- Harvesting of any large trees with commercial value (i.e. pine plantations). Refer to section 4.18 of this report.
- Removing other vegetation (i.e. scrub and smaller trees) with earthwork machinery (i.e. bulldozers and excavators). The vegetation is stockpiled to naturally compost for later use around the site. In addition, useful native species are removed prior to stripping of topsoil for use in the eco-sourced nursery on site.
- Stripping of topsoil and stockpiling for use in future rehabilitation activities.

4.2 Overburden removal

In some areas of the site, silts and clays, or sands with low concentrations of titanomagnetite overlay the higher value deposits. To access the economic deposits, the overburden must be removed. Heavy earthmoving machinery (excavators, trucks, dozers etc) is used to remove and stockpile the overburden. This stockpiled material is reused for future mine paths/areas for landform recontouring during rehabilitation.

4.3 Extraction of ironsand

Ironsand is extracted using various methods and equipment depending on ground conditions.

In upper layers, standard earthmoving machinery such as excavators, bulldozers, and trucks are used to collect the ironsand and deposit it into a Dry Mining Unit (**DMU**). The DMU mixes the ironsand with water to form a slurry, which is then pumped to a treatment plant for titanomagnetite extraction. The DMU may be located immediately adjacent to the mining area to receive ironsand pushed in directly or trucks may be used to cart material to the DMU. With this technique, the sand is mined in a series or panels or stages, which generally take approximately 3-4 weeks each to mine. The number of panels depends on the site of the overall pit. Multiple active mining areas may feed one DMU, or a DMU can be dedicated to a single mining panel.

During this process, groundwater and surface water may enter the active excavation area. To maintain dry working conditions, this water may be pumped out as required. However, as mining progresses to deeper layers and is below the groundwater table, maintaining a dry pit may become impractical. In such cases, a cutter-suction or bucket wheel dredge is used to form a small water-filled pond. The dredge floats on the water and uses a submerged dredge head to cut, fluidise, and pump the ironsand slurry through a pipeline to the treatment plant. The dredge is capable of operating at depths of 8 to 15 meters below the pond surface. In some instances, a long-reach excavator may also be used to extract material from within the pond. The size of the waterbody increases with excavation.

The employment of mining techniques below the groundwater table will be used to mine deeper ironsands deposits.

4.4 Processing

The extracted material is transported as a slurry and includes ironsands with variable concentrations of titanomagnetite mixed with some silts and clays and water called head feed. To meet the export specifications, the ironsand must be refined. The refinement process is constantly being improved as technology develops and will continue to do so in the future.

Key steps in the current process are:

- Initial screening of the slurry to remove oversize particles (i.e. using an inclined or trommel screen);
- Gravity separation of the heavier ironsands from lighter silt sands and non-ferrous sands; and
- Magnetic separation.

Depending on the quality of the deposit being mined, the ironsand may be recirculated through parts of the process multiple times to achieve the desired concentration grade for export. TIL also operates several pre-treatment plants, called 'mobile rougher plant' and 'mobile cleaning plant'. They are deployed at, or near, the active mining area to pretreat the extracted ironsand, minimising the volume of material that needs to be transported to the central processing plant.

The material is in a slurry state throughout all these processes. The separated tailings (mostly non-ferrous sand with some silt and clays) which are separated from the exportable product are pumped from the processing plant(s) to a tailings storage area for dewatering or directly to an area undergoing rehabilitation for land contouring across the mine. Once the tailings are dewatered, mechanical plant (excavators and dozers) redistribute the material to form the grade and levels required by the rehabilitation plan for that area.

Currently a centralised processing plant is used for all mining areas. In the future, aspects of the processing may be implemented closer to the extraction area via smaller mobile plants to increase efficiency and reduce water use.

It is important to note that no hazardous substances are used in the ironsand concentration process. It is purely a gravity and magnetic separation process.

Following the refinement process, the concentrated titanomagnetite that is suitable for export is cyclone separated to reduce water use then pumped as a slurry to a stockpile. Separated water is recovered and fed back into the mining process i.e. water is recycled on site.

Mining occurs at a rate of approximately 45,000 tonnes per day and continues 24 hours per day, 7 days a week with a 10 hours maintenance shutdown period once a fortnight.[16] The overall production rates are currently approximately 3 million tonnes (export volume) per annum, with an intention to increase this to an export volume of 5 million tonnes per annum with the next 5 years.

4.5 Shiploading

The site has no natural harbour and is subject to oceanic wave conditions. This requires the export vessel to be moored offshore to a SBM.

The export pipelines run from the shore facility to the SBM, located 3.5 km offshore. The 12 m diameter SBM is anchored to the seabed by six sets of chains and anchors, each weighing 124 tonnes. Loading at the SBM is restricted to appropriate weather and swell conditions. The SBM is

[16] With the exception of mining along the ridge between the Central Block and the Old Kana Homestead. In this area mining will occur between 7am and 7pm for a prescribed period.

designed to allow a moored vessel to rotate freely around its circumference (weathervane) in various wind and tide conditions.

The SBM and the surrounding waters are legally defined as the Taharoa Port (see Photograph 4.1). The location of the SBM and end of the pipeline is NZTM 1745860mE, 5773436mN.

Photograph 4.1: Image of the mooring buoy at the Taharoa Port

The SBM is moored to the seabed by a system using 6Te Stevpris Mk6 anchors. The approximate anchor radius from the SBM varies between 320 m and 327 m. The mooring arrangement is illustrated in Figure 4.1 below.

When approaching the SBM, the vessels slow down to 5 knots or less at a distance of 3 nm from the SBM (the pilotage limit). A pilot is taken onboard at the pilotage limit (typically via helicopter), and the vessel slows to 2 knots at 1nm from the SBM and then to 0.5 knots 500 m from the SBM.

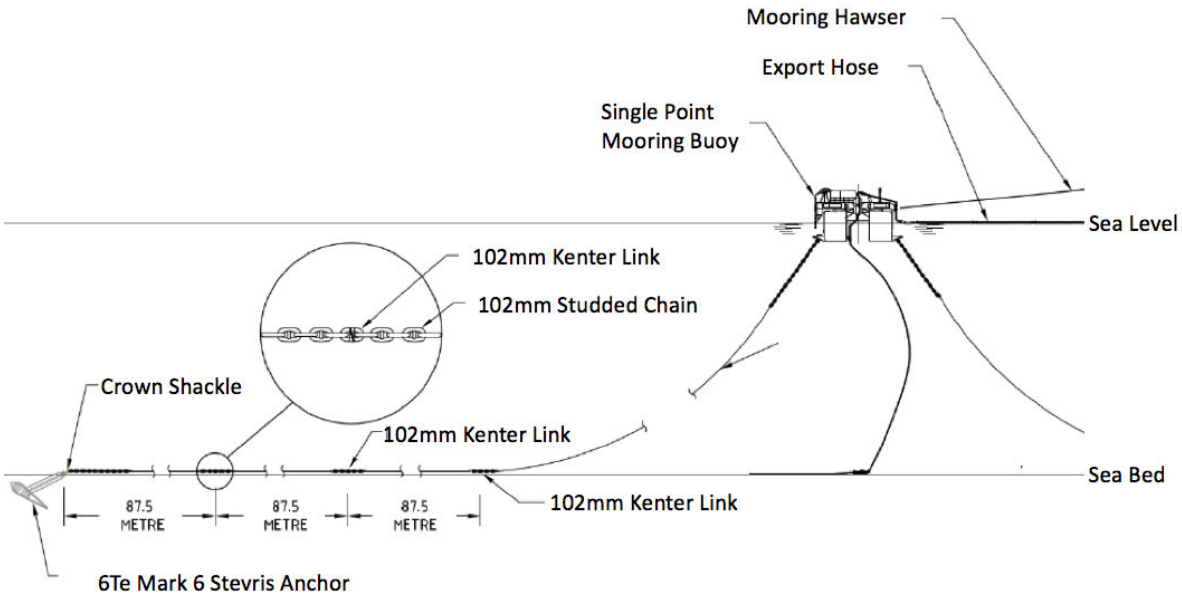

Figure 4.1: Mooring arrangement

The SBM and mooring spread have been certified by classification society DNV-GL.

Prior to the shiploading process the ironsand concentrate is mixed with equal parts water to form a slurry in a constant density feed tank. The slurry is then pumped via two parallel 318 mm diameter submerged steel pipelines which terminate at a point 30 m below the SBM. A gland water pipe runs in parallel with the steel pipelines. The pipes are secured to the seabed by piles on pile frames approximately every 50 m.

From the SBM, two 305 mm internal diameter hoses connect to marine floating hoses and convey the concentrate to the moored bulk carrier. The delivery system is capable of pumping 2,500 dry tonnes per hour through the two parallel pipelines. An additional pipeline exists to the south of the main pipeline. While this pipeline is no longer currently active it performs the important function of providing cathodic protection for the main pipeline.

The ship is prepared to receive the slurry by pumping freshwater into the hold to provide protection from the ironsand slurry hitting and damaging the hold floor. The percentage of concentrate is increased until the designed density (50% by weight) is reached. The ship is fitted with dewatering equipment and the resulting freshwater, containing residual fine suspended material (inert, inorganic geological material) that is removed from the ironsand slurry, is discharged from the ship to the sea. The discharge rate is estimated to be 60,000 m^3 per day during shiploading which is within the currently consented 75,000 m^3/day limit. The discharge forms a buoyant plume that floats on the seawater surface before dispersal and dilution.

The length of the pipeline and the location of the SBM were altered in 2012 to accommodate the berthing of larger iron ore carriers at the offshore port. The export fleet currently consists of the Taharoa Destiny, Taharoa Eos and Taharoa Providence which have all been purpose built for export of ironsand to China and Japan. Each export ship is approximately 290 m long and 45 m wide and are the largest dry cargo vessels in New Zealand. Each shiploading activity takes up to 90 hours (of pumping time) however weather conditions have an influence on loading timeframes.

TIL currently undertakes up to 20 shiploading events at the offshore port per annum and proposes to gradually increase this to up to 35 ship loading events per annum over the life of the consents that are sought. Although TIL is proposing to undertake a greater number of shiploading events, it is not seeking to increase the volume of ship loading water (or stormwater and process

water) that it is already authorised to be discharged under its existing resource consents. It is important to note that not all ships will be filled to 100% capacity. Some may be partially filled due to export demands, weather conditions or availability of exportable product.

Here it is noted that some practical constraints exist on the site that serve to effectively constrain the maximum number of ship visits that could occur. These constraints include limitations on power supply to the site, constraints associated with the water take limit, and the area available for stockpiling of export material, as well the ability to physically process extracted material at required rates. Thus, this is not a situation where the mine activity is unfettered in its ability to accommodate additional ship visits.

4.6 Mine Plan

TIL seeks the necessary consents to mine all of the Central and Southern Block, excluding the areas listed in 4.6(a)-(d) below.

TIL has developed concept mine plans for the primary mining operations in the Central and Southern Blocks which show the potential staging of and process for TIL's primary mining operations, to assist the Panel determining this application. Figure 4.2 and Figure 4.3 below show the concept mine plan and staging.

Because these mine plans are high level, conceptual plans, they do not depict targeted mining of small areas, such as:

- Mining of the remaining northern section of the ridgeline/dune edge lying south of the Mitiwai near existing mining activity;
- Ongoing mining of smaller areas of historic tailings deposits; and
- Isolated areas of historically overlooked resources.

Mining of these areas (which forms part of this application) is typically short-term, in the order of months, and mined using smaller-scale operations, with single DMU's and smaller dredge plant.

The mine plans are conceptual because mining across the blocks is subject to a number of variables and can change from time to time.

For the Central Block, the concept mine plan aims to access the Te Ake Ake Formation and comprises:

- Mining of any remnant surficial ironsands from the Mitiwai Formation and historic tailings deposits, typically via the use of standard earthworks machinery and DMUs.
- Removal of the silt/clay layer that overlies the Te Ake Ake formation, stockpiling these materials for rehabilitation purposes.
- Mining the unsaturated layers of the Te Ake Ake Formation with standard methods and DMUs.
- Once groundwater is encountered, continue mining with a floating dredge plant.
- As the areas are worked through, tailings will be placed back into the mined areas and he ground surface recontoured.
- The mine plan shows a planned sequence of mining, with four phases (or pits) expected.

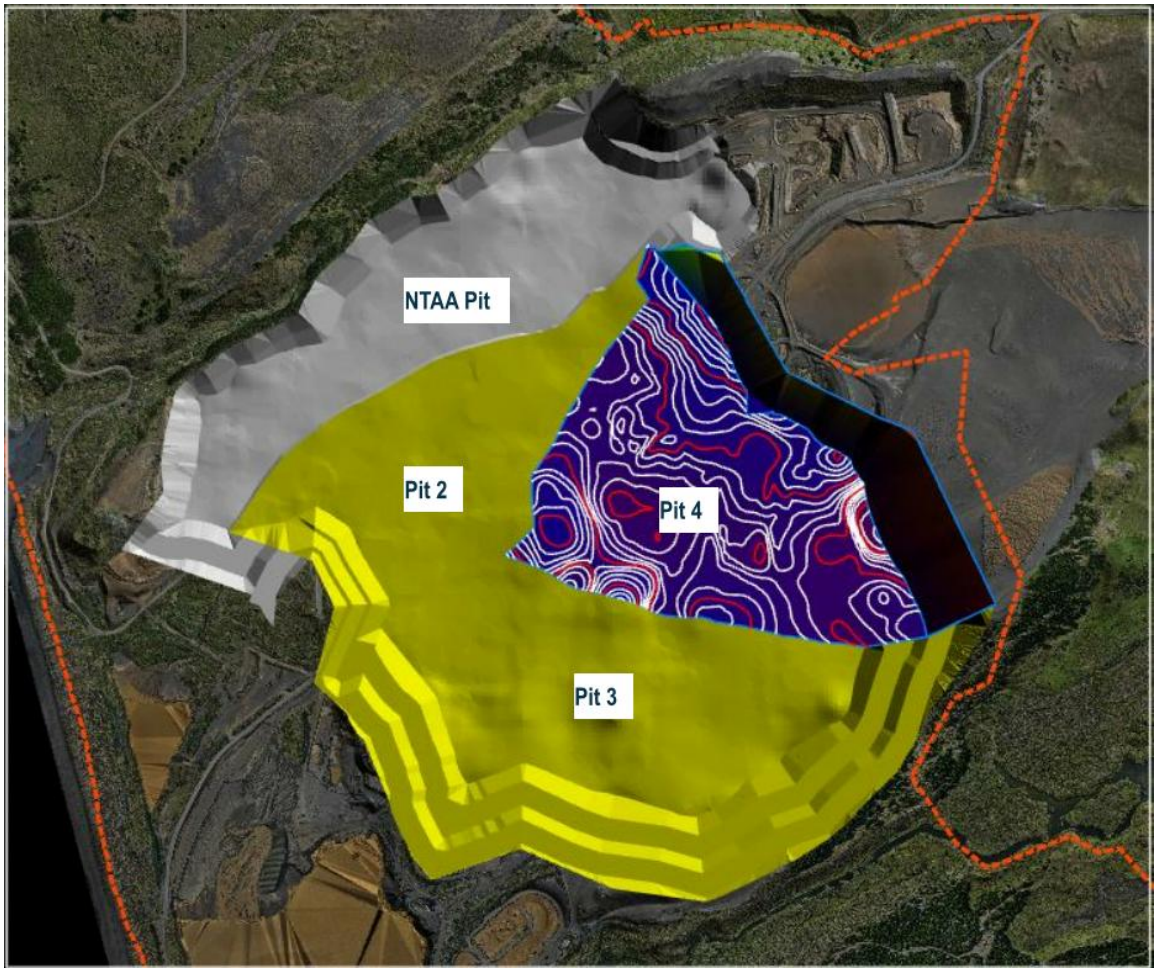

Figure 4.2: Concept mining plan for the Central Block. NB the NTAA is the North Te Ake Ake pit and mining is underway in this pit.

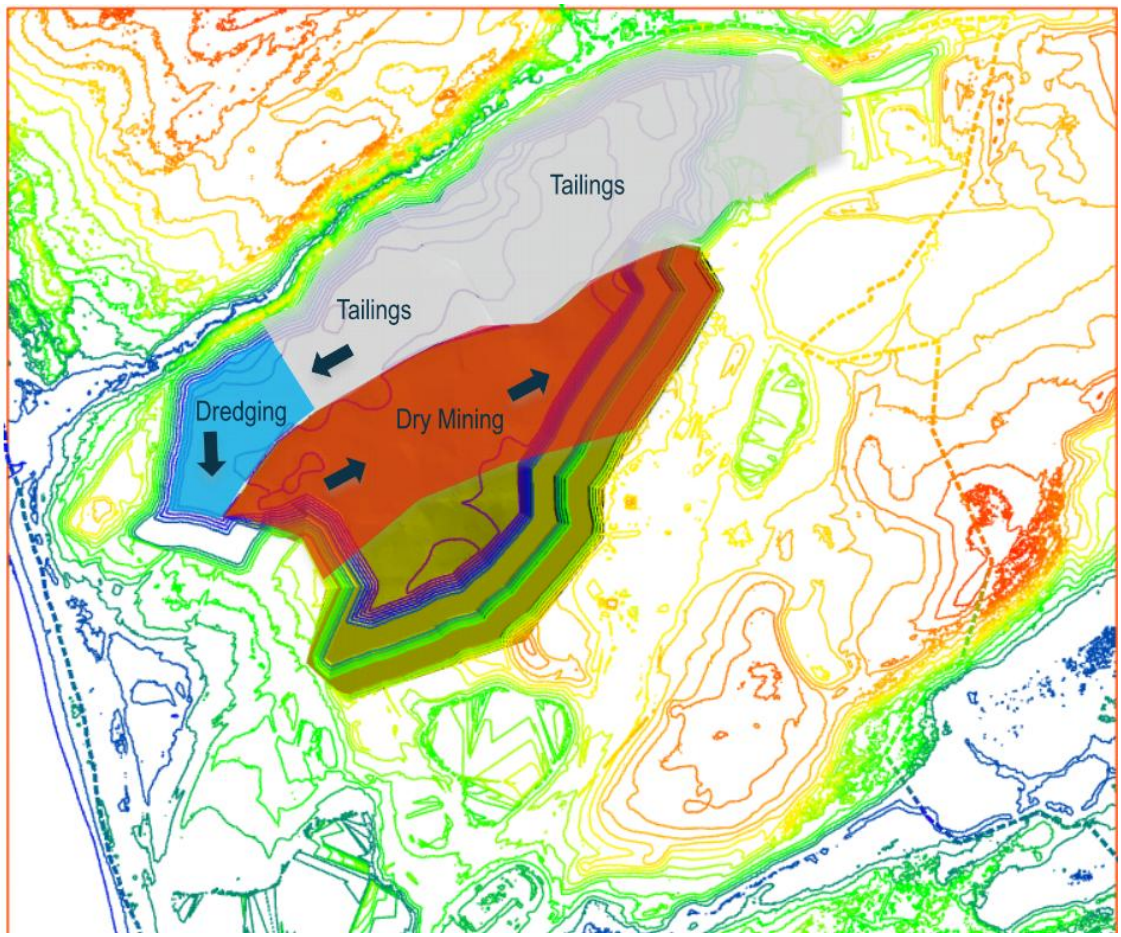

Figure 4.3: Concept stage plan showing the mining sequence for NTAA pit and Pit 2.

A similar mine plan is proposed for the Southern Block, principally remaining higher grade tailing and access deeper deposits that the previous NZSML floating dredge could not access. In general, the mining depths are shallower in the southern portion of the Southern Block.

The same sequence of mining using dry mining methods followed by dredging is anticipated for the Southern Block. The concept mine plan anticipates the initial focus being on three main mining pits, followed by three extension areas. Figure 4.4 shows the concept mine plan, along with key features on the Southern Block.

All of the current mine infrastructure, maintenance and operational facilities will be maintained for the future mining operations.

Mining is not proposed, in either the Central or Southern Blocks, to occur;

(a) In the demarcated archaeological and cultural reserve areas;
(b) In the proposed 30m perennial waterbody and wetland buffer areas;
(c) In the proposed 100m setback from the mean high water springs.
(d) In the southernmost part of the Southern Block, separated from the remainder of the Block by an escarpment and which intersects with the Waiohipa stream.

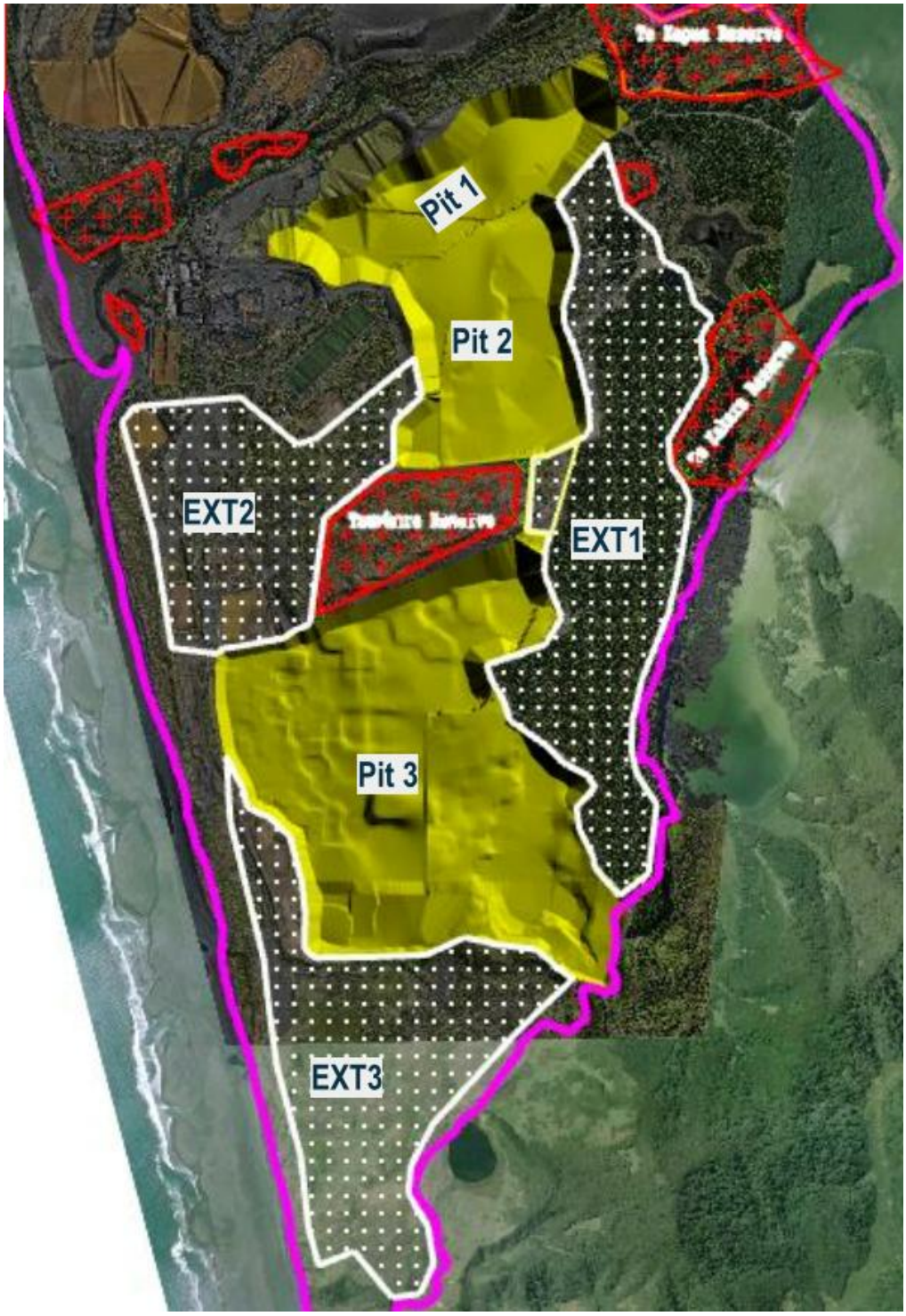

Figure 4.4: Southern Block concept mine plan

4.7 Ground stability

The pit wall slopes are up to 60 m in height. To inform the pit wall stability, a geotechnical assessment has been prepared by Baseline Geotechnical Limited. The assessment makes the following recommendations based on the site's geological units and proximity to key features, which are proposed to be implemented:

- Slopes developed primarily within Te Ake Ake Formation to be limited to a maximum overall slope angle of 33 degrees (which is the current slope angle).
- Slopes developed primarily within Mitiwai Formation to be limited to a maximum overall slope angle of 30 degrees.
- A 30 m buffer between the crest of pit slopes and perennial watercourses.
- A 20 m buffer between the crest of pit slopes and cultural/archaeological reserves and adjacent property boundaries, unless a location specific geotechnical assessment can identify a reduced setback.
- Annual geotechnical reviews of pit slope performance in relation to waterways, cultural/archaeological reserves and property boundaries. If slope instability is found, this can be addressed though a reduced slope angle, provision of a bench mid-slope or placement of sand to buttress the affected area.

The geotechnical assessment is provided for information purposes at **Appendix R**.

4.8 Water takes

Freshwater is required for both iron sand mining operations and shiploading activities. As explained above, water is currently abstracted from the Wainui Stream that flows from Lake Taharoa. Much of the water taken for mining purposes from the Wainui Stream is recovered and recycled with stormwater in the mining process.

Eight water pumps are available to abstract water from the Wainui Stream for use in the concentration and shiploading processes. The pump intakes are enclosed with a mesh screen to avoid the uptake of weeds and fish.

4.9 Dam and fish pass in Wainui Stream

TIL proposes to retain the existing dam and fish pass located in the Wainui Stream for water abstraction purposes. The dam and fish pass are described in section 3.5.3 of this report.

4.10 Augmentation of water flow in Mitiwai Stream

TIL propose that the Mitiwai Stream be supplemented with clean water from mining operations to maintain minimum flow conditions (as per the WRP), should mining below the water table in this vicinity result in reduced flow within the stream (refer to section 8.1.5 of this report). The augmentation of flow conditions in the Mitiwai Stream is expected to be short-term, with mining in this area expected to occur over a one to two year period and will only be required in dry summer conditions. Once mining below the water table is complete and the dredge pits are refilled, natural flow conditions within the Mitiwai Stream will return in 12-18 months.

4.11 Works within wetlands

Due to their location within the Southern Block of the site, TIL propose to mine seven wetlands that have formed as a result of earlier mining activity, which have a combined area of 4.25 ha. The wetlands to be removed are shown in Figure 4.5 below (marked orange). The wetlands to be retained are shown in Figure 4.5 below (marked blue).

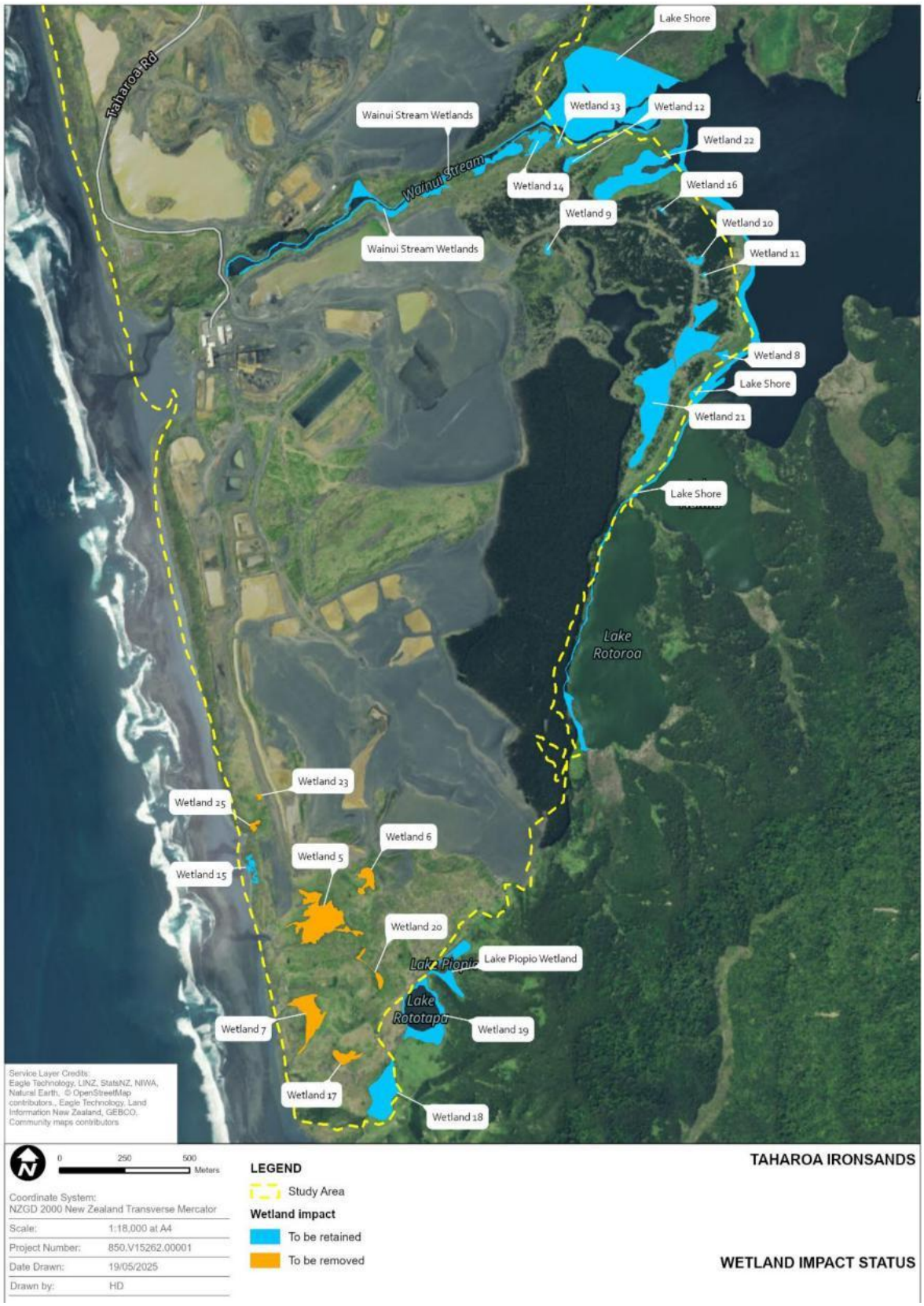

Figure 4.5: Wetland Impact Status. Sites in orange will be removed as part of mining operations (Source Ref to Appendix K Terrestrial Ecology - Wetlands and Vegetation Assessment, SLR Consulting New Zealand, 13 October 2025 Revision 4.0)

4.12 Stormwater and process wastewater management

In the first instance, excess stormwater and process wastewater is discharged into one of the many settling ponds and soakage areas throughout the site. The settling ponds are de-sludged when required to maintain at least 80% of the pond volume.

In certain circumstances, where there is no suitable area to provide for discharge on land, or as a result of overflow during high rainfall events, up to 32,600 m^3 per day of stormwater and process water is proposed to be discharged into the CMA, through the shiploading pipeline, when required. This is currently authorised and occurs infrequently.

All stormwater runoff collected from around the pump house and concentrate stockpiles is used in the mining and concentration water circuit. During periods of heavy rainfall, water is released from the circuit to avoid overflowing the ponds.

All stormwater runoff and washdown water from around the workshop, stores compound and administration building, is directed through an oil trap prior to pumping into the mine water recycling system. Oil and sediment are collected in concrete lined bays. The oil trap is inspected at least once a month and cleaned out as and when required. However, there may be a small/incidental discharge of settled stormwater and washdown water into the Wainui Stream from time to time during high rainfall events.

4.13 Dust control

To monitor and control airborne dust which may arise due to meteorological conditions and mining activities, the mine operates under an alert level framework (contained within the proposed Environmental Management Plan (**EMP**) for the site) where meteorological conditions and total suspended particle (**TSP**) concentrations are monitored, and subsequent control measures are increased as the alert levels rise to a point where work is ceased at Level 4. The alert level framework is shown below in Figure 4.6.

Alert Level	Wind	Rainfall (last 24 h)	Temperature (°C)	TSP /Averaging Time	Operations
1	<5 m/s <10 m/s >10 m/s	No Yes Raining	>20 °C >20 °C >20 °C	<80 µg/m³ Rolling 24 hour average	Normal
2	<10 m/s	No	>20 °C	<160 µg/m³ 1 hour average	Alerted
3	>10 m/s	No	>20 °C	<240 µg/m³ 1 hour average	Modified
4	>20 m/s	No	>20 °C	>240 µg/m³ 1 hour average	Cease work that has the potential to generate dust or application of water for dust control. Recommence works when the TSP is less than 160 µg/m³ and monitor continually.

Figure 4.6: Alert Level Framework (Source: Taharoa Ironsands – Central and Southern Block – AQ Assessment, Pattle Delamore Partners Ltd, October 2025)

The site currently operates under an Interim Dust Management Plan which is voluntary and was developed in 2024 to assist in the management of dust on the site. The Plan contains specific control measures for dust which are aligned to the alert levels shown in Figure 4.6, which are incorporated into the updated draft EMP for the site. The control measures that are implemented depend on the alert level and include minimising vehicle movements, use of a water cart to wet

exposed clay/silt surfaces, limiting drop heights and regular inspections if dust is being generated. TIL is also in the process of trialling several additional dust mitigation measures.

Mined areas are actively stabilised and progressively rehabilitated, which reduces the areas of exposed surface sand consequently reduces the potential for wind-blown dust emissions. Refer to section 4.17 of this report for further details of this process.

In addition, TIL proposes that at least 100 m of the site along the Central Block boundary closest to 1891 Taharoa Road (being the nearest dust receptor) will be stabilised using methods such as geotextiles, polymers or planting, within 3 months of mining being completed within the area. This aligns with the recommendations in the Air Quality Assessment prepared by Pattle Delamore Partners (**PDP**), which is attached to this report as **Appendix S**. This is also included in the updated draft EMP for the site (refer to **Appendix T**).

4.14 Noise management

Mining can be undertaken in accordance with permitted activity noise limits in the PWDP, and noise levels will not adversely affect amenity values or the health and wellbeing of people and communities. A Noise Assessment for the Central and Southern Blocks has been prepared by Tonkin & Taylor Ltd and is attached to this report as **Appendix W**. To inform the assessment, noise monitoring at noise sensitive receivers near the site was undertaken.

In this working environment, it is reasonably expected that there may be higher noise levels at certain times. In accordance with noise modelling, TIL will manage noise at the source by implementing the following management measures:

- TIL will take all necessary steps to avoid unreasonable noise in accordance with section 16 of the RMA.
- Within the Central Block tailored mining methodology is required for activities on the ridge line area (nearest to noise sensitive receptors) to ensure compliance with noise limits. There are options to achieve this including a reduction in plant noise and/or restriction on the line of sight to the nearest noise sensitive receivers. Methods include using a 15 to 20 tonne excavator operating on the ridge in combination with a rope-trawl bucket crane positioned behind the ridge. Mining near the ridge line at the northern end of the block will be limited to daytime hours, 7 am to 7 pm. As mining moves away from the ridge, the ridge will act as a natural noise barrier where normal working hours and practices can resume. On-going monitoring will be undertaken to ensure compliance, particularly with respect to evening and nighttime periods when mining occurs at locations close to noise sensitive receivers. With these measures, noise levels will be within permitted activity limits.
- Mining activities can take place anywhere within the Southern Block and not exceed noise limits at any time.

No noise exceedances are predicted during mining at any time within Taharoa township, at Te Kura o Taharoa School, or at the Aaruka Marae and Te Kooraha Marae.

4.15 Hazardous substances

No hazardous substances are used in the processing of the product; however, small volumes of oils, lubricants and other hazardous substances are used for the operation and maintenance of machinery. These substances are stored within a bunded area on site to ensure that, in the unlikely event of a spill, discharge to the stormwater system and ultimately the Wainui Stream will not occur.

Diesel is stored in three above-ground bulk storage tanks on the site, each with a maximum capacity of 100,000 litres. Unleaded petrol is stored in a bulk storage tank with a capacity of

7,500 litres and helicopter fuel is contained in a bunded area on the helicopter pad (during helicopter operations) with a capacity of 1,900 litres. There are also a number of mobile diesel tankers and moveable fuel cells of different capacities.

There are no underground fuel tanks in use. Refuelling processes are closely monitored by site staff.

4.16 Ancillary infrastructure

Ancillary infrastructure such as haul roads, pipe structures, lighting structures and slurry pipes are existing on site and will continue to be used in the operation of the mine. This is also:

- The Taharoa Port operation and control building is located on the Central Block adjacent to the main vehicle access route. This is where communications, customs and maritime safety matters are co-ordinated.
- There is a helicopter pad located off Taharoa Road in the Central Block.
- There are seaside dormitory buildings which provide accommodation for contractors and staff during shiploading, located near the helicopter pad.

4.17 Ballast water

Ballast water discharges from ships during iron sand loading are regulated under the Resource Management (Marine Pollution) Regulations 1998. As such, these discharges fall outside the scope of regional coastal plan rules and cannot be the subject of a resource consent. Accordingly, ballast water has not considered as part of this application, nor has consent been sought for this activity.

4.18 Tailings disposal, stabilisation and rehabilitation

Land within the Central and Southern Blocks is progressively rehabilitated over the life of TIL's consents before the eventual closure of the mine.

Rehabilitation occurs in two stages – interim or temporary compaction, stabilisation or revegetation for dust and erosion control and then final contouring and/or revegetation to create a final, long-term environment.

The tailings (comprising ferrous and non-ferrous sand, silts and clays) which are separated from the exportable product are pumped as a slurry to tailings disposal areas, known as cells. The locations of these cells change over time and depend on which part of the site needs to be refilled and rehabilitated.

The discharged slurry dewaters by gravity, with the drainage water collected and directed into a settlement pond or ponds. The purpose of these ponds is to safely manage the runoff and allow for reuse of the water within processing operations, or for shiploading. In some instances, cyclone stackers are used, which recover most of the slurry water as the tailings are deposited. The recovered water is fed back into the mine water recycling system.

Once dewatered, mechanical plant (excavators and dozers) reshape and redistribute the tailings to form the grade and levels anticipated for any given area. Following this the land may be stabilised, top soiled and replanted, noting that dunes cannot be stabilised. This process can take many months following the cessation of mining activity. An eco-sourced nursery has been set up on site to provide some plants for use in the rehabilitation of previously mined areas. Where vegetation removal is required as part of preparatory work for mining activity, native species will be transplanted from that area and used in the ongoing development of native stock at the nursery. A staged and adaptive approach is required. Advances in technology may allow TIL to re-

enter areas that have been previously mined to recover residual ore. In the future, these areas where tailings have been disposed will be re-mined if it becomes economically viable to do so (i.e. if extraction processes become more efficient).

Final rehabilitation of the land is not intended to result in complete re-planting or returning the landform to its previous pre-mining contour. Specific parts of the landscape will be planted e.g. the ecological corridors, and other parts will be simply stabilised or contoured, in accordance with the wishes of the landowner.

TIL is required to continually adapt its rehabilitation approach making impractical and ineffective to bind TIL's rehabilitation efforts to rigid timeframes or fixed hectare targets. This is due to several dynamic factors that have influenced TIL's ability to undertake rehabilitation to date, including environmental factors (such as severe wind and rain events and the season that mining ends in any given area), operational and logistical factors limiting the availability of completed areas to rehabilitate, availability of plants and planting to occur, and ecological factors such as the performance of different plant species in the local environment and their availability at any time. By way of example, some years the phases of mining allow larger areas to be rehabilitated and in other years less completed tailings areas are available. When conditions allow, it is possible to undertake coconut matting and plant 5-6 hectares a year. However, rehabilitation requirements need to be flexible enough to take into account the phases of mining that are undertaken at any given time.

Given these complexities, TIL must continually trial new technologies and ways of stabilising the land. TIL has undertaken a successful trial of coconut matting which has assisting in the successful planting of more than 74,909 plants over a period of 5 weeks, and successful rehabilitation across a 6.5-hectare area. TIL plans to continue using such techniques, while remaining responsive to the environmental, operational, and ecological factors that shape rehabilitation outcomes.

When the mine is closed this will be completed in accordance with the Conceptual Site Closure Plan which will detail the final rehabilitation for the site and the fate of existing infrastructure.

4.19 Harvesting of pine trees

It is proposed to fell the 60.6 ha (approximately) radiata pine plantation forest (**Taharoa forest**) which is located on the Southern Block of the site on previously mined ground. Taharoa forest is to be harvested ahead of mining activities within this pit and will be undertaken and managed by independent commercial forestry contractors. The timing of the felling is yet to be determined, but it would take three – four months to harvest unless timing is extended due to harvesting being completed in stages. The trees will be of harvestable age within 10 – 15 years, however they may be harvested sooner should TIL wish to commence mining in the forest area before then. Trees will be harvested utilising machine harvesters and manual felling.

Harvesting will require the upgrade of approximately 1,200 m of existing road within the site and the formation of approximately 400 m of new extended road together with the construction of four new skid (landing) areas for log processing approximately 2000 – 3000 m^2 each. This will require earthworks of approximately 10,000 m^3 and will likely be three-four weeks in duration (in total, noting that harvesting will likely be staged, and earthworks will be undertaken as required for each stage). Following the harvest, all harvesting waste (woody debris and slash) will be removed from the area and converted to mulch to enable the area to be mined.

A Harvest and Earthworks Management Plan which includes a draft Forestry Earthworks Management Plan and a draft Harvest Plan is attached to this report as **Appendix U**. The plan details the proposed harvesting activity and includes a harvest map showing the location of Taharoa forest and its surrounds.

4.20 Activities that relate to the entire Taharoa Mine

The following activities (as described above) are proposed to be authorised by consents for the Central and Southern Block Mining Project but they relate to or support the entire Taharoa Mine, i.e. including the Northern Block (including Pit 1), Eastern Block and Te Mania Extension:

- Water takes from the Wainui Stream (including the damming and diversion to create the water supply reservoir).
- Operation of the dam and fish pass within the Wainui Stream.
- Discharge of stormwater and process water to land and to the CMA (where that stormwater and process water may originate from activities in other blocks).
- All shiploading activities.
- Storage and use of hazardous substances.
- Mine overburden and tailings placement and associated discharges of water to land.

Mining of the Northern Block is subject to a separate approval under the FTAA. Mining in Pit 1, the Eastern Block and the Te Mania Extension are authorised under separate resource consents.

4.21 Consideration of alternatives

Under section 105 of the RMA, if an application is for a discharge permit that would contravene section 15 or section 15B, the application must have regard to any possible alternative methods of discharge, including discharge into any other receiving environment.

Here it is noted that the proposed discharge of tailings and process wastewater to land and shiploading water to the sea will not result in any significant adverse effects on the environment.

In terms of the discharges to land and water associated with the mining activity, this discharge has been a long-established practice at the mine. The existing infrastructure (e.g. soakage pits and tailings ponds) are specifically designed for this land based discharge and it has operated for decades with no significant adverse effects reported. No feasible alternative methods exist and there is a lack of viable alternative receiving environments. The geological and hydrological conditions of the site (e.g. permeable dune systems, distance from sensitive water bodies) also make land discharge appropriate.

Likewise, there are limited opportunities for alternatives to the shiploading discharge. Those that do exist are assessed as follows:

1 **Pumping shiploading water back to shore for land disposal.** This would require the installation of pumping equipment on the ship as well as the installation of an additional pipeline on the seabed. TIL has determined this option would not be cost effective, would be complex from an engineering perspective, and would result in large amounts of water to be discharged on land (potentially creating new environmental risks) as well as adverse effects associated with seabed disturbance from the installation of a new pipeline in the CMA.

2 **Installing new filter technology on the ships** to capture a greater proportion of fine sediment prior to discharge. TIL have considered this option but concluded that the work required to convert the ships would not be cost effective. Furthermore, as the material has already gone through significant processing to remove these fines, additional filtering would provide limited benefit to the environment. It is noted that the Marine Ecology Assessment (**Appendix V**) concludes that discharges to the CMA have not had a significant adverse effect on the benthic macrofaunal community. TIL may however, when purchasing

new export ships in the future, consider vessels that can be fitted with advanced filtering technology if/as that technology becomes available.

3 **Establishing a wharf based port facility attached to land at Taharoa**. This would involve the construction of significant structures within the CMA and would have much greater effects on the environment than the proposed discharge that has a low environmental impact.

For all the alternatives identified above, the small scale of the environmental impacts of the existing discharges does not warrant the economic and environmental cost of implementing any of the alternatives.

Further, the discharge of excess stormwater and process wastewater is only necessary on rare occasions, with the primary method of disposal being onto land. Discharge to sea is only used on occasions when it is not possible to discharge to land – for example, at times of heavy rainfall when surface water conditions make it impracticable. The infrequent discharge to the CMA is recognised in condition 2 of TIL's current discharge permit (100900) that requires discharge to land "in the first instance". A similar condition is proposed to continue to apply to the new permit sought for the discharges.

5 Approvals required

To authorise the proposed activities outlined in section 4 of this report, the applicant is seeking:

- New resource consents under section 42(4)(a) of the FTAA that would otherwise be applied for under the RMA;
- A Wildlife Approval under section 42(4)(h) of the FTAA that would otherwise be applied for under the Wildlife Act 1953; and
- An Archaeological Authority under the HNZPTA under section 42(4)(i) of the FTAA that would otherwise be applied for under the HNZPTA.

The following sections describe each of these approvals.

5.1 Resource consents otherwise required under the Resource Management Act 1991

5.1.1 National Environmental Standard for Freshwater 2020

Table 5.1 outlines the resource consents that are required under the NES-F.

Table 5.1: Resource consents required under the NES-F

Proposed activity	Regulation reference / description	Comment
Works within or close to a natural inland wetland.	Regulation 45D(1) - Vegetation clearance within, or within a 10 m setback from a natural inland wetland for the purpose of the extraction of minerals and ancillary activities is a **discretionary activity.**	Vegetation clearance and earthworks is proposed as part of the removal of natural inland wetlands 5, 6, 7, 17, 20, 23 & 25 shown on Figure 6 in **Appendix K** – Terrestrial Ecology - Wetlands and Vegetation Assessment and on Figure 4.5 in this report. These activities require consent as discretionary activities.
	Regulation 45D(2) – Earthworks or land disturbance within, or within a 10 m setback from a natural inland wetland for the purpose of the extraction of minerals and ancillary activities is a **discretionary activity**.	
	Regulation 45D(3) – Earthworks or land disturbance outside a 10 m, but within a 100 m, setback from a natural inland wetland is a discretionary activity if it— (a) is for the purpose of the extraction of minerals and ancillary activities; and (b) results, or is likely to result, in the complete or partial drainage of all or	Mining that is close to wetlands and/or below the water table may impact the hydrology of remaining natural inland wetlands which are connected to groundwater (as explained in **Appendix N** - Hydrogeology Assessment (Groundwater Effects) by WWLA). Refer to Figure 4.5.

Proposed activity	Regulation reference / description	Comment
	part of the wetland is a **discretionary activity**.	
	Regulation 45D(4) – The taking, use, damming, or diversion of water within, or within a 100 m setback from, a natural inland wetland for (a) the purpose of the extraction of minerals and ancillary activities; and (b) there is a hydrological connection between the taking, use, damming, or diversion and the wetland; and (c) the taking, use, damming, or diversion will change, or is likely to change, the water level range or hydrological function of the wetland is a **discretionary activity**.	
	Regulation 45D(5) - The discharge of water into water within, or within a 100 m setback from, a natural inland wetland where (a) the discharge is for the purpose of the extraction of minerals and ancillary activities; and (b) there is a hydrological connection between the discharge and the wetland; and (c) the discharge will enter the wetland; and (d) the discharge will change, or is likely to change, the water level range or hydrological function of the wetland is a **discretionary activity**.	Should mining adversely affect water levels within the retained natural inland wetlands (refer to section 8.1.5 of this report), supplementation of wetland water levels with water from the mine either directly (if clean) or indirectly via ground soakage through sand beds if silty will be required. There is also a small possibility that stormwater containing sediment could be discharged into remaining wetlands.

5.1.2 National Environmental Standard for Commercial Forestry 2017

The NES-CF applies to any forest of at least one hectare that is a plantation forest or an exotic continuous-cover forest as defined by the NES-CF. Table 5.2 below identifies the activities that require consent under the NES-CF. The site is identified as being predominantly within Land Use Capability Class 8e[17] which means it has severe to extreme erosion limitations or hazards and resource consent is required for forestry activities.

[17] Ministry for Primary Industries Erosion Susceptibility Classification.

Table 5.2: Resource consents required under the NES-CF

Proposed activity	Regulation reference / description	Comment
Earthworks	Regulation 35(1) – Earthworks are a **restricted discretionary activity** if the earthworks are in an area and of a volume set out in regulation 24, and any provision of regulations 26 to 33 is not complied with.	The thresholds specified in regulation 24(2)(d)(i) and (ii) will be exceeded due to the side cutting required for new roads exceeding 50 m (400 m) and the deposition of fill exceeding 100 m^3 (up to 3,000 m^3).
Removal of plantation pine forest	Regulation 71(1)(a) – Harvesting in any red zone of Land Use Capability Class 8e is a **restricted discretionary activity.**	The harvesting of the pine trees will require consent as a restricted discretionary activity under the regulations.
Discharge of sediment	Regulation 97(7) – Discharge of sediment into water or onto land in circumstances where it may enter water [which includes groundwater] that does not comply with subclause (1)(a) to (g) has the same activity status that applies if the conditions of the associated commercial forestry activity are not complied with. It is therefore a **restricted discretionary activity.**	As outlined in regulation 97(1), the discharge of sediment is a permitted activity if the other relevant regulations are complied with. Due to the volume of earthworks, the activity will not comply with the regulations for earthworks as outlined above.

Discretion is restricted to the following matters:

Earthworks

(a) the timing, location, and duration of the activity:
(b) the effects on ecosystems, fresh water, and the coastal environment:
(c) the effects on vegetation in the riparian zone:
(d) the method of stabilising soil disturbance:
(e) the method of sediment retention and run-off management:
(f) stormwater control measures:
(g) the methods used to minimise erosion:
(h) the placement and management of cuts, fill, or spoil likely to cause slope instability:
(i) the preparation and content of the forestry earthworks management plan:
(j) the information and monitoring requirements:
(k) the effects on the values of an outstanding freshwater body where a Treaty of Waitangi settlement Act includes a statutory acknowledgement in relation to that outstanding freshwater body.

Harvesting

(a) The preparation and content of the harvest plan and the forestry earthworks management plan (if required).
(b) The type and method of harvesting.

(c) The timing, location, and duration of harvesting (including in relation to fish spawning).
(d) Measures to address effects of harvesting on water quality, vegetation in the riparian zone, wetlands, and the coastal marine area.
(e) Measures to minimise soil erosion during and after harvesting.
(f) Measures to contain and remove slash, including minimum requirements for removal from the cutover.
(g) The information and monitoring requirements.
(h) The effects on the values of an outstanding freshwater body where a Treaty of Waitangi Settlement Act includes a statutory acknowledgement in relation to that outstanding freshwater body.

Discharge of sediment

(a) the timing, location, and duration of the activity:
(b) the effects on ecosystems, fresh water, and the coastal environment:
(c) management and containment:
(d) the spill response procedure:
(e) the location of fuel storage, refuelling, and oil changing:
(f) the information and monitoring requirements:
(g) the effects on the values of an outstanding freshwater body where a Treaty of Waitangi settlement Act includes a statutory acknowledgement in relation to that outstanding freshwater body.

5.1.3 Waikato Regional Plan

The WRP includes the provisions that apply across the Waikato Region. Plan Change 1 (Healthy Rivers) to the WRP was notified in July 2018 and the Environment Court released its interim decision on Plan Change 1 in May 2025. Because none of the Plan Change 1 provisions are applicable to this application, the proposed works were assessed against the relevant provisions of the Operative WRP.

The specific planning controls that apply are determined by the scope and scale of the proposed activities, the site zoning, and any planning features notated on the relevant planning maps. The Wainui Stream is identified as 'Significant Indigenous Fisheries and Fish Habitat Water Class' on the WRP map.

Table 5.3 below identifies the activities that require consent under the WRP to ensure the future operation of the site. Overall, resource consent is required under the WRP as a **discretionary activity.**

Table 5.3: Resource consents required under the WRP

Proposed activity	Rule reference / description	Comment
Take of up to 75,000 m^3 of surface water per day from a water supply reservoir created by the damming of the Wainui Stream for shiploading.	Rule 3.3.4.23 – taking of surface water that is a non-qualifying s14(3)(b) take is a **discretionary activity.**	The water taken from the Wainui Dam for the continued mining operations will not be used for an individual's domestic needs or animal drinking water and as such, is defined as a non-qualifying take under section 14(3)(b) of the RMA. Therefore, consent is required for the taking of surface water under Rule 3.3.4.23 as a **discretionary activity.**

Proposed activity	Rule reference / description	Comment
Take of up to 27,200 m^3 of surface water per day from a water supply reservoir created by the damming of the Wainui Stream for mining operations.	Rule 3.3.4.23 – taking of surface water that is a non-qualifying s14(3)(b) take is a **discretionary activity.**	The water taken from the Wainui Dam for the continued mining operations will not be used for an individual's domestic needs or animal drinking water and as such, is defined as a non-qualifying take under section 14(3)(b) of the RMA. Therefore, consent is required for the taking of surface water under Rule 3.3.4.23 as a **discretionary activity.**
Take of surface water from dredge ponds as part of sand mining below the water table and use of that water for mining operations.	Rule 3.3.4.23 – taking of surface water that is a non-qualifying s14(3)(b) take is a **discretionary activity.**	This will specifically authorise the taking of the surface water component of the sand/water slurry that is abstracted by the dredge or by excavator below the water surface. The water taken in association with suction dredging /excavation for mining below the water table will not be used for an individual's domestic needs or animal drinking water and as such, is defined as a non-qualifying take under section 14(3)(b) of the RMA. Therefore, consent is required for the taking of surface water under Rule 3.3.4.23 as a **discretionary activity.**
To discharge process water into the ground as a result of iron sand mining operations.	Rule 3.5.4.5 – any discharge of a contaminant into water, or onto or into land that is not specifically provided for by any other rule is a **discretionary activity.**	Process water will be discharged to water and land which is not specifically provided for by another rule in the WRP and as such, consent is required under Rule 3.5.4.5 as a **discretionary activity.**
Placement of tailings (as a slurry) and associated discharges of water to land.	Rule 3.5.4.5 – any discharge of a contaminant into water, or onto or into land that is not specifically provided for by any other rule is a **discretionary activity.**	Water from tailings is not specifically provided for by another rule in the WRP and as such, consent is required under Rule 3.5.4.5 as a **discretionary activity.**
Other incidental discharges of water to water or land associated with various stages of processing.	Rule 3.5.4.5 – any discharge of a contaminant into water, or	Components of the processing system such as the spiral plant and water recycling system may result in the incidental release of water to land where it may enter surface or ground water. As a safeguard, resource consent is sought for these incidental discharges under Rule 3.5.4.5 as a **discretionary activity**.

Proposed activity	Rule reference / description	Comment
	onto or into land that is not specifically provided for by any other rule is a **discretionary activity.**	
Discharge mining process water into water within a dredge pond and water management ponds, and discharge water containing contaminants (naturally occurring sediment) from a mining dredge into water within a dredge pond.	Rule 3.5.4.5 – any discharge of a contaminant into water, or onto or into land that is not specifically provided for by any other rule is a **discretionary activity.**	This will specifically authorise the surface water, and entrained sediment that is captured in the dredge bucket/suction cutter, which then partially overflows from the bucket/suction cutter back into a dredge pond, as well as the discharge of mine process water and entrained sediment to dredge ponds and water management ponds.
Discharge of stormwater and washdown water per day into the Wainui Stream.	Rule 3.5.11.8 – the discharge of stormwater to surface water which does not comply with Rules 3.5.11.4 – 3.5.11.7 is a **discretionary activity.**	The discharge of stormwater that may incorporate washdown water into the Wainui Stream is unlikely to meet the permitted activity standards of Rule 3.5.11.4 and as such, consent is required under Rule 3.5.11.8 as a **discretionary activity.**

Proposed activity	Rule reference / description	Comment
To dam and divert the Wainui Stream for the purpose of creating a water supply reservoir for iron sand mining operations.	Rule 3.6.4.10 – damming of water, diversion, taking and discharging of water and the use or alteration of any associated structure that was lawfully established before the date of notification of this Plan is a **controlled activity.**	The Wainui Dam within the Wainui Stream was lawfully established prior to the date of notification of the WRP. Therefore, the dam itself[18], the damming of water and the diversion, taking and discharging of water related to the passage of water through, past or over the dam is a **controlled activity** under Rule 3.6.4.10.
Place a rock weir in the bed of the Wainui Stream and to divert water through a fish pass channel located adjacent to the Wainui Stream.	Rule 3.6.4.11 – the diversion and any consequent discharge of water from a diversion where the activity was lawfully established before the date of notification of this Plan is a **controlled activity.**	The diversion and consequent discharge of water from the lawfully established diversion of Wainui Stream is a **controlled activity** under Rule 3.6.4.11 as it can meet the relevant standards and terms.
Diversion of groundwater associated with a dredge pond as part of as part of sand mining below the water table.	Rule 3.6.4.13 – the diversion and subsequent discharge of water which does not comply with Rules 3.6.4.6 – 3.6.4.8 and	Mining below the water table will intercept and cause a diversion of groundwater and is a **discretionary activity** under Rule 3.6.4.13.

[18] Section 3.6 of the WRP states that Chapter 4.2 (River and Lake Bed Structures) deals with the adverse effects of the structure where damming and diverting does not occur.

Proposed activity	Rule reference / description	Comment
	4.2.9.1 – 4.2.9.3 is a **discretionary activity.**	
Undertake iron sand mining operations and associated land disturbance activities.	Rule 5.1.4.15 – soil disturbance and vegetation clearance activities in High Risk Erosion Areas is a **discretionary activity**.	The site is located in a coastal dune environment and is defined as a High-Risk Erosion Area under the WRP. Mining operations in the Central and Southern blocks will result in vegetation clearance and soil disturbance activities greater than 1000 m^3 in volume within a 12-month period and as such, consent is required under Rule 5.1.4.15 as a **discretionary activity.**
To discharge mine overburden onto land in the Central and Southern Blocks for the purpose of rehabilitating mined areas.	Rule 5.2.5.3 – the discharge of overburden onto or into land and any subsequent discharge of contaminants into water or air is a **discretionary activity.**	The discharge of overburden within a High-Risk Erosion Area will exceed 5000 m^3 within a three-year period. Therefore, consent is required under Rule 5.2.5.3 as a **discretionary activity.**

5.1.4 Additional consent under the WRP

Table 5.4: Application to discharge contaminants to air

Proposed activity	Rule reference / description	Comment
To discharge contaminants to air (dust) from the mineral extraction (mining) activity.	Rule 6.1.9.2	Based on the Air Quality Assessment (**Appendix S**), TIL is of the view that a resource consent to discharge dust from the site is not required. However, in recognition of WRC's initial view that an air discharge consent may be required for the Project, an application is included should the Panel be of the view that a resource consent is required. TIL intends to clarify WRC's position on this matter.

5.1.5 Waikato Regional Coastal Plan

The WRCP includes the provisions that apply across the CMA of the Waikato Region and is the Operative WRCP.

Table 5.5 below identifies the activities that require consent under the WRCP to ensure the future operation of the Taharoa Mine site. Overall, resource consent is required under the WRCP as a **discretionary activity.**

Table 5.5: Resource consents required under the WRCP

Proposed activity	Rule reference / description	Comment
Discharge of up to 32,600 m^3 per day of stormwater and process wastewater to the CMA.	Rule 16.3.6 – the discharge of water from stormwater structures into the CMA which does not comply with the conditions for a permitted activity is a **controlled activity.**	The proposed discharge of stormwater and process wastewater to the CMA (when unable to discharge to land) is not from a natural waterbody, not run-off collected from a road, from an area greater than 1 hectare and may contain substances that could cause the production of scums or foams or floatable suspended materials and as such, cannot meet the permitted activities standards in Rule 16.3.5. The discharge of stormwater/process water to the CMA will not result in the production of conspicuous oil, or grease films, scums or foams, or floatable suspended materials outside a 10 m radius of the discharge point or cause significant adverse effects on aquatic life. Therefore, consent is required as a **controlled activity** under Rule 16.3.6.
Discharge up to 75,000 m^3 per day of iron sand slurry water into the CMA during shiploading operations.	Rule 16.6.13 – any activity in the CMA involving, in any 12-month period, disturbance to the foreshore or seabed and involving the deposition of material on the foreshore or seabed in quantities greater than 50,000 m^3 is a **discretionary activity.**	The discharge of iron sand slurry water to the CMA during shiploading processes will result in the deposition of over 50,000 m^3 of material onto the seabed and therefore consent is required as a **discretionary activity** under Rule 16.6.13. The deposition of material will not contain any contaminants or disturb shellfish beds, fish spawning areas or areas of wāhi tapu.
Operate, maintain and replace existing mooring buoy (SBM) and associated structures in the CMA for the purpose of shiploading.	Rule 16.4.8 – the erection, placement, use of or occupation of space by a swing mooring of a vessel outside of any Zoned Mooring Areas is a **discretionary activity.**	The existing mooring buoy (the Taharoa Port) is a permanent swing mooring located outside of a Zoned Mooring Area. The mooring is not located above any shellfish beds and has been designed to withstand coastal processes, to safely accommodate the vessels to be moored. As such, consent is required as a **discretionary activity** under Rule 16.4.8. The maintenance, repair and replacement of the SBM, if required, will include all associated activities (i.e. disturbance, discharge, diversion, water take, and deposition).
Operate, maintain and replace the existing pipelines '1' and '2' in the CMA for the purpose of shiploading, including a	Rule 16.4.24 – the erection, placement, use of, occupation of space by, extension, reconstruction, alteration, removal or demolition of a	The use and occupation of the existing pipelines, including an extension of pipeline 2 on the seabed for the transportation of ironsand slurry to the

Proposed activity	Rule reference / description	Comment
500 m extension to pipeline '2'. This includes associated occupation.	structure in the CMA is a **discretionary activity.**	bulk carriers requires consent as a **discretionary activity** under Rule 16.4.24. The maintenance, repair and replacement of the pipelines, if required, will include all associated activities (i.e. disturbance, discharge, diversion, water take, and deposition).
Use of vehicles in the CMA for shiploading purposes.	Rule 16.6.3 – the use of motorised vehicles in the CMA for any purpose which does not comply with the conditions for a permitted activity in Rule 16.6.2 is a **discretionary activity** provided it complies with the standard and terms stated in the rule.	The use of vehicles in the CMA will not comply with the conditions for a permitted activity and therefore requires resource consent under Rule 16.6.3 as a **discretionary activity.** Vehicles will not be used on shellfish beds, vegetated areas, bird nesting areas during nesting season or in any area identified as waahi tapu. No contaminants will be discharged from the vehicle.

5.1.6 Proposed Waikato Regional Coastal Plan

The PWRCP was notified on 18 August 2023, and hearings were held from February to April 2025. Decisions were made by the independent Hearing panel on the 14 October 2025.

Table 5.6 below identifies the activities that require consent under the PWRCP to ensure the future operation of the Taharoa Mine site. Overall, resource consent is required under the PWRCP as a **discretionary activity.**

Table 5.6: Resource consents required under the PWRCP

Proposed activity	Rule reference / description	Comment
Discharge of up to 32,600 m^3 per day of stormwater and process wastewater to the CMA.	Rule WD-R8 – the discharge of contaminants into the coastal marine area not identified as permitted, controlled or restricted discretionary elsewhere in this plan is a **discretionary activity**. Rule WD-R18 - the discharge of stormwater to the coastal marine area not otherwise provided for is a **discretionary activity**.	The discharge of contaminants and stormwater to the CMA which is not otherwise provided for triggers consent as a **discretionary activity** in accordance with Rules WD-R8 and WD-R18. These rules are combined here as the stormwater and process water is discharged to the CMA in a combined manner.
Discharge and deposition of up to 75,000 m^3 per day of iron sand slurry water into the CMA during shiploading operations.	Rule WD-R8 - Discharge of contaminants into the coastal marine area not identified as permitted, controlled or restricted discretionary elsewhere in this plan is a **discretionary activity**. Rule DD-R22 – deposition of sand onto the foreshore and seabed in any 12-month period not otherwise	The discharge of iron sand slurry water to the CMA during shiploading processes will result in the deposition of over 50,000 m^3 of material onto the seabed. The sand deposition will not disturb saltmarsh, seagrass, mangroves, bird foraging areas during nesting season, fish passage, or shellfish beds, is not within an area identified in Schedule 7A and will not

Proposed activity	Rule reference / description	Comment
	permitted is a **discretionary activity.**	contain contaminants, marine pests or harmful aquatic organisms.
Operate, maintain and replace existing mooring (SBM) in the CMA for the purpose of shiploading.	Rule MOA-R5 - The erection, placement, maintenance, replacement, use of and occupation of space by a mooring (including the vessel when tied to the mooring), within the Port of Taharoa mooring area identified in Schedule 2, and any associated disturbance to the seabed. Where one permanent mooring is located within the Port of Taharoa mooring area is a **controlled activity.**	The SBM mooring is a **controlled activity**. If maintenance, repair, or replacement of the SBM is required, this includes all activities associated with its construction (i.e. disturbance, discharge, diversion, water take, and deposition). The matters of control are listed below. 1. The design, construction and maintenance of the structure. 2. Management of biosecurity risks and removal of biofouling.
Operate, maintain and replace the existing pipelines '1' and '2' in the CMA for the purpose of shiploading, including a 500 m extension to pipeline '2'. This includes associated occupation.	Rule STR-R13 – to erect, construct, occupy space or use of any structure that is not otherwise provided for by a specific rule in the plan is a **discretionary activity**.	If maintenance, repair or replacement of the pipelines is required, this includes all activities associated with its construction (i.e. disturbance, diversion discharge, water take, and deposition).
Use of vehicles in the CMA for shiploading purposes.	DD-R6 – disturbance in the CMA not otherwise provided for is a **discretionary activity.**	The use of a vehicle in the CMA for shiploading is not provided for within the permitted activity rule and is therefore a **discretionary activity** under Rule DD-R6.

5.1.7 Waitomo District Plan and Proposed Waitomo District Plan

The Proposed District Plan is currently at the appeals stage of the process and is largely treated as operative under section 86F of the RMA. Within the Proposed Waitomo District Plan (**PWDP**), the site is zoned Rural Production. The mine is listed in Schedule 1 of the Rural Production Zone chapter as a rural production site and of regional significance as a significant mineral resource. This zone seeks to recognise and provide for the economic and social benefits afforded by listed rural production sites and their unique operational requirements. Within this zone, 'quarrying activities' is a permitted activity.

The PWDP generally seeks to enable scheduled activities in the rural production zone, provided that the adverse effects of the activities are internalised, or avoided, remedied or mitigated as far as practicable through methods such as management practices, rehabilitation plans and mitigation measures. This application is consistent with the relevant objectives and policies in this regard.

Under the Operative District Plan (**ODP**) the site is zoned Industrial. Within the Industrial Zone, any activity which complies with the conditions for permitted activities is permitted.

In consultation with WDC, the Council noted that it had notified the PWDP and that it was likely that a number of the PWDP provisions would be operative when the substantive application was lodged. This is now the case as only a handful of provisions have been appealed. Under these provisions, resource consent would be required to mine up to the boundary of the Central and

Southern Block as a restricted discretionary activity (because mining would not comply with a permitted activity setback standard). However, TIL has existing use rights in relation to the mining of the Central and Southern Blocks, meaning that resource consent is not required under these rules.

The mine was established in 1973 by the New Zealand government. As such the establishment of the mine pre-dates the RMA, and the PWDP, by a significant period of time. Mining of the Central and Southern Blocks was lawfully established, authorising TIL to mine up to the boundary of adjoining sites. Mining has been continuous since it was first established, and has been of a consistent character, intensity and scale. The effects of the Project are also of the same character, intensity and scale, and this application ensures that adverse effects are internalised, or avoided, remedied or mitigated as far as practicable.

The mine therefore benefits from existing use rights pursuant to section 10 of the RMA for mining and associated activities within the Central and Southern Blocks.

5.1.8 Permitted activities

Table 5.7 outlines the permitted activities that apply to the mining activity.

Table 5.7: Permitted activities relevant to the proposed activity

Proposed activity	Rule	Comment on compliance
The dam on the Wainui Stream and its associated weir, culverts and other structures.	NES-F clause 60	The dam and associated structures all existed on 2 September 2020 and are thus exempt from subpart 3 of the NES-F relating to fish passage.
The discharge of uncontaminated (clean) water from mining below the water table to the Mitiwai Stream to augment flow levels.	WRP Rule 3.5.4.4 Discharges of water to Water.	Monitoring of the clean water discharge is undertaken to ensure there are no adverse effects on the water quality of the Mitiwai Stream.
Planting for rehabilitation and streamside enhancement within the bed of Wainui Stream and Mitiwai Stream.	WRP Rule 4.3.8.1 Introduction and Planting of Plants	The planting will not result in any increase in flooding effects or obstruct the stream bed. Suspended solids standard 4.2.21 will be complied with during planting.
Discharges to air from mining operations.	WRP Rule 6.1.16.1 Mineral Extraction, Size Reduction, Screening and Storage	Section 9.0 of **Appendix S** - Air Quality Assessment, assesses compliance with Rule 6.1.16.1, which in turn refers to compliance with section 6.1.8 of the WRP. As per the assessment, PDP considers it extremely unlikely that direct health effects can be associated with the type of dust generated by TIL's mining operations in the Central and Southern Blocks. The assessment also states that based on the FIDOL[19] assessment, it is unlikely that dust discharges from the Central and Southern Blocks

[19] Frequency, Intensity, Duration, Offensiveness, Location.

Proposed activity	Rule	Comment on compliance
		will cause nearby receptors to experience nuisance effects, especially if the mitigation and dust control measures are implemented (refer to section 4.13 of this report). PDP notes that there will be some high wind conditions where particulate matter will discharge beyond the boundary of the site, but this would occur naturally due to the exposed coastal nature of the site. Overall PDP considers that dust emissions at the site can be controlled appropriately by the dust mitigation and control measures so that offensive and objectionable effects are not experienced at nearby receptors.[20] PDP therefore considers that WRP Rules 6.1.8.c and 6.1.8.d can be complied with as long as the appropriate mitigation and dust control measures are implemented (meaning that Rule 6.1.16.1 will also be complied with). Refer to **Appendix S** for further information. Therefore, a consent is not required under Rule 6.1.16.1 of the WRP. Permitted Activity Rule 6.1.16.1 is also circular because it requires, among other things, that there be no objectionable or offensive discharge beyond the boundary of a site. We have confirmed with WRC that it will require any consent granted to include a condition prohibiting objectionable or offensive discharge beyond the boundary of a site. There is therefore no utility in the Panel granting a consent if no discharges can actually be authorised. TIL is also proposing conditions in line with what WRC have indicated they would impose on any dust discharge consent. It is also noted that in granting the parts of the 2020 RMA Application for the Central and Southern Blocks last year, neither WRC nor the Panel identified that an air discharge consent was required. However, in the event that the Panel disagree, this application gives the Panel scope to grant an air discharge permit under Rule 6.1.9.2 if it deems it necessary to do so.

5.2 Wildlife Approval

A general Wildlife Approval to:

a. capture, temporarily hold and relocate lizards prior to site clearance works for the purpose of protecting animals within the works footprint; and

[20] PDP have identified nearby sensitive receptors as marae, school and residences.

b. incidentally kill lizards, recognising that trapping / handling activities carry some risk of injury or mortality, and that any remaining undetected lizards may also incidentally be killed during site works.

5.3 Heritage New Zealand Pouhere Taonga Act 2014

A general Archaeological Authority is sought for works associated with mining of the Central and Southern Blocks on the Taharoa C Block. TIL has also sought approval of an archaeologist to carry out the activity to be authorised under the Authority.

6 Persons and groups likely to be affected by the Project and/or persons who must be invited to comment

The following persons and groups have been identified as parties who must be invited for comment and/or are likely to be affected by the Project. This list has been compiled in accordance with section 53 of the FTAA, with reference to section 13(4)(j).

Relevant local authorities:

(a) Waikato Regional Council
(b) Waitomo District Council

Relevant iwi authorities and Treaty settlement entities:

(a) Te Ruunanga o Ngāti Mahuta ki te Hauaaruru Charitable Trust (as representatives of Ngaati Mahuta ki te Hauaauru hapuu)
(b) Maketuu Marae
(c) Aaruka Marae
(d) Te Kooraha Marae
(e) Waikato-Tainui (also Ngāa marae o te takutai moana o Waikato-Taini as an Unsettled Treaty Settlement Entity)
(f) Maniapoto Māori Trust Board now Te Nehenehenui (the post-governance settlement entity for Ngāti Maniapoto).

Applicant groups under the Marine and Coastal Area (Takutai Moana) Act 2011 (MACA):

(a) Te Ruunanga o Ngāti Mahuta ki te Hauaaruru Charitable Trust (as representatives of other Ngāti Mahuta)
(b) Ngāti Apakura
(c) Kāwhia Tangata, Aotea Whenua and Whaingaroa Moana
(d) Maniapoto Iwi (through Te Nehenehenui)
(e) Nga Tini Hapu o Maniapoto

The landowner:

(a) The Proprietors of Taharoa C Block Incorporated (who have provided written approval to the Project, consent to the Project proceeding on Māori land, and consent to the archaeological authority application – see **Appendix LL, Appendix D** and **Appendix X**, respectively)

The occupiers and occupiers of the land adjacent to the land to which the substantive application relates:

(a) Te Huia Pihopa Trust (landowner)
(b) David John Keepa Kupa Whanau Trust (landowner)
(c) The Kana Whanau (landowner)
(d) The Roy Wetini Whanau Trust (landowner)
(e) Tukotahi Tuteao Whanau Trust (landowner)
(f) Taharoa Lakes Trustees (entity who owns and is responsible for management of Lake Taharoa)
(g) The owners and occupiers identified in **Appendix B** to this application.

Other groups:

(a) Department of Conservation

The following additional persons and groups are captured by section 53 of the FTAA:

The Minister for the Environment and other relevant portfolio Ministers:

(a) Minister for Economic Growth
(b) Minister for the Environment
(c) Minister for Primary Industries
(d) Minister of Conservation
(e) Minister for Arts, Culture and Heritage

Relevant administering agencies:

(a) James Palmer, CEO of Ministry for the Environment
(b) Penny Nelson, Director General of Conservation at the Department of Conservation
(c) Andrew Coleman, Chief Executive of Heritage New Zealand Pouhere Taonga

The relevant persons and groups listed in clause 13 of Schedule 5 (in relation to the resource consent application):

(a) Director General of Conservation

The relevant persons and groups listed in clause 4 of Schedule 7 (in relation to the Wildlife approval application):

(b) The New Zealand Conservation Authority
(c) Waikato Conservation Board
(d) The New Zealand Fish and Game Council
(e) The Game Animal Council

7 Consultation

In relation to a substantive application for a listed project:

(a) Section 29(1)(a) of the FTAA requires the authorised person for a listed project to undertake consultation with the parties and groups referred to in section 11, before lodging a substantive application. What is required in respect of consultation is not set out in the FTAA.

(b) Section 11 refers to the following parties and groups:

   a. relevant local authorities; and
   b. any relevant iwi authorities, hapu and Treaty settlement entities;
   c. relevant applicant groups with MACA applications; and
   d. relevant administering agencies.

(c) Section 43 of the FTAA requires applications to contain the information required by section 13(4). Relevantly, under section 13(4)(k) this includes:

   a. a summary of consultation undertaken for the purposes of section 29, and any other consultation undertaken on the project with the persons and groups referred to in section 13(4)(j) (who are set out in section 6 above); and
   b. a summary of how consultation has informed the project.

In accordance with these provisions, TIL has undertaken pre-application consultation with the relevant section 11 parties. A summary of the consultation undertaken and how consultation has informed the project is set out below.

7.1 Summary of consultation undertaken

TIL initiated consultation on the substantive application with the relevant section 11 parties and additional potentially affected parties between April and June 2025.

For the majority of the parties, consultation was initiated by way of a letter to the relevant parties, with a nine-page summary of the application which provides an overview of the Project, a description of the proposed works, the approvals sought (being resource consents, archaeological authorities, and a wildlife permit), outlines the benefits of the Project, and summarises the potential adverse effects on the environment and consistency with the relevant planning framework. In the letter, TIL sought written feedback on the application and/or to meet with the relevant party or group to discuss the application.

The relevant section 11 parties are listed under the headings for “relevant local authorities”, “relevant iwi authorities, hapu and Treaty settlement entities”, “administering agencies” and “MACA applicants” in section 6 above.[21]

TIL also initiated consultation with the landowner, Taharoa C, and the following parties who were notified of the 2020 RMA Application in 2023 (and which otherwise did not fall under section 11):

(a) Roy Wetini Whaanau Trust
(b) Kana Whaanau
(c) Te Huia Pihopa Trust
(d) John David Keepa Kupa Whaanau Trust
(e) Taharoa Lakes Trust

[21] Noting that combined letters were sent where parties are MACA applicants and Treaty settlement entities or relevant iwi authorities and hapu.

(f) Harbourmaster

In total, TIL reached out to 21 parties and groups.

A Consultation Register setting out key correspondence, meetings / hui and written feedback received during the consultation process is set out in **Appendix Y**.

Specific proof of consultation in relation to the Wildlife Approval has been included in Appendix KK, in accordance with Schedule 7, clause 2(1)(n) of the FTAA.

As demonstrated by **Appendix Y and Appendix KK**, TIL:

(a) took appropriate steps (and in some cases, extensive steps) to consult with the relevant parties in respect of the substantive application, including following-up multiple times with those parties who indicated that they wished to meet to arrange a suitable meeting time and location; and
(b) provided a detailed summary of the application, updates, further information and application materials to meet the parties' requests as soon as reasonably possible.

Overall, as a result of TIL's consultation efforts:

(a) Taharoa C provided its written consent for the Project to proceed on Māori land and its written consent to the Archaeological Authority Application;
(b) Written feedback was received from Taharoa C, Roy Wetini Whaanau Trust, Te Kooraha Marae, Taharoa Lakes Trust, WDC, WRC, and the HarbourMaster;
(a) Meetings / hui were held with eight parties – Taharoa C, WRC, Heritage New Zealand Pouhere Taonga, Department of Conservation, Te Kooraha Marae, Te Ruunanga o Ngaati Mahuta ki to Hauaaruru Charitable Trust, Roy Wetini and Whaanau, Waikato-Tainui and Taharoa Lakes Trust;
(b) Eight parties did not respond to TIL's initial consultation offer, or engage with TIL;
(c) Consultation with Te Nehenehenui is on-going;
(d) TIL provided regular updates on the status of the application and development of the application materials to parties and groups who were interested in reviewing the application documents;
(e) TIL provided the draft Archaeological Authority Application and supporting documents to the three Marae, Te Ruunanga o Ngaati Mahuta ki to Hauaaruru Charitable Trust and Waikato-Tainui for their review and feedback;
(f) TIL provided final application materials and conditions prior to lodgement to all parties who had requested them before lodgement – ahead of them being made available by the EPA. This includes Taharoa C, Roy Wetini Whaanau Trust, Taharoa Lakes Trust, Te Kooraha Marae, DoC, Te Nehenehenui and Te Ruunanga. Specific relevant reports were also circulated to Heritage New Zealand prior to lodgement; and
(g) TIL has, overall, ensured that the views of those parties who engaged in the consultation process are understood so that the Project could be appropriately informed and/or modified to address any issues.

In addition to consultation specifically undertaken in respect of TIL's substantive application, TIL has a long history of engaging with the relevant parties and groups. Unlike a new development, the Mine has been operating for over 50 years. It is also located in a remote location, nearby to a small town and community – many members of that community, including Ngati Mahuta tribal members, are employed by TIL and work at the mine or are the family of employees at the mine. Many of them are also hapu beneficiaries of Taharoa C (the landowner). As a result, TIL knows the relevant parties and groups well, and has been engaging with them in different forms, and as part of different processes, since TIL acquired the business in 2017. Previous owners of the

business were in a similar position. Some of the processes referred to include:

(a) Historical RMA consenting processes, including the 2020-2025 reconsenting process for the Central and Southern Blocks of the Mine (which this application replaces);
(b) RMA planning processes, including in respect of the Proposed Waitomo District Plan and the Proposed Waikato Regional Coastal Plan;
(c) Annual consultation meetings held with specified stakeholders in accordance with TIL's existing resource consents for the Central & Southern Block; and
(d) Ad hoc / day-to-day engagement on various issues arising in respect of the operation of the Mine – initiated by TIL or by the relevant party.

As noted earlier, between the years of 2020 and 2025, TIL progressed the 2020 RMA Application– an application that was substantially the same as the resource consent component of this application. The 2020 RMA Application was limited notified in 2023 to the parties listed above. A number of those parties made submissions on the application and then attended and presented at a week-long hearing of the application in August 2024. As noted in section 2.8 of this report, TIL went on to appeal the decision to the Environment Court. Four parties joined that appeal as interested parties – being the Roy Wetini Whaanau Trust, Taharoa Lakes Trust, Te Ruunanga o Ngaati Mahuta ki Te Hauaauru and John David Keepa/Kupa Whanau Trust. The appeal is now on hold pending the filing of this substantive application. As a result of the RMA process, TIL has become very familiar with submitters' and WRC's position on the reconsenting of the Central & Southern Blocks of the Mine. A number of issues raised by submitters and WRC were addressed by TIL as part of the RMA process, including by way of additional proposed conditions of consent. These responses have been incorporated into the substantive application.

As a result of the above engagements, TIL believes it has a clear understanding of the parties' position and key areas of interest.

7.2 Summary of how consultation has informed the Project

To summarise the key takeaways from TIL's consultation on its substantive application:

(a) Taharoa C has provided its written consent to the Project being undertaken on Māori land and in providing this consent explained the economic, cultural and social benefits that the Mine has delivered to the people of Taharoa;
(b) WRC advised that it is supportive, in principle, of resource consents being granted for 35 years;
(c) None of the other parties who engaged with TIL had advised that they oppose the application being granted;
(d) WRC, the Roy Wetini Whaanau Trust, Te Kooraha Marae and the Taharoa Lakes Trust have signalled their support for the conditions imposed by the 2024 RMA Hearing Panel Decision – TIL has therefore used those conditions as a starting point for this substantive application;
(e) Some of the iwi groups and other affected parties raised questions about aspects of the substantive application, including TIL's decision to proceed with a Fast-track application and aspects of TIL's operations and environmental management methods. TIL clarified these points through the consultation process in various communications (letters and emails) and in meetings;
(f) The Roy Wetini Whaanau Trust, Te Kooraha Marae, Te Ruunanga o Ngaati Mahuta ki to Hauaaruru Charitable Trust and the Taharoa Lakes Trust have raised specific issues in respect of the application. These primarily relate to environmental management methods and associated conditions of the proposed resource consents – namely in relation to on-going consultation, setbacks, rehabilitation, opportunities to exercise kaitiakitanga as it relates to the mining activity, the role of kaumatua in respect of the archaeological authority

application and management of effects on surface water and aquatic ecology. TIL has considered each one of these issues and updated the 2024 Hearing Panel conditions as considered necessary to respond to these matters.

Set out below is a high-level summary of key feedback received from each party that has engaged with TIL and how this has informed the Project. A more detailed summary is provided in the Summary of Consultation provided in **Appendix Z** and should be read in conjunction with the following.

7.3 Local authorities

7.3.1 Waikato Regional Council

WRC identified three key matters of interest being the type of resource consents that would be sought for mining that interacts with groundwater, whether an air discharge consent is required for the Central and Southern Blocks and TIL's proposed conditions of consent.

WRC wanted to ensure that all the necessary resource consents were sought to allow for ongoing mining activity on the Central and Southern Blocks to be authorised, including where mining interacts with groundwater. In that regard, WRC has confirmed its agreement that resource consents sought for diversion of groundwater and surface water take associated with this activity, as applied for in this application, are appropriate. WRC also advised TIL to consider a single resource consent document for the diversion and surface water take associated with this activity (under rules 3.6.4.13 and 3.3.4.23 of the WRP). We have accepted that feedback and taken that approach in the proposed consent conditions. WRC was also of the strong view that a third resource consent sought for this activity as part of this application, for the discharge of contaminants to surface water, may be a permitted activity under Rule 3.5.4.4 of the WRP. However, a consent for this activity (under rule 3.5.4.5 of the WRP) has been sought as part of this application out of an abundance of caution. This is because the water and sediment picked up by the dredge and then discharged from the dredge back into the dredge pond, could be considered a contaminant given the broad definition of contaminant under the RMA (albeit a natural form of contaminant).

As referenced earlier in this report, WRC is also initially of the view that TIL requires an air discharge permit for the Central and Southern Blocks due to non-compliance with the WRP permitted activity air discharge Rule 6.1.16.1. This view is based on the proximity of mining operations to adjacent properties and recent engagement in relation to compliance. However, the Air Quality Assessment in **Appendix S** concludes that the relevant rule can be complied with. In addition, no air discharge consent was required as part of the 2020 RMA Application. TIL expressed this view to WRC during consultation and has also proposed a range of *Augier* conditions to manage dust effects and ensure that permitted activity air discharge Rule 6.1.16.1 is adhered to. WRC has not yet confirmed its position on this matter. To address this point of potential disagreement, the scope of TIL's resource consent application includes an application for an air discharge consent, if the Panel determines that such a consent is required. However, we continue to be of the same view as TIL, that an air discharge consent is not required.

TIL shared a copy of its draft consent conditions with WRC on 17 October and will be meeting with WRC on 31 October to discuss the conditions further.

WRC provided notice pursuant to Section 30(3)(b) of the FTAA on 01 December 2025[22] (see **Appendix MM**). In that letter, WRC concludes that section 165ZI of the RMA does not apply to TIL's application to occupy space in the common marine and coastal area, given that "there are

[22] TIL's substantive application has been lodged within 3 months of this date therefore satisfying the requirements of section 30(6) and clause 5(1)(l) of Schedule 5 of the FTAA.

no aquaculture activities for which a consent is held, nor is there an application for an aquaculture activity located within the area of the proposed/existing activities within the Coastal Marine Area". However, we note that section 165ZI of the RMA does not apply to this Application because section 165ZI(1) is only applicable to applications that seek "to occupy space in the common marine and coastal area for aquaculture activities". TIL is not seeking to occupy space in the common marine and coastal area for the purpose of an aquaculture activity, therefore section 165ZI does not apply.

7.3.2 Waitomo District Council

WDC advised that the decisions version of the PWDP would likely be released and parts may be operative by the time the substantive application is lodged.

WDC also advised that Ngaati Mahuta have published their own Environmental Management Plan that needs to be considered. The Project is generally consistent with this plan, as set out in the assessment enclosed to this application (**Appendix AA**).

These matters had already been considered so no adjustments were considered necessary to the substantive application.

WDC provided notice pursuant to Section 30(3)(b) of the FTAA on 01 December 2025. This notice provides feedback on a point unrelated to section 30 – it notes that TIL's application is relying on existing use rights under section 10 of the RMA and that further information would be useful in assessing the activities for which existing use rights are claimed. The EPA did not require this information to confirm compliance with clause 5(1)(h), 5(2) and 5(3) of the FTAA when it assessed completeness of this application when it was originally lodged with the EPA on 31 October 2025. We have therefore advised WDC that the application is being re-filed as soon as possible, and that TIL is agreeable to providing this further information during processing, should it be requested by the Panel.

7.4 Iwi authorities, hapu and Treaty settlement entities and other consulted parties

The following groups provided feedback as part of the consultation process:

Taharoa C – the landowner;

Te Ruunanga o Ngaati Mahuta ki to Hauaaruru Charitable Trust – as representatives of Ngaati Mahuta hapu and MACA applicant;

Te Kooraha Marae – as representatives of Ngaati Mahuta hapu;

Taharoa Lakes Trustees – the entity entrusted with protection of the Taharoa Lakes system; and

The Roy Wetini Whaanau Trust – immediate neighbours to the site.

As noted above, none of the groups oppose the application.

Taharoa C has provided its written consent for the Project to be undertaken on Māori land (See **Appendix D**), and in doing so expressed its view that it supports the mining operation and:

i. The Mine has brought long-lasting socio-economic benefits;
ii. The Mine has enabled a number of tangata whenua to retain and remain on their ancestral land in Taharoa;
iii. The Mine has enabled the land to be used in a productive way to the benefit of local Ngaati Mahuta; and

iv. In its view, TIL is committed to ensuring that the legacy of mining doesn't harm the cultural and ecological wealth of the area.

The other parties do not oppose the application but have expressed concerns about specific matters, primarily relating to mining setbacks, management of effects on surface water and aquatic ecology, rehabilitation, ongoing consultation, access to information, opportunities to exercise kaitiakitanga as it relates to the mining activity, and associated conditions of consent.

These concerns have informed the substantive application as follows:

v. **Panel conditions as a starting point** – Consistent with the feedback received, TIL has used the set of resource consent conditions imposed by the Panel as part of the 2024 Hearing Panel Decision, as the starting point for its proposed conditions of consent for the resource consents sought as part of its substantive application

vi. **Mining Setbacks** – the mining setbacks from perennial waterbodies (30 m) and MHWS (100 m) are supported by all parties and are retained in the proposed conditions of consent. However, the additional setbacks[23] sought by the groups outlined above through consultation, which stem from the 2024 RMA Hearing Panel Decision, have not been included given that the various technical specialist reports that support this application have not identified any effects-based reasons for those setbacks to be applied. The technical specialists have recommended a range of measures to mitigate potential effects on adjacent properties, surface water bodies and natural inland wetlands – the blunt management tool of applying increased setbacks is not needed when other mitigation measures are being applied to manage effects. This matter also needs to be considered in light of the significant operational and economic impact of applying large setbacks across the site. The value of the iron product increases towards water bodies, and the quantity of material that would be lost from the proposed setback areas (in volume and economic terms) will significantly impact the TIL's ability to fill ships and meet customer commitments and deliver the economic and other benefits that have been forecasted. TIL has calculated that a 100 m setback around the perimeter of the site (excluding the 100 m coastal setback) would reduce the mine's potential revenue by over $1.5 billion.[24] It is therefore vitally important to TIL that setbacks are not beyond what it has proposed. To do so would be inconsistent with the requirement under the FTAA that conditions are not more onerous than necessary to address the reason for which those conditions are set (section 83, FTAA).

vii. **Management of effects on surface water and aquatic ecology** – The proposed conditions of consent require minimum flows through and downstream of the Wainui Stream dam and in the fish pass to maintain fish passage, including for grey mullet. They also include comprehensive measures to ensure the effectiveness of the fish pass, including on-going maintenance and monitoring, and a review and update of TIL's existing Wainui Stream Enhancement Plan, in consultation with tangata whenua groups. Consent is sought to allow abstracted water for mining purposes to be used for flow augmentation purposes both at the dam/fish pass and in the Mitiwai Stream should groundwater drawdown in the vicinity reduce the stream base flow. Lake Taharoa water levels are to be monitored and in addition to a minimum "stop take" lake level, a lake level that will trigger the need for wetland monitoring and response mechanisms to be implemented in the advent of adverse effects on the wetlands is proposed.

[23] 100 m from the Mitiwai Stream, 200 m from third party properties.

[24] This calculation is based on the assumption that there is a 100m setback, the average mining depth is 50m, the perimeter is 11km (along the Mitiwai and around the eastern boundary of the Central and Southern Block (excluding the western boundary along the CMA already subject to a 100m setback and the Northern Block boundary)), there are 2.8 tonnes of product per m^3 of headfeed, approximately 20% yield and approximately 50% usable material.

viii. **Rehabilitation** - TIL proposes conditions that require progressive interim and final rehabilitation to be undertaken in accordance with a Site Rehabilitation Plan and Conceptual Site Closure Plan. This is the same general approach as the existing resource consents, however the proposed conditions require that the contents of the plans will be more detailed and replacement plans will be required. The replacement plans will need to be provided to WRC for certification within 12 months of the consents being granted. Future landforms and groundcovers will be determined with the input of the landowner, however, they will be cognisant of the views expressed by mana whenua for the site to be returned to a largely unvegetated dune environment with vegetation along the perennial waterbodies. A priority stabilisation area has also been proposed adjacent to the nearest sensitive area, where stabilisation will be prioritised within three months of mining activity being completed.

ix. **Ongoing consultation** - the 2024 RMA Hearing Panel Decision imposed a condition requiring stakeholder meetings with Waikato Regional Council, Proprietors of Taharoa C Incorporation Limited, Taharoa Lake Trustees, Te Ruunanga o Ngaati Mahuta ki te Hauaauru, Te Kooraha Marae, Aaruka Marae, John David Keepa Kupa Whaanau Trust, Te Huia Pihopa Trust, Roy Wetini Whaanau Trust, Tukotahi Tutaeo Whaanau Trust and the Department of Conservation. While TIL's preference is to have smaller meetings with relevant groups directly and as required, in recognition of the community views and desire for certainty, this condition is included in the proposed conditions in **Appendix CC** with some modifications to more clearly set out the scope and other arrangements for the meetings. This includes that the meetings relate to resource management matters and address monitoring information in the period since the last meeting, have an agenda prepared in advance, and that they occur annually. The proposed conditions also provide for mana whenua engagement when preparing the final Environmental Management Plan for the site and in preparing a fish pass monitoring programme.

x. **Access to information** - The proposed conditions include a requirement for TIL to establish a public website with various information including the Annual Works Plan, Environmental Management Plan, monitoring reports, water abstraction and rainfall data, stormwater discharge records, and dust monitoring data. The proposed conditions also require that TIL shares an Annual Monitoring Report with the Department of Conservation, the Proprietors of Taharoa C Incorporation Limited, Taharoa Lake Trustees, Te Ruunanga o Ngaati Mahuta ki te Hauaauru, Tukotahi Tuteao Whaanau Trust, Te Kooraha Marae, Aaruka Marae, and WRC. The report will provide a summary of all environmental monitoring, data analysis, rehabilitation efforts, compliance issues, and proposed changes to enhance environmental performance. Additionally, it will report on any complaints and/or feedback received during the stakeholder meetings set out above.

xi. **Opportunities to exercise kaitiakitanga and incorporate maatauranga Māori into effects management** - The proposed conditions provide for tangata whenua to exercise kaitiakitanga and incorporate mātauranga Māori into environmental management, including by requiring the EMP to include cultural health indicators and requiring the Conceptual Site Closure Plan to protect Māori reserves and allow for customary practices. As above, the proposed conditions also provide for mana whenua engagement when preparing the final EMP for the site and in preparing a fish pass monitoring programme. The Archaeological Management Plan also incorporates notice to local kaumātua if koiwi or archaeological remains are discovered.

xii. **Review conditions**: A review condition has been included in the proposed conditions to ensure that WRC retains the ability to review the consents if unanticipated adverse effects are identified.

xiii. **The role of kaumātua in respect of the archaeological authority application:** The proposed conditions and AMP for the archaeological authority specify that kaumātua nominated by Taharoa C will be involved in the management of archaeological discoveries across the site, namely those that provide evidence of Māori occupation, kōiwi and taonga. TIL has a long-established history of working with three kaumātua nominated by Taharoa C and it wishes to continue this practice – to respect the wishes and the kaitiaki role of Taharoa C, the Māori landowner. In accordance with the proposed conditions of the Archaeological Authority Application and the associated Archaeological Management Plan, these kaumātua will be informed in advance of works that are to be monitored by an archaeologist under the Authority, will be informed when archaeological material relating to Māori occupation, koiwi or taonga are discovered, may inspect any kōiwi that are discovered, may access the site to undertake tikanga practices, and will receive copies of any reports prepared in relation to any finds. They will also be consulted on appropriate action to take when taonga or archaeological material relating to Māori occupation is found and will organise the reinternment or removal of kōiwi from the site and appropriate cultural ceremonies.

7.5 Customary marine title applicant groups

Te Ruunanga o Ngaati Mahuta ki te Hauaaruru Charitable Trust was the only MACA applicant group who engaged in consultation with TIL. Te Ruunanga did not raise any concerns about the application specifically relating to their customary marine title application. Other feedback provided by Te Ruunanga o Ngati Mahuta ki te Hauaaruru Charitable Trust described above.

7.6 Administering agencies

7.6.1 Department of Conservation (DOC)

DOC provided minimal substantive comments in pre-lodgement consultation, other than to confirm the appropriateness of TIL's approach to seek a Wildlife Act permit for lizards on a precautionary basis.

7.6.2 Heritage New Zealand/Pouhere Taonga (HNZ/PT)

HNZPT expressed a view that given that an archaeological authority is being sought at the same time as resource consents, the most appropriate location for accidental discovery protocol (**ADP**) conditions to be applied to is in the archaeological authority and not in the resource consent conditions. On that basis, the proposed conditions to apply to the resource consents sought do not include ADP conditions. The proposed conditions for the archaeological authority, and the associated archaeological management plan, contain the appropriate ADPs.

7.6.3 Ministry for the Environment (MfE)

MfE provided a letter setting out the requirements of section 13(4)(y)(i) and schedule 5 (paragraph 2) of the FTAA with regards to the need to include an assessment of the Project against relevant National Policy Statements (**NPS**) and National Environmental Standards (**NES**). The letter also listed all of the currently operative NPS and NES. An assessment of the Central/Southern Block Mining Project against the relevant NPSs and NESs is provided at section 8.3 of this report.

7.7 Consultation with other parties

7.7.1 Maritime New Zealand

At the time of consultation, Maritime New Zealand acted in the capacity of Harbourmaster for the Taharoa Port. Their feedback was as follows:

"*In considering the impact of the proposals on navigation safety, at this time, Maritime NZ consider that TIL will need to ensure they maintain their systems and processes to manage navigation safety risks with a focus on:*

• *Ensuring appropriate scheduling to reduce risks to the ships calling at the SBM due to the ability for the SBM to only handle one vessel at a time, including appropriate management of vessels if weather conditions deteriorate.*

• *Ensuring any increase in scheduled ship calls does not affect the existing maintenance plans for the SBM and mooring infrastructure*."

TIL already has robust systems and processes in place to manage navigation safety risks associated with scheduling and maintenance. In respect of the above comments, and to the extent that they are matters that can be addressed through the FTAA, no conditions of consent are necessary.

8 Fast Track Approvals Act Schedule 5 Requirements - Resource Management Act 1991

Section 43 and Schedule 5 of the FTAA set out the information required for a substantive application seeking a resource consent.

8.1 Assessment of the actual or potential effects on the environment

8.1.1 Introduction

Schedule 5, subclause 5(4)[25] of the FTAA requires an assessment of the activity's effects on the environment that:

(a) includes the information required by clause 6; and

(b) covers the matters specified in clause 7.

The following is an assessment of environmental effects which identifies and assesses the types of effects that may arise from the proposed activities in relation to the resource consents sought and includes the required information and matters to be covered as required by these clauses. The conclusions in the following subsections rely on the technical reports contained in the Appendices attached to this application. This section also outlines the measures that TIL proposes to avoid, remedy, mitigate or off-set any potential adverse effects on the environment.

There are a number of measures currently carried out at the mine to avoid or mitigate environmental effects which are proposed to be continued and incorporated into the mine operational management plans and/or conditions of consent. These measures are noted below where relevant. The longevity of mining activity on the Central and Southern Blocks provides a sound basis upon which the effectiveness of proposed conditions (for example in terms of water takes and discharges) can be considered.

There are also large areas reserved from mining for cultural/archaeological reasons.

8.1.2 Effects baseline – "the existing environment"

As required by section 104 of the RMA[26], the effects of the activity on the environment must be considered. For the purpose of this assessment the "environment" consists of the environment at the time the application is determined including already consented activities that are likely to be implemented and any non-fanciful permitted activities that might be established in the future (the 'existing environment'). In accordance with clause 17(1) of the FTAA, section 104 of the RMA is a matter that an Expert Panel must take into account when determining a resource consent application under the FTAA. It follows that the concept of the existing environment developed in the RMA context applies to this application as well.

Case law indicates that the on-going effects of activities authorised by regional consents should be excluded for the purposes of considering and evaluating the effects of an application on the environment aside from in some limited circumstances.[27]

Notwithstanding that the mine has operated continuously in this environment for many years, this assessment adopts a cautious approach to identification of the "existing environment", which assumes that mining of the site under the existing resource consents has ceased. The approach is

[25] Also required by section 43(2) of the FTAA.
[26] In accordance with clause 17(1) of the FTAA, section 104 of the RMA is a matter that an Expert Panel must take into account.
[27] Appendix DD.

further explained in a memorandum prepared by MinterEllisonRuddWatts for the TIL consenting team, see **Appendix CC**. All effects assessments in the technical reports appended to this application have been prepared in accordance with this memorandum.

For the purposes of the Application the environment against which the Project is assessed:

i. Includes the effects of TIL's past activities on the environment, including all steps required under the existing resource consents to rehabilitate the site.
ii. Assumes the activities authorised under the existing resource consents do not continue and therefore excludes the future effects of those activities.

In practice this means the 'environment' for the purpose of assessing the environmental effects or impacts of the Project includes the condition of the land at the end of the term of the regional resource consents, including the required rehabilitation works. This includes:

- A landform that is heavily modified and affected by past lawful activities for some years (i.e. modified sand dunes, new wetland and marginal terrestrial habitats).
- The dam in the Wainui Stream and associated infrastructure will have been removed and consequently the water level in the Taharoa Lakes will have dropped to pre-dam levels.
- The water take and discharge will have ceased, but the environment will still be acclimated to the presence of the water take and discharge.
- The large areas reserved from mining for cultural/archaeological reasons remaining reserved.
- All rehabilitation works required under the existing consents would have been completed, including recontouring and planting in accordance with TIL's current Land Management and Rehabilitation Plan. Some planting would be in a state where it is newly established but some rehabilitation will be undertaken progressively over time, so some areas could be more established.

Practically, it should be noted that given the longevity of mining activity at the site (mining began in the early 1970's and has been continuous using various methods ever since) a number of aspects of the environment have been modified by, and acclimated to, the presence of the ongoing mining activity.

An example is the margins of Lake Taharoa, where historical maintenance of the lake levels above RL8.53 (as required by current and proposed consent conditions that are discussed later in this report) has allowed wetland environments to establish and become habitat for a range of species.

There are also a number of mitigation measures currently carried out at the mine which are proposed to be continued and incorporated into the mine operational management plans and/or conditions of consent. These measures are noted below where relevant. The longevity of mining activity on the Central and Southern Blocks provides a sound basis upon which the effectiveness of proposed conditions (particularly in terms of water takes and discharges) can be considered.

8.1.3 Positive effects

The positive effects of the Project include benefits on a national and regional scale as outlined below.

8.1.3.1 National economic benefits

As detailed in the Economic Assessment in **Appendix C** and outlined in section 2.2 of this report, the Central and Southern Block Mining Project will have significant national economic benefits because TIL is a major contributor to New Zealand's export economy. These benefits include:

- A sizable contribution to the New Zealand economy from export revenue, which is projected to grow to $14 billion over the next 35 years (to 2055).

- TIL is the largest single export company in the Waikato region and is the country's largest single exporter by gross tonnage.[28] The mine is expected to increase annual production to over 5 million tonnes, accounting for approximately 9% of New Zealand's total export tonnage.[29]
- Currently, the operation generates $316 million in export revenue annually, and since returning to New Zealand ownership in 2017, [redacted]

In 2026, TIL's exports are forecasted to generate greater export revenue than New Zealand's entire arable industry and be on par with the wool export industry.[30]

As the largest ironsand exporter in the country, TIL provides high value-added export revenue that supports global steel supply chains, particularly in China and Japan. Its operations are not only economically significant but also strategically important for maintaining New Zealand's presence in international markets. It is evident that TIL is a significant and essential contributor to New Zealand's economic profile.

8.1.3.2 Regional economic benefits

As detailed in the Economic Assessment in **Appendix C** and outlined in section 2.2 of this report, the Central and Southern Block Mining Project will deliver significant regional economic benefits through direct and indirect investment, including:

- Over the next 30 years, TIL is expected to expend significant regional spend on goods and services which is also projected to grow ($9 billion over the next thirty years or $298 million per year).
- Since 2017, the company has already spent $1.2 billion regionally and paid millions in royalties and dividends to local landowners.
- Employment has grown by 30%, with the mine now supporting 350 full-time equivalent jobs, including 240 direct employees and over 100 contractors, being a significant contributor to the regional labour market.
- Investments in plant and equipment total $221 million, and the operation significantly boosts local industries such as marine servicing and logistics.

Additionally, the assessment notes that given the mine's remote location, the mine enables local tāngata whenua to connect to labour markets which benefits Māori development in the region.

8.1.3.3 Social and development benefits

The social and development impacts of the mining operation are profound, especially for the Taharoa village and surrounding communities. Taharoa Village is largely dependent on the continued operation of the mine.

Approximately 70% of residents within Taharoa, including a number of Ngati Mahuta tribal members, are employed by TIL with local labour market outcomes effectively determined by the success of the mining operation. Mining creates employment for local people and over the last 40 years, Taharoa Village has expanded to house employees and their families. TIL owns 75 of the houses of Taharoa Village which are rented to employees at significantly reduced rates ($28 per week). TIL also provides:

[28] Appendix C - Economic Assessment at 12.
[29] Appendix C - Economic Assessment at 12.
[30] Appendix C - Economic Assessment at 13.

- 100% of all village infrastructure costs (water and wastewater services for the village, power, rubbish collection, maintenance of public areas).
- the community hall, the local school, shop and two large sports facilities in the Village.
- subsidised freight services for the village store.
- education payment for travel and boarding for employees' high-school aged children, at a cost of up to $18,000 per child annually.

Employees are provided with training to undertake their jobs and are given the opportunity to develop skills while employed with the mine. Wages from employment at the mine contribute significantly to the local Waitomo district and the Waikato regional economy.

Taharoa C (joint owner of TIL) also has a wider social and economic role in the community by providing educational grants for travel and boarding to employees' children. By 2013 the beneficiaries (Taharoa community and iwi) had invested over 50 million dollars in royalties into businesses and farms.

Taharoa Village relies on the operation of the mine for stable and enduring employment and business services. Premature closure of the mine would result in significant adverse economic and social effects to the community of Taharoa and wider region with residents most likely having to relocate to gain employment.

8.1.3.4 Positive environmental benefits

As outlined in proposed management plans and conditions of consent, environmental enhancements at the site are proposed, including planting of buffer areas around perennial waterways and wetlands to be retained, replacement of low value induced wetlands with a much larger area of re-created wetland, pest-plant and fauna management. The area will also be stabilised and rehabilitated at the completion of mining. The Project will also have a low CO^2 emissions footprint per tonne. Following planned investment, it is anticipated that emissions will be approximately 4.2 kg CO_2 per tonne, 35% of typical competitors, consistent with its goal to be entirely reliant on renewable energy use in the near future.[31]

8.1.4 Hydrological effects of the dam and water take

WWLA has undertaken a Hydrology Assessment to assess the effects of the proposed water takes from the Wainui Stream/Taharoa Lakes[32] (collectively referred to as "Lake Taharoa" within the assessment) and the dam structure in terms of water level changes within the stream and lake. The assessment is attached to this report as **Appendix I** and is summarised below.

The assessment includes a high-level analysis of historic measured lake water levels and a lake water balance model. The lake water balance model was developed and calibrated to provide insight into the hydrological functioning of the lake and characterises and quantifies the relative magnitude of key inputs (catchment inflow and rainfall) and outputs (flow through the dam structure, evaporation, seepage loss, and TIL's water takes) on fluctuations in lake level.

Five scenarios were assessed with the model, including one naturalised scenario without the dam or abstractions to align with the concept of the "existing environment" (refer to section 8.1.2 of this report), and one extreme scenario where the maximum proposed processing water volume was taken 365 days of the year. The results of the scenarios showed:

[31] Appendix C - Economic Assessment at page 3 and 17.
[32] Lake Taharoa, Lake Numiti and Lake Rotoroa

- Water levels in Lake Taharoa are approximately 2.5 m higher on average as a result of the construction of the dam structure.
- Lake levels have remained relatively stable between ~9.6 m RL and ~10.4 m RL over the last 10-years (the period of available monitoring data).
- Lake level fluctuations are seasonal, with lower levels typically occurring in late summer, and higher levels throughout winter.
- Whilst TIL's water takes lower the lake levels, the reduction in lake level is transitory and temporary only. Lake levels recover as catchment inflows to the lake increase during winter and wetter periods.

Additionally, the presence of the dam can potentially create low flow levels within the Wainui Stream downstream of the dam (thereby affecting fish movement and downstream habitat); and high lake/stream levels upstream of the dam. Based on recorded water levels behind the dam structure, TIL's existing Taharoa Mine Water Management Plan and discussions with the project freshwater ecologist, WWLA recommends maintaining residual flows by manual pumping at a minimum flow rate through the dam box weir of 10 L/s and a minimum flow rate into the fish pass of 24 L/s, should water levels drop below the invert levels of the dam v-notch and fish pass respectively (total downstream flow of 34 L/s).

With respect to water levels upstream of the dam, as outlined above modelling of the stream without the dam in place shows that the presence of the dam has increased Lake Taharoa water levels by approximately 2.5 m. A review of lake levels showed that the highest daily average lake level that has occurred in the last eleven years was 10.9 m RL, which is approximately 1 m higher than the median lake level and occurred as a result of Cyclone Dovi in 2022 (which shows that the lake level can increase due to natural weather events). Flooding risks are considered minimal, with high lake levels being rare and short-lived. When lake levels are high, a low-lying section of Taharoa Road may be overtopped, however this is a result of the historical location and elevation of the road as constructed, relative to the natural land upgradient of the lake, part of road would be prone to flooding during high catchment flows even if the dam was not present. The report also notes that the dam is a passive structure and cannot be modified to increase or decrease outflow rates for a given water level. Due to the above, a maximum lake level condition is not proposed.

Four water level trigger values and corresponding actions are recommended to maintain and protect the hydrological functioning of the Taharoa Lakes and downstream receiving environment. The recommended water level triggers are shown below in Table 8.1.

Table 8.1: Water level triggers recommended by WWLA

No.	Level (m RL)	Location	Objective / Purpose
1	8.53	Lake	Minimum allowable lake level. No abstractions shall occur below this level. As noted in section 2.3.1 of the assessment, it is understood that this is equal to the minimum lake level prior to construction of the dam.
2	9.6	Lake	Minimum lake level over the last 10-years. TIL shall: • Implement management responses to reduce its water takes from the lake as far as practicable.

No.	Level (m RL)	Location	Objective / Purpose
			• Engage a suitably qualified and experienced ecologist to monitor and report on the extent and health of the raupo and flax wetland on the margins of Lake Taharoa. This trigger provides an alert that lake levels are dropping below what has occurred over recent times (the last 10-years), and as such signals a requirement to monitor ecological health of lake margins.
3	9.36	Dam	Invert level of the v-notch. Natural flows through the outlet weir will cease if water levels behind the dam drop below this level. As such, TIL shall implement temporary manual pumping into the box weir at a rate of not less than 10 L/s in order to maintain the residual flow immediately downstream of the dam.
4	9.3	Dam	Invert level of the fish pass. Natural flows through the outlet weir will cease if water levels behind the dam drop below this level. TIL shall implement temporary manual pumping of water into the fish pass at a rate of at least 24 L/s.

The Hydrology Assessment states that with the implementation of the above recommendations, the potential hydrological effects of the water takes on Lake Taharoa and the Wainui Stream are considered to be less than minor, and that the change in the hydrologic regime created by the dam can be managed by conditions to an appropriate level. Refer to section 8.5 of this report and **Appendix I**.

8.1.5 Hydrogeological (groundwater) effects

The proposed mining of the Central and Southern Blocks will interact with groundwater and a Hydrogeology Assessment (Groundwater Effects) has been completed by WWLA. As excavation intersects the water table, groundwater will drain into the mine pit potentially reducing groundwater levels in adjacent areas. The assessment utilises hydrogeological investigations, groundwater monitoring and a 3D numerical groundwater model to determine hydrogeological effects associated with the drawdown of groundwater. This assessment is attached to this report as **Appendix N** and is summarised below.

8.1.5.1 Overview of anticipated groundwater drawdown

The greatest groundwater drawdown in the Central Block is predicted during excavation in proposed Pit 3 (the southernmost pit in this block), with a drawdown of approximately 17 meters lower than the baseline. This drawdown is expected to remain mostly within the mining area, however approximately 1 m of drawdown may extend beyond the Central Block boundary towards the east and southwest, potentially affecting the Eastern Block of the Taharoa Mine (outside of the scope of this Project). Additionally, reduced groundwater levels are anticipated along the southeastern edge of the mine, with the drawdown contour extending only a few hundred meters beyond the site, slightly impacting the adjacent property at Taharoa A7J8C Block ML 368840 (Pihiopa property).

In the Southern Block, the maximum drawdown is predicted in the northern part of Pits 1 and 2, being 29 m where the deepest excavation is planned. The drawdown will extend northeast within the mining area and up to approximately 1 km beyond the property boundary, primarily affecting the Eastern Block and Te Mania Extension of the Taharoa Mine, and the Pihopa property. This peak drawdown is further compounded by residual dewatering effects from earlier excavation in

the Central Block, if groundwater levels had not fully recovered. Refer to Figure 13 within **Appendix N**.

The potential effects of the groundwater drawdown are identified as:

- Reduced water availability or increased pumping requirements at neighbouring bores as a result of lowered groundwater;
- Potential impacts on surface water systems, including stream baseflow and wetlands within and adjacent to the proposed Central and Southern Blocks which are hydraulically connected to the groundwater system;
- Potential for saline intrusion in groundwater as a result of reduced pressure during mining; and
- Potential long term changes in the hydrogeological regime following mining and land reclamation.

The findings of the assessment are summarised below.

8.1.5.2 Effects on neighbouring bores

There are five active bores located outside of the mine site which could be affected by groundwater drawdown at the mine, in and around Taharoa Village as shown in Figure 13 in the Hydrogeology Assessment (Groundwater effects) –**Appendix N**. The only infrastructure within the area that is subject to groundwater drawdown is the domestic bore ID 142329 (located at the property legally described as Taharoa A7 J8 C Block) which has a maximum of 1.65 m of drawdown predicted during the peak of the excavation in the Southern Block. Given the depth of the bore water (18.2 m above the pump) it is assessed that this level of drawdown would still allow sufficient drawdown (14.5 m) and pump submergence (2 m) for normal bore operation, hence the effects of drawdown on neighbouring bores are assessed as less than minor.

8.1.5.3 Effects on stream baseflow

A transient model was used to evaluate the stream baseflow of Mitiwai and Wainui Streams over the mine area by comparing flow with and without mining over the course of the simulation period. The simulations included the presence of the dam structure on the Wainui Stream (as sought in the application) and therefore raised water levels in Lake Taharoa.

8.1.5.3.1 Mitiwai Stream

The maximum base flow (i.e. groundwater inflow to the stream) reduction from mining in the Mitiwai Stream is predicted to be 4.4 L/s which amounts to a 5% reduction in total stream flow (under summer low flow conditions when groundwater baseflow accounts for most of the total stream flow) and 10% of 7-day mean annual low flow. Once the landscape is restored following mining, the stream baseflow will return to 97% within 15 months and continues towards full recovery thereafter. The assessment states that these findings support the conclusion that seasonal and year to year variation in stream baseflow will far exceed any lasting effects related to mining. It is recommended that existing flow monitoring stations be used as part of a monitoring program to confirm flow maintenance. A three-tier trigger level system is proposed as part of this monitoring program to set the criteria for management and contingency measures, outlining flow rates for early warning, water use review and flow augmentation as shown below:

Table 8.2: Recommended trigger levels for Mitiwai Stream flow

Trigger level	Metric	Flow (L/s)	Management Response
TL1	7-day Mean Annual Low Flow	45	Early warning
TL2	Q_5 (1:5 year recurrence interval)	31	Water use review (being a review of catchment wide water use, recent climate and mining data, and planning for flow augmentation)
TL3	90% Q_5	28	Flow augmentation

Trigger level 3 is the default minimum flow requirement set in the WRP[33] and would require contingency measures to be implemented that may include direct flow augmentation to be discharged into the Mitiwai Steam. Conditions are proposed to require implementation of the contingency measures/flow augmentation. The maximum predicted baseflow reduction of 4.4 L/s is 14% of the Q_5 flow rate.

8.1.5.3.2 Wainui Stream

Stream flow within the Wainui Stream is governed by discharges from Lake Taharoa which are lake level dependant. The lake level is influenced by the presence of the dam (refer to section 8.1.4 of this report), as well as other natural factors. TIL's current Taharoa Mine Water Management Plan requires a minimum flow rate of at least 24 L/s to the Wainui Stream downstream of the dam structure through the fish pass, and a residual flow requirement of 10 L/s through the dam weir. The total downstream flow requirement is therefore 34 L/s.

The theoretical maximum baseflow depletion at the mouth of Wainui Stream is 43.3 L/s from mining and would occur during the excavation of proposed Central Pit 3, during the 10th year of mining. The proposed activity comprises a continuation of current water take practices with no changes that will affect flow in the Wainui Stream. In practice no reduction in Wainui Stream flows will occur due to the following factors:

- Spent water from ironsand processing is discharged back to ground with the tailings disposal, hence the site water balance will be virtually non-consumptive (a small component of evaporative losses would occur); and
- Flow in the lower reach of the Wainui Stream (downstream of the dam) is a function of lake levels behind the dam structure. TIL proposes a minimum flow requirement of 34 L/s, so the depletion of baseflow will not manifest as a change in low-flow conditions.

The assessment anticipates no adverse effects on Wainui Stream as a result of groundwater drawdown.

Overall, the effects on stream flow depletion are assessed as less than minor.

[33] Table 3-5, Section 3.3 of the WRP.

8.1.5.4 Effects on wetlands

There are 88 wetlands that have been identified within the model area (within and beyond the site), with over half found to be groundwater fed or potentially groundwater fed. The vulnerability of a wetland to dewatering effects from mine excavation depends on its degree of connection to underlying groundwater, with wetlands that are directly connected to groundwater being more vulnerable to adverse effects.

Thirteen groundwater fed or potentially groundwater fed wetlands are proposed to be mined. With respect to these wetlands, a compensation package is proposed. Refer to section 8.1.11 of this report for further information.

The remaining 75 natural inland wetlands to be retained are discussed below and are shown in Figure 17 of WWLA's Hydrogeology Assessment (Groundwater Effects) **Appendix N**. Of the remaining wetlands, 50 are not anticipated to be affected by mining or groundwater drawdown and 25 are potentially affected by mining activities. The affected wetlands are all primarily surface water fed, with groundwater connection only likely to occur during high water events, if at all.

8.1.5.4.1 Wetlands not affected by mining or groundwater drawdown

Wetlands 1 – 46 and 53 (except 42 – discussed separately below) are north of the mining area and are unlikely to be affected in any way because they are outside of the 0.2 m drawdown contour.

Wetlands 50 and 51 are north of the mining area and within the 2 m drawdown contour, however both are surface water fed and will not be affected by mining.

Wetlands 56 and 76 are along the Lake Taharoa shoreline but are outside of the 2 m drawdown contour and will not be affected by mining.

8.1.5.4.2 Wetlands potentially affected by mining

The remaining 25 wetlands (42, 57 – 66, 68 – 75, 78, 80, 83, 86, 88) are classified into four groups based on their location and topographic position and it can be assumed that water level in a given wetland will rise and fall with the other wetlands in the same group.

- Group 1 is comprised of one wetland near the Mitiwai Stream (wetland 42). This wetland is currently monitored by an existing piezometer.
- Group 2 wetlands are in riparian features situated in the portion of the Wainui Stream channel that is continuous with Lake Taharoa and are primarily fed by surface water. These wetlands are fed by the Wainui Stream.
- Group 3 wetlands are near the edge of Lake Taharoa. Of these, Wetland 72 is the largest and closest to the proposed excavation.
- Group 4 is a group of wetlands to the south of the Southern Block which are predominantly surface water fed from the adjacent hills.

The assessment recommends:

- A 30 m mining setback from all retained wetlands (noting this is also for ecological reasons).
- The establishment of water level monitoring sites at the retained wetland locations where drawdown may occur, and management responses provided for additional assurance that these wetlands are not partially drained over the course of mining. Monitoring is recommended to be implemented through the following:
    - Wetland Group 1 (wetland 42) be monitored by the existing piezometer C103.

- Wetland Group 2 be supported via flow conditions in the Wainui Stream (as described in section 8.1.5.3.2 of this report).
- Establishment of a new monitoring site within Wetland 72 (Group 3).
- Installation of a shallow monitoring piezometer at Wetland 80 (Group 4).

A 12-month baseline monitoring period during the first 12 months of exercising of the consent is recommended, which will form the basis of long-term simulation modelling to define trigger levels for the setting of contingency measures, should water levels recede towards historical lows. Contingency measures comprise a range of options such as cessation of dewatering in pits in close proximity to the wetlands during dry times until wetland water levels recover, or supplementation of wetland water levels with water from the mine either directly (if clean) or indirectly via ground soakage through sand beds if silty. With the implementation of these measures, the assessment states that hydrological function will be maintained for all retained wetlands on the Taharoa C Block. These measures are further explained in the terrestrial ecology section of this report (section 8.1.12) and included in the Natural Inland Wetland and Buffer Management Plan – refer to **Appendix DD.**

8.1.5.5 Saline intrusion effects

Saline intrusion or the landward migration of the saline interface within groundwater is a potential environmental effect of mining activities that extend below sea level in close proximity to the coast. The assessment states that it is unlikely saline intrusion inland would occur because the movement of saline water is anticipated to be very slow and the duration of this reversal is expected to be brief (so there is not enough time for significant migration to occur). If saline intrusion did occur, the effects would be confined to the active pit area, which is uninhabited and not used for water supply.

8.1.5.6 Post-mining recovery

In the post-mining period, the land will be restored to an approximate smoothed impression of the original topography with tailing material emplaced except for a lake remaining in the final excavation area. The Mitiwai and Wainui Stream baseflows will return to baseline conditions within 1.5 and 2 years after the end of mining, respectively. Groundwater conditions will rebound to the original state over a similar time period.

8.1.5.7 Summary of hydrogeological effects

All hydrogeological effects of the proposed mine excavations are assessed as less than minor. Mitigation and monitoring are proposed to manage residual risks and compensation is proposed in respect of the wetlands that will be lost. Refer to section 8.5 of this report and **Appendix N** for the relevant conditions.

8.1.6 The effects of discharge to land

The applicant's operation involves the following discharges to land:

- Discharge of process water to land.
- Other incidental discharges of water associated with various stages of processing such as the spiral plant and water recycling system.
- Discharge of mining process water and water potentially containing contaminants from a mining dredge.
- Placement of tailings (as a slurry) and associated discharges of water.

In relation to the discharge of water to land, process wastewater filters through the sand leaving any solid material on the dune surface. This water is naturally filtered by percolation through the sand and is unlikely to result in any contamination of groundwater. This discharge to land occurs away from surface water systems to avoid runoff into natural waterways. Similarly, incidental discharges of process water (incidental release of water such as from the spiral plant and water recycling system) are an ordinary part of mine processing activities and are not expected to result in contamination, as the plant is not operated adjacent to surface water.

In relation to the discharge of mine process water from the dredge, this relates to the discharge of mine process water and also the discharge surface water that is captured in the dredge bucket/suction cutter when mining below groundwater and is discharged within the mining footprint when it partially overflows from the bucket/suction cutter back into the pond. This discharge occurs within the active mine areas (away from natural waterways) and has the same or similar characteristics to other process water (i.e. no chemical additives and natural filtration).

The placement of tailings as a slurry results in the discharge of water that contains clays and sands (tailings) that remain after the separation of the titanomagnetite ironsand product. The water and tailings are natural materials and no chemicals are added during the separation process. Approximately 50% of the mineral deposit is exported which means there is sufficient space to re-deposit the remaining tailings in the previously mined areas i.e. no 'out of pit' tailings placement is necessary. After dewatering of the tailings deposits has occurred, the deposits are reformed into dunes matching, as far as practicable, the original landform and planted with stabilising vegetation.

Overall, due to the natural nature of the tailings, the management of the discharge to avoid surface water contamination, and the rehabilitation of the deposits, the effects of discharging water and tailings to land are considered to be less than minor.

8.1.7 Erosion effects

The west coast of the Waikato, with its extensive sand dune systems, is classed as a high-risk erosion area in the WRP. As such, there is a greater erosion-related risk to development, infrastructure, cultural sites and residential properties.

The mine operates with a suite of erosion and sediment controls which have been designed in accordance with the WRC guidance document titled 'Erosion and Sediment Control – Guidelines for Soil Disturbing Activities' dated January 2009. These measures manage process water collection and settlement, sediment entrained in stormwater from the administration and operations area and mining works adjacent to surface water and wetlands and are outlined in the site's EMP. These controls are proposed to continue. Refer to **Appendix T** for further details.

It is understood that during the previous 50 years of operation no serious erosion issues have arisen that have required mitigation. On disturbed areas, revegetation tends to occur quickly, and large areas have been naturally vegetated by kikuyu grass which acts as a dune stabiliser. Marram grass has also been planted in various rehabilitated areas to provide dune stabilisation.

Overall, considering the operational history of the mine, the isolated and undeveloped nature of the site, the mining setbacks imposed close to perennial waterbodies (refer to sections 4.6, 8.1.11 and 8.1.12 of this report), the erosion and sediment control measures used at the mine, and the rehabilitation process, any adverse effects in relation to erosion from land disturbance are considered to be less than minor.

8.1.8 Air quality effects resulting from dust

Mining has the potential to create airborne dust particles. Therefore, dust controls at the site are proposed to be implemented as outlined in the site's draft EMP (refer to section 4.13 of this report). The draft EMP incorporates controls which are currently set out in a voluntary Interim Dust Management Plan which was developed by TIL for the Central and Southern Blocks in 2024.

An Air Quality Assessment has been prepared by PDP which attached to this report as **Appendix S**. A summary of that assessment is provided above in section 5.1.8 of this report. As per the assessment, PDP considers that with the dust mitigation and control measures implemented at the site, it is unlikely that dust discharges from the Central and Southern Blocks will cause nearby receptors to experience nuisance effects. Additionally, PDP considers it is extremely unlikely that direct health effects can be associated with the type of dust generated by TIL's mining operations in the Central and Southern Blocks. Although dust can be discharged from the site during high winds, this is a natural occurrence.

Overall PDP considers that dust emissions at the site can be controlled appropriately by the dust mitigation and control measures so that offensive and objectionable effects are not experienced at nearby receptors.

On this basis, any dust effects are considered to be acceptable (and within permitted activity limits).

8.1.9 Effects of harvesting the pine trees in the Southern Block

Effects related to the harvesting of pine trees are assessed below in accordance with the matters of discretion under the NES-CF (refer to section 5.1.2 of this report). The proposed plan for harvesting is cognisant of the proximity of Taharoa forest to Lake Rotoroa and Lake Numiti and the mitigations have been designed to minimise potential effects on the lakes and adjoining wetlands. The potential effects and the proposed mitigation are summarised below. Further information is contained in the Draft Harvest and Earthworks Management Plan and Harvest Plan attached to this report as **Appendix U**.

8.1.9.1 Effects of earthworks

Earthworks will be required to upgrade and extend the existing roads that access the forest and to build 4 new skid sites for log processing. Runoff controls and surface stabilisation techniques will be used as described below and are included in the proposed EMP for the mine. The controls have been designed for a heavy rain event of 5% Annual Exceedance Probability (**AEP**) or greater at 20-minute intervals, which equates to a rainfall depth of 18.2mm (Niwa High Intensity Rainfall System –Taharoa Port). Operations will be suspended when rainfall is predicted to exceed this threshold, or design storm, as determined by a review of MetService forecasts.

Due to site topography, there will be no large-scale cut and fill required at the site. However, cut and fill operations will follow best management practices and spoil will be placed in a location where it will not mobilise into a waterway or waterbody in a 5% AEP event. Spoil will likely be used to control the direction of stormwater.

Erosion and sediment control measures will include:

- Stabilisation – compaction to stabilise surfaces following routine site inspections.
- Runoff control – diversion channels and water bars/bunds will be constructed where required which will discharge to soakage pits.
- Sediment control – soak holes/sediment traps and silt fencing on the downslope side (lake side) of the disturbed ground as needed.

- A buffer/setback of 30 m between the harvesting activities and the lakes/wetland, as shown in the Harvest Plan.
- The area of indigenous vegetation adjacent to the margin of Lake Rotoroa will be retained to help erosion and sediment control and to filter runoff. A 10 m setback from the indigenous vegetation will be implemented.
- Regular monitoring and inspections, especially during heavy rainfall events, to ensure measures are working appropriately and as intended. Any improvements in design will be implemented immediately.
- Sediment controls will be regularly inspected and maintained to ensure storage capacity is maintained. Any accumulated sediment will be removed.
- All sediment control devices will be inspected before a storm that is likely to result in rainfall depths approaching the design criteria (i.e. 18.2 mm). The measures will also be inspected after the storm and repairs/maintenance undertaken as needed.

With the above measures, the erosion and sedimentation effects of earthworks on the lake and wetlands will be minimised.

8.1.9.2 Effects of harvesting

The forest has been identified as habitat for the critically endangered long-tailed bat for foraging and potentially roosting. In accordance with the recommendations contained in the Terrestrial Ecology – Fauna Assessment, Bat Roost Protocols will be implemented prior to felling (refer to section 8.1.12 of this report and **Appendix M**). The 30 m setback from the lake and wetland will be maintained and developed through additional planting of indigenous species and fast-growing exotics to shorten the time-lag between habitat loss and new habitat becoming available. The indigenous vegetation near the shore of Lake Rotoroa will be retained and protected by a 10 m minimum buffer during harvesting.

Trees will be felled directionally away from the edge of Lakes Rotoroa and Numiti. There will be no machine access to the lake edge setback unless it is required for safety purposes for tree felling. Skid sites are proposed to be located on flat terrain at least 200 m from the lake.

Slash will be stored at designated slash storage areas (adjacent to skid sites), on landings with stable ground. Slash will not be deposited onto land that would be covered by water during a 5% AEP event or stockpiled/stored within 100 m of the lake edge. Slash piles will be managed to remain stable and avoid the collapse of a pile or the ground under the pile, by ensuring stormwater is diverted away from any slash piles. All slash will be removed from the area and converted to mulch for use in rehabilitation projects across the site.

Post-harvest monitoring is proposed to occur for a minimum of 6 months. If any issues are found, these will be rectified before works on site are considered completed to NES-CF standards.

With the above measures, the effects of harvesting the pine forest can be appropriately managed.

8.1.9.3 Effects relating the discharge of sediment

Due to the permeable sands at the site and site topography, ground disturbance works in proximity to the lakes and wetlands are anticipated to have a medium risk (refer to **Appendix U**).

The road and proposed skid sites will be located on the western side of the forest, away from the lake and wetland. All earthworks and harvesting will be completed in accordance with erosion and sediment control measures set out in the mine's EMP.

Minimal effects associated with the discharge of sediment to Lake Taharoa are therefore expected. Further information on erosion and sediment control is as outlined above at section 8.1.9.1.

8.1.9.4 Summary of harvesting effects

As outlined above, the effects associated with the harvesting of Taharoa forest including earthworks and the release of sediment can be appropriately managed and minimised. Effects are therefore considered to be no more than minor.

8.1.10 Archaeological effects

Clough & Associates have undertaken an Archaeological Assessment to determine the effects of mining activities on any remaining archaeological sites and is attached to this report as **Appendix O**. The assessment included a review of recorded site information and a field survey of the mine site. The assessment found the following:

There are a total of 35 recorded archaeological site locations in the Central Block. Thirty of these sites are considered to be destroyed by historic activities on the site. Three are located in buffer or reserve areas that will not be affected by mining (R16/113, R16/115, R16/116). Of the remaining two sites, R16/61 has an unknown status and R16/117 is at least partially intact. These two sites are midden/oven sites and may be impacted by proposed mining works.

In the northern part of the Southern Block there are proposed to be three mining pits in areas that have previously been dredged, and with three extension areas into locations that have not been mined. There are a total of 13 recorded archaeological sites in this part of the Southern Block. Twelve of these sites are considered to be destroyed, and the one remaining site has a missing record, although based on its recorded location it is also likely to have been destroyed by historic activities on the site.

In the three future mining extensions also within the Southern Block (in the southern part of the Southern Block):

- The first of these is on the eastern side, being primarily within forestry. A total of four sites are recorded within this extension, all are considered likely to be destroyed.
- The second extension is situated to the west of Te Tauwhare Reserve. This area encompasses three recorded sites. Two of these are considered to be destroyed, with the third (R16/327), having an unknown status. It is thought that the grid coordinates are not accurate for this site, and that a more accurate placement would have this site situated just within the Te Tauwhare Reserve. R16/327 is a burial site recorded in 1977, and at that time the bones were collected for reburial elsewhere. It is understood that kōiwi are the reason for the formation of the Te Tauwhare Reserve.
- To the south of the Southern Block, there is a third potential mining extension area. A total of four recorded sites are within the proposed extent. One of these sites is considered to be destroyed, with another two having an unknown status. The two sites of unknown status, R16/52 and R16/89 (both being midden/oven remnants), have the potential to be affected by mining activities. The fourth site (R16/137) is considered likely to be intact; however, its location is not within the proposed mining extent, being instead 90 m to the east and within a neighbouring property.

Overall, in the Southern Block there are 3 sites (R16/327, R16/52 and R16/89) that may be impacted by proposed mining works.

Ancillary mining activities will potentially affect a further 18 sites, of which 11 are considered to be destroyed. The other 7 sites (R16/12, R16/58, R16/88, R16/150, R16/151, R16/155, and

R16/572), are either partially intact or have an unknown condition. All except R16/12 may be impacted by the ancillary operations and works. All of the sites are midden/oven remnants except site 16/572 which is a pit/terrace.

The proposed activity therefore has the potential to affect 11 sites of either intact or unknown status (being R16/61 and R16/117 in the Central Block and R16/52, R16/58, R16/88, R16/89, R16/150, R16/151, R16/155, R16/327, and R16/572 in the Southern Block). These sites are not scheduled in the Waitomo District Plan (Operative or Proposed). If any intact remains of these sites have survived, they would be destroyed by future works. Based on the Waikato Regional Policy Statement criteria and Heritage NZ guidelines, the nine midden/oven sites (R16/52, R16/58, R16/61, R16/88, R16/89, R16/117, R16/150, R16/151, and R16/155) are assessed as having limited archaeological and historic heritage value as midden are a very common site type, and these sites have little amenity value. Site R16/572 is a pit/terrace located in geology that is less modified by the erosion and movement of sand and therefore has a greater potential of intact archaeological deposits to be present. The archaeological value of the site is assessed as limited to moderate. Site R16/327 is a burial site and if any burial remains are still present their primary values would be cultural, though archaeological information may be recovered from kōiwi, if tāngata whenua request it. Overall, potential adverse effects on archaeological deposits or features are assessed as minor and can be appropriately mitigated through archaeological investigation and recording to recover information relating to the history of Taharoa, or in the case of any surviving burial remains at R16/327, through appropriate action as directed by tāngata whenua.

It is also possible that additional unrecorded subsurface remains may be exposed during future mining. TIL is also seeking an Archaeological Authority for the Central and Southern Blocks as outlined within this report, and works will be managed in accordance with an Archaeological Management Plan.

Taharoa C (the landowner) has prepared a Cultural Values Report to inform the Archaeological Authority Application (refer to **Appendix X**). The Cultural Values Report states that the draft Archaeological Management Plan will enable them to exercise tikanga with respect to archaeological discoveries, and that continuation of protocols and regular mining updates maintains the integrity of the relationship between TIL and Proprietors of the Taharoa C Incorporation. Further, the report states that "this will ensure that the significant cultural values associated with the Taharoa C Block are recognised and provided for and the adverse effects of ongoing mining excavation activity on those values are mitigated and appropriately managed".

On this basis it is considered that the potential archaeological effects and the archaeological management protocols proposed for the mine are acceptable to the owners of the site from a cultural perspective.

8.1.11 Effects on terrestrial vegetation and wetlands

As part of the mining operation vegetation will be removed vegetation from the area to be mined and 7 natural inland wetlands are proposed to be removed. A Terrestrial Ecology – Wetlands and Vegetation Assessment incorporating an assessment of the effects on terrestrial vegetation and wetlands was undertaken by SLR and is attached to this report as **Appendix K**. The assessment was undertaken to identify the natural inland wetlands on the site by surveying the existing vegetation and wetlands using aerial surveys and walkthrough site visits and the Wetland Delineation Protocols (Ministry for the Environment). As assessment was made of the values of species, communities and habitats identified to determine the ecological values, in the context of the existing environment, which were assigned a level on a scale of Negligible, Low, Moderate, High or Very High. Ecological values range from Negligible for the actively mined areas to Very

High for dune habitats and some wetlands. Ecological value and the magnitude of effect on that value was used to determine the overall level of effect using a decision matrix.

TIL proposes to continue the following existing avoidance and mitigation measures relating to terrestrial ecology:

- Mining operations are not undertaken within 100 m of the MHWS and not closer than 30 m from any other perennial water bodies (excluding wetlands that are proposed to be removed).
- Containment berms are installed near natural waterways adjacent to processing areas.
- Runoff from all processing and spoil cells is collected and directed to treatment ponds.
- Sediment traps are installed to avoid sediment loss to natural waterways.
- Riparian planting within stream buffer areas.
- Minimum lake level requirements for Lake Taharoa as explained in section 8.1.4 of this report.

As outlined in the Terrestrial Ecology – Wetlands and Vegetation Assessment, these measures have been taken into account when assessing the (mitigated) potential effects, which are summarised below.

8.1.11.1 Removal of vegetation

Approximately 463 ha of negligible value habitat and 344 ha of moderate value habitat is proposed to be removed to enable mining. The moderate value habitat is elevated in value by the presence of At-Risk and Threatened fauna species but is otherwise of low value as it is generally dominated by exotic plant species. Appropriate habitat for these fauna will be progressively restored as the sand compartments are mined and rehabilitated. Upon closure, the mine will be rehabilitated into a mix of indigenous landcover, recontoured sand dunes and potentially productive land use which will result in a long-term net benefit. SLR has recommended that a Natural Inland Wetland and Buffer Management Plan be appended to the EMP and include provisions to restore vegetation after tailings cells are filled and restoring open habitat for the New Zealand pipit. With mitigation, the magnitude of effect associated with vegetation removal has been assessed as no more than low. The level of effect is assessed as no more than low.

A draft of the Natural Inland Wetland and Buffer Management Plan is included in **Appendix DD**.

Refer to section 8.1.12 below for further assessment of the effects on fauna, including effects related to the removal of the pine plantation forest.

8.1.11.2 Potential to damage dune vegetation

Dune vegetation could potentially be damaged or destroyed by mining operations if the existing 100 m MHWS buffer is not clearly marked, or where established dune habitats extend outside the 100 m buffer zone. However, the existing indigenous dune vegetation strip has been maintained adjacent to mining activities since the 1970's and the buffer is well respected by the current operators so this effect is assessed as unlikely, and the timescale of the effect would be short term. The dune buffer will be retained and the location will be delineated and communicated to mine personnel. The magnitude of effect is therefore assessed as negligible and the level of effect as low.

8.1.11.3 Effects on wetlands

The proposed mining will result in the following potential effects on wetlands:

- Loss of seven wetlands[34] of moderate ecological value (totalling 4.25 hectares), some of which appear to have been induced by the landform left by historic mining.
- Potential impacts on wetland hydrology resulting from intercepting or diverting ground and surface water, particularly where mining is undertaken below the water table. Potential effects include loss of the wetland or a change in the water regime such that the plant communities and habitat values are adversely affected. As there is some uncertainty whether wetlands 8, 9, 11, 15 and 16 are connected to groundwater (or are perched), wetlands will be monitored once mining starts and potential adverse effects managed appropriately.
- Water takes from the Wainui Stream potentially altering the level of Lake Taharoa, with a proposed increase in ship loading events potentially increasing the regularity of the lake level fluctuations to some extent. This could result in changes to the extent of these wetlands or changes to the composition or health of the vegetation. However, it is noted within the assessment that there are large natural fluctuations in lake levels and the existing wetlands have survived and thrived under this regime. Water takes could also result in increased stress on lake margin wetlands during periods of severe drought as they would induce a faster drawdown. However, this would only occur to the point where the authorised take has to cease due to the low water level trigger. The likelihood of this scenario occurring is low but the potential effect on wetlands is high.
- The accidental discharge of stormwater or sediment to wetlands could potentially have an adverse effect on water quality, substrate and ultimately the functioning of the ecosystem and the composition of the vegetation.

To mitigate the potential effects of altering the hydrology of retained wetlands and potential for adverse effects on water quality in retained wetlands, the following measures are recommended to be included in the Natural Inland Wetland and Buffer Management Plan appended to the EMP:

- A map of all remaining wetlands, perennial water bodies and their buffers and measures to ensure staff and machines avoid these areas.
- Planting of buffers around remaining wetlands and perennial water bodies to limit runoff, disturbance effects and weed invasion.
- A maintenance and weed control programme for wetlands and buffers.
- Other measures as outlined in the Ecological Assessment – Fauna including pest animal control (refer to section 8.1.12 for details of the fauna assessment).
- Development of a Lake Taharoa margin wetland monitoring programme which will include baseline monitoring of the extent and health of the raupō and flax wetlands on the margins of the section of lake adjoining the site within the months of February and March following the commencement of the consents, and repeat monitoring every 5 years.
- Setting of a Lake Taharoa level trigger equivalent of 9.6 m RL to trigger mine management responses that will reduce water consumption and take; monitor and report on the extent and health of the raupō and flax wetlands if the lake level is less than the 9.6 m RL for a continuous 30-day period; and outline measures to address any adverse effects.
- Development of a method to monitor and manage water levels in all wetlands within the proposed groundwater drawdown areas. This would include establishing the typical operating water level of all wetlands in this area, triggers for beginning supplementary water flows into these wetlands as needed, and details of how water will be pumped into the wetlands to maintain their typical operating levels for the duration of the groundwater drawdown.

[34] Wetlands 5, 6, 7, 17, 20, 23 & 25 shown on Figure 6 and Table 11 in Appendix K Terrestrial Ecology – Wetlands and Vegetation Assessment and on Figure 4.5 in this report.

With the implementation of these mitigation measures the overall effect of the proposed mining operation on the wetlands to be retained is assessed as low or very low.

However, the wetland loss cannot be mitigated, therefore offsetting for this loss is recommended/proposed to achieve an overall low level of effect or net gain. This will involve replacement of the moderate value, mainly induced wetlands, with a much larger area of re-created wetland at the mine site. An offset model (refer to **Appendix K**) was used to determine that 8.3 ha of wetland re-creation will offset the loss of the 4.25 ha of wetland, including a 10% net gain as a buffer. An indicative plan for wetland re-creation is outlined in the draft Natural Inland Wetland and Buffer Management Plan, attached to this report as **Appendix DD**. SLR have confirmed the conditions required to create this offset.

8.1.11.4 Pest plant invasion

Mining activities have the potential to further spread pest plants, however the site has a weedy nature and contains other pest plant dispersal methods such as via livestock and birds. Pest plant management for the protected parts of the site (dunes, wetlands and planted buffers) is proposed to be included in the Natural Inland Wetland and Buffer Management Plan. Additionally, any machinery arriving at the site will be cleaned and decontaminated to reduce the chance of introducing pest plant propagules. This effect is assessed as having a negligible magnitude and the level of effect is assessed as very low to low.

8.1.11.5 Summary of effects on terrestrial vegetation and wetlands

With the mitigation recommended (and proposed), the level of effect on terrestrial vegetation and wetlands is assessed as at worst, low. Refer to section 8.5 of this report and **Appendix BB** for the relevant conditions.

8.1.12 Terrestrial fauna effects

A Terrestrial Ecology – Fauna Assessment has been undertaken by SLR to assess the effects of mining on terrestrial fauna at the site and is attached to this report as **Appendix M**. An assessment has been made of the ecological values of species, communities and habitats identified to determine the magnitude of effect and overall level of effect, (as per the Terrestrial Ecology – Wetlands and Vegetation Assessment refer to section 8.1.11 of this report). The assessment identifies the following potential ecological effects for terrestrial fauna species and their habitats:

- Loss of nesting/foraging/commuting habitat or fragmentation through vegetation clearance, loss of 4.25 hectares of wetlands and land disturbance.
- Potential or injury and/or death during vegetation clearance or during maintenance or emergency pipeline works required in dune/beach habitat during breeding season.
- Potential adverse effects of dust, lighting, noise and vibration associated with mining operations.

The findings of the assessment are summarised below.

8.1.12.1 Bats

Potential effects on long-tailed bats are:

- Foraging and commuting habitat loss or fragmentation through vegetation clearance and land disturbance.
- Potential loss of short-term roosting habitat through vegetation clearance and land disturbance.

- Adverse effects of lighting, noise and vibration associated with mining operations.

To mitigate these effects, the assessment recommends the following measures:

1. Removal of the pine forest in stages (rather than felled in one harvest), or retention of a buffer of pine forest to maintain foraging habitat for as long as possible. Replanting of fast-growing exotic species in adjacent areas which are not proposed to be mined is also recommended which will shorten the lag time between habitat loss and new foraging and roosting habitat becoming available. This could include adding non-invasive exotic species to the planting proposed (refer to section 8.1.11 of this report).
2. Adoption of Bat Roost Protocols (vegetation clearance protocols) during the removal of the plantation pine forest to minimise the risk to any roosting bats during tree felling.
3. Implementation of best practice lighting design and light management principles in accordance with Australian Guidelines,[35] as practicable.
4. Retention of the 30 m setback along the Mitiwai Stream to retain key bat habitat.
5. An indigenous, full vegetated buffer within the setback around the perimeter of waterbodies/wetlands including planting with large native tree species.
6. Within the planted wetland and stream buffer areas, planting of appropriate species including large trees (such as kahikatea) is recommended and is expected to provide both foraging and roosting habitat as the restoration area becomes established.
7. Pest control across the site and along the edges of neighbouring native forest, riparian margins and wetlands to reduce pressure from mammalian predators. This is outlined in the draft Natural Inland Wetland and Buffer Management Plan appended to the EMP including target species, methods, locations and service times. The benefits of pest management would also apply to avifauna and any herpetofauna that may be present.

With the implementation of mitigation, the overall ecological effect on long-tailed bats is assessed as low. TIL propose to implement these measures.

8.1.12.2 Avifauna

Potential effects on avifauna are:

- Loss of large areas of grassland nesting/foraging habitat for grassland species such as New Zealand pipit within the mining extent, prior to rehabilitation.
- Potential for New Zealand pipit disturbance, injury and/or death during clearance of suitable grassland habitat as part of mining activity.
- Potential for dust, vibration and noise disturbance to various wetland species (particularly Australasian bittern, and especially during breeding season) during mining activities near wetlands.
- Potential for New Zealand dotterel disturbance, injury and/or death if maintenance or emergency pipeline works are required in dune/beach habitat during breeding season.
- Potential for native wetland bird disturbance, injury and/or death during mining of seven wetlands (4.25 ha in total) of degraded quality (from a terrestrial fauna perspective). However, these wetlands are unlikely to provide habitat for any vulnerable wetland bird species.

[35] National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds. Commonwealth of Australia. 2020.

To mitigate these effects, the assessment recommends the following measures:

1. A 100 m setback above MHWS and 30 m setback around perennial waterbodies (including lakes and wetlands to the east and south of the site) which is clearly and permanently marked to ensure compliance, and this is confirmed by a qualified ecologist.
2. A 30 m wide indigenous planting buffer to be planted within the setback around the perimeter of waterbodies/wetlands to be retained to mitigate for effects of dust and disturbance to sensitive wetland species and to reduce potential disturbance on key bird habitats.
3. Prohibition on maintenance works inside the CMA between the months of September – January (inclusive) for the protection of nesting New Zealand dotterels.
4. Protocols and best-endeavours to be included around ensuring no nesting birds are present within wetland, grassland and shrubland vegetation to be cleared during peak breeding season (September – January) including ecological surveys to identify nests and a requirement for a 30 m setback from that nest for the duration of the breeding season; and nesting dotterel in the event an emergency pipeline repair is necessary within dotterel nesting habitat. This will include consultation with WRC and the Department of Conservation in the event that emergency repairs are required during the dotterel nesting season.
5. Animal pest management detailing target species, methods, locations and service times.
6. Management steps to guide clearance of habitat suitable for grassland bird species.
7. An indigenous, fully vegetated buffer within the setback from waterbodies and wetlands to be retained.

With the implementation of mitigation, the overall ecological effects on wetland birds, the New Zealand dotterel and grassland birds is assessed as low. TIL proposes to implement these measures.

8.1.12.3 Herpetofauna

Based on lizard habitat within the mine, mining operations could have the following potential effects on lizards:

- Loss of large areas of grassland habitat within the mining extent, prior to rehabilitation.
- Potential injury or death for skink as a result of vegetation clearance.

Taking into consideration the absence of lizards in the surveys and the conservative approach that they may be scarcely distributed in low densities, the potential adverse effects on herpetofauna is assessed as low.

8.1.12.4 Katipō

With the 100 m mining setback from dunes proposed, no mining operations would take place in the foredune habitat considered to be of highest value and most suitable habitat for katipō. The potential effects on katipō are assessed as very low.

8.1.12.5 Summary of effects on terrestrial fauna

Effects on terrestrial fauna are assessed as low, or very low with respect to katipō. Mitigation measures are recommended (and proposed) with respect to bats and avifauna. Refer to section 8.5 of this report and **Appendix BB** for the relevant conditions.

8.1.13 Freshwater ecology effects

The following potential freshwater ecology effects have been identified and assessed in the Freshwater Ecology Assessment of Effects prepared by SLR, which is attached to this report as **Appendix L**:

The following mining activities have the potential to result in adverse effects on freshwater ecology:

- Damming of the Wainui Stream, with potential effects on migratory fish passage.
- Water abstraction from the Wainui Stream, including:
    - potential effects on the water regime upstream and downstream of the take, and
    - potential entrainment of fish into the water intake structures.
- Effects of mining below the water table on stream hydrology and function.
- Stormwater discharge to the Wainui Stream, with potential contamination of the receiving environment.

The findings of SLR's assessment are summarised below.

8.1.13.1 Damming of the Wainui Stream, the fish pass and fish passage

SLR reviewed existing monitoring data regarding the existing dam fish pass effectiveness and undertook additional fish surveys including eDNA sampling and instream fish surveys. Overall, the results of surveys undertaken since the fish pass was upgraded in 2010 and in recent years indicate that the fish pass is functioning well, enabling upstream passage for a diverse range of native fish species.

The assessment recommends that a targeted monitoring programme is developed with key iwi and environmental stakeholders and is undertaken to demonstrate the ongoing effectiveness of the fish pass for the key target fish species.[36] One of the key target species is grey mullet which are underrepresented in the monitoring data (although grey mullet have been observed using the fish pass and small schools of adult grey mullet have been observed in the Taharoa Lakes). The monitoring programme will add to the understanding of grey mullet movements and population size in the Taharoa Lakes. Proposed conditions of consent have been included (refer to section 8.5 of this report and **Appendix BB**) regarding this monitoring.

Maintenance and monitoring of the fish pass is important to ensure its structural and design integrity. TIL proposes to include conditions similar to those of its current fish pass resource consent requiring maintenance and monitoring of the condition of the fish pass and surrounding inlet and outlet to ensure its ongoing functionality and effectiveness. Refer to section 8.5 of this report and **Appendix BB**.

The assessment recommends that a 0.5 m deep pool be maintained or sump be installed at the base of the dam weir overflow chamber so that any migratory eels or mullet dropping over the overflow structure to the base would not be injured by falling onto the concrete base. The requirement for a pool depth of 0.5 m to be maintained at all times is a condition of the current/expired consents and is included as a proposed condition of consent.

8.1.13.2 Water abstraction from the Wainui Stream

There is the potential for flows to the lower Wainui Stream to cease under some flow conditions, once reservoir levels fall and the inlet to the fish pass or the overflow weir sits higher than the reservoir level. The cessation of flows to the fish pass has the potential to result in stranding of

[36] īnanga, longfin eel, shortfin eel, smelt and grey mullet.

fish within the pass and for water depths and water quality to decrease. Extended periods without dam weir overflows could result in a reduction in available instream habitat as water levels drop and degradation in water quality, particularly an increase in water temperatures and reduction in dissolved oxygen levels, which could cause stress or deaths for aquatic biota.

However, with the flow augmentation proposed for the dam and the fish pass if required, (refer to section 8.1.4 of this report), the assessment states that provided low flow conditions are not maintained for extended periods, the addition of even a small residual flow will avoid the potential for this section of watercourse to become stagnant and help maintain dissolved oxygen levels and water temperatures. Monitoring of instream habitat conditions and water quality is recommended should residual flow augmentation extend for more than two weeks. If adverse effects are occurring, mitigation in the form of reducing take volumes or increasing residual flow will be required. This requirement is included as a proposed condition of consent. Eels and mullet (the fish most likely to be in this reach immediately below the dam) are highly mobile so the potential for stress or fish deaths (if present) during short periods of low flow and flow augmentation is assessed as low.

The assessment notes that the water intake pumps within the reservoir are fitted with coarse fish screens which are 12 mm in mesh size which means small fish and invertebrates may become entrained or impinged on the screens.

The assessment states that the WRP specifies that the screen mesh size is 1.5 mm for water takes < 100 m above sea level, with a maximum intake velocity of 0.3 m/s. The relevant WRP rule is 3.2.4.5 a.i. The WRP states in 3.2.4.5 that the standards listed (for the fishery classes) must be met where referred to in relevant permitted activity rules. In this case the dam and fish pass structures require consent as controlled activities, refer to Table 5.3 of this report, so the standard does not apply to this application.

The assessment has calculated that based on the screen area and pump volumes, maximum intake velocities would be less than 0.3 m/s, reducing the likelihood of impingement of larger fish, but the large screen mesh size would potentially allow entrainment of small fish such as larval fish and elvers, into the pumps.

However, the assessment also notes that in accordance with a review of the fish pass design report prepared by Tonkin & Taylor in 2010, the fish pass inlet has been positioned away from the pump inlets, specifically to limit the potential for fish to be swept into the pumps or downstream.

The size of the fish screen is a matter that is addressed further in the Key Issues Table, at **Appendix G**.

8.1.13.3 Extraction of groundwater

The extraction of groundwater could reduce flows throughout the lower reaches of the Mitiwai Stream where groundwater is a major contributor to the stream base flow. A reduction in stream flow , has the potential to result in the following adverse effects on freshwater values:

- A reduction in instream habitat availability through changes in water depth and wetted stream width.
- Changes to water quality due to flow reduction, including water temperature fluctuations (increases) due to the loss of cooler groundwater inflows and associated potential reduction in dissolved oxygen levels.
- Limitations to native fish passage opportunities, during both upstream and downstream migration periods, as a result of reduced water depths or channel dewatering.

- Variation in the saltwater/freshwater transition zone and potential for saltwater intrusion upstream, potentially impacting available spawning habitats for fish such as īnanga (an At Risk – Declining species).

Based on the proposed mine staging plan, these effects could occur over the summer periods for between 4 to 5 years out of the 35 year life of the proposed consents.

It is assessed that the addition of supplementary stream flows to the Mitiwai Stream (refer to section 8.1.5 of this report) would address the risk to instream habitat values by augmenting or reinstating minimum flow conditions close to natural conditions. SLR's assessment recommends ongoing monitoring and management measures to clearly demonstrate that the mine water proposed to augment instream flows will not result in any notable reduction in instream water quality in the lower Mitiwai Stream. This includes that the existing level of upstream fish passage is maintained for the duration of mining below the water table near the Mitiwai Stream. If monitoring shows a notable reduction in the characteristics above, management measures will be required to address adverse effects. This could include a review of the augmentation source water or review of augmentation flows rates. These measures will form part of the Lake Level and Water Management Plan (referred to in the report as the Water Management Plan). The Draft Lake Level and Water Management Plan is attached as **Appendix EE**. A condition of consent is recommended (and proposed) requiring monitoring of key water quality parameters from within stream sections containing augmented flows. The monitoring is intended to ensure no adverse changes in water quality result from the flow augmentation.

The assessment states that mining below the water table, and the associated groundwater abstraction, near the Wainui Stream is unlikely to result in the dewatering effects anticipated for Mitiwai Stream. Potential dewatering effects will be buffered by the presence of the Taharoa Lakes as a replenishing water source to the stream and controls applied by TIL to maintain stream flow.

8.1.13.4 Stormwater discharges to the Wainui Stream

All stormwater runoff and washdown water from compacted surfaces and the administration building is intercepted and recycled into the mine process water system, however some may reach Wainui Stream as a non-point source discharge. The proposed consent conditions require that there are no discharges of oil, grease, fuel or detergents that result in a conspicuous oil or grease film, scum, foam or a conspicuous change in colour of visual clarity after reasonable mixing, to ensure the discharge does not result in elevations of key contaminants that could adversely impact aquatic biota in Wainui Stream or within the coastal marine environment.

8.1.13.5 Summary of freshwater ecology effects

With the implementation of the measures recommended in the Freshwater Ecological Assessment of Effects, the effects on freshwater ecology are generally considered to be acceptable, however it is acknowledged that potential effects on the migratory cycles of small or larval fish are possible if fish become entrained in the water intake pumps due to the larger mesh size. Proposed conditions of consent are contained in **Appendix BB**.

8.1.14 Marine ecology effects

The dewatering discharge (plume) from the export vessel, the discharge of stormwater and process water to the CMA and the coastal marine structures have the potential to adversely affect marine ecology in this location. A Marine Ecology Assessment has been undertaken by SLR and is attached to this report as **Appendix V**. To inform the assessment, desktop-based assessment was undertaken, and marine sediments were sampled and analysed for their chemical and physical characteristics and benthic macrofaunal community composition. Samples

were taken at two locations, approximately 250 m from the SBM (Mooring sites) and at two reference sites approximately 2 km away (Reference sites). The findings from the assessment are outlined below.

A broad range of common macroinvertebrates was identified; notable groups include amphipods, bivalves, shrimp, nematodes, and polychaete worms. None of the species identified are listed as Threatened or At Risk.

Iron was the only metal with statistically significantly higher concentrations in sediments near the mooring than at the northern reference site. Iron is a commonly occurring metal and although concentrations are elevated near the mooring relative to the northern reference site, the concentrations are unlikely to cause adverse effects on the environment, notably in sands that are known for their naturally high iron concentrations.

All sediment metal concentrations with ANZG (2018)[37] default guideline values (DGV) for toxicants in sediment were below the DGV. This indicates a low risk of unacceptable effects occurring to benthic organisms due to metal concentrations.

The amount of sediment predicted to be deposited on the seafloor is low at <0.002 mm near the SBM and <0.006 mm in the nearby Kawhia and Aotea Harbours over a three-month period. The highest levels of deposition (>0.05 mm/year) were predicted to occur over less than 1% of Kawhia and Aotea Harbours, which is highly unlikely to be measurable over and above natural variability.

Based on discharge dispersion modelling by MetOcean (**Appendix FF**), the estimated concentrations of suspended sediment in the water column will be low, within the range of natural variability and highly unlikely to cause adverse effects in fish. Similarly, suspended sediment concentrations and deposition of sediment on the seabed will have an overall effect on shellfish within the Kawhia Harbour and Aotea Harbour area as 'very low' at most.

The coastal marine structures provide a small positive effect by providing a hard substrate for marine organisms to colonise that is otherwise rare or absent in the area. This compensates for the small footprint lost to the pipeline resulting in a level of ecological effect of the marine structures as 'Low'.

Overall, the assessment identifies a small difference in the benthic macrofaunal community composition between the mooring and two reference sites; however, there were species identified at all sites that have known sensitivities to elevated mud and metal concentrations. Based on this, the assessment concludes that the small changes that have occurred to sediment mud and metal concentrations near the SBM due to the existing ship dewatering and stormwater/process water discharges have not had a significant adverse effect on the benthic macrofaunal community.

The effects of the proposed activity on the marine environment are assessed as 'low' overall from an ecological perspective.

8.1.15 Effects on marine mammals

There is potential for effects on marine mammals as a result of shiploading activities at the SBM/Taharoa Port. A Marine Mammals Report has been completed by the Cawthron Institute and is attached to this report as **Appendix FF**. The assessment uses a desktop review of resident and transient marine mammal populations using the coastal area at this location, and a literature review of marine mammal effects from similar sand extraction activities. The assessment has a particular focus on Māui dolphins (which have a threat classification of Nationally Critical) as the Port sits within an important resting and feeding habitat for a small population, and the West

[37] ANZG 2018. Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia.

Coast North Island Marine Mammal Sanctuary, however it notes that other marine mammals could be present including common dolphins and orca.

The assessment identifies the following potential effects on marine mammals:

- Underwater noise from vessels and pipelines.
- Vessel strike.
- Vessel lighting.
- Entanglement.
- Ecological effects including contaminants and prey impacts.

The findings of the assessment are summarised below.

8.1.15.1 Underwater noise

The main sources of underwater noise from the mining operations are likely to come from two areas: vessel noise including noise from engines, generators, dewatering equipment, pumps, propeller, etc. and pipeline noise - primarily noise from the slurry being pumped through the pipe to the vessel. However, it is noted that there is no data available regarding the underwater noise produced by the bulk carrier ships that are used to transport the processed ironsand, however comparisons can be drawn with other vessels of a similar size and configuration.

Noise effects on marine mammals are categorised as follows:

1. Permanent threshold shift (**PTS**): alteration of hearing function caused by physical damage and leading to irreversible hearing loss. The damage can be due to acute or chronic impacts.
2. Temporary threshold shift (**TTS**): non-permanent alteration of hearing function causing temporary hearing loss, in which the longer the exposure time, the longer this temporary effect lasts.
3. Behavioural responses: either displacement or attraction to the noise source, including changes in swimming direction, surfacing or diving patterns, click rates, etc.; can range from low-level to more moderate.
4. Acoustic responses: animals change their acoustic rates or call frequency to prevent or avoid acoustic interference (also known as masking) from the anthropogenic source.

The assessment states that any effects from underwater noise will be limited to those periods when a vessel is on station and the pipeline is being used to actively transport ironsand. Based on noise characteristics from similar activities, it is likely that any effects will be limited to the temporary masking of some marine mammal acoustic communication within the vicinity of the operation and/or possible avoidance behavioural responses (avoidance or attraction) in the immediate vicinity of the vessel and/or pipeline. The likelihood of any PTS hearing injury effects occurring is assessed as not applicable (i.e. will not occur) and any localised TTS is assessed as highly unlikely. The likelihood of underwater noise effects on marine mammals is assessed as low and the significance level of residual effects is assessed as less than minor.

The report notes that as there are no known studies that that collect underwater noise levels from this section of coastline, it would be useful to record the noise levels of export vessels. Proposed conditions of consent are included in this respect.

8.1.15.2 Vessel strike

The assessment states that vessel strikes are unlikely to be an issue at the Port given the slow speeds of the export vessels (less than 5 knots) when approaching and departing from the

mooring buoy. The likelihood of vessel strike effect is assessed as low and the significance level of residual effect is assessed as negligible.

8.1.15.3 Vessel lighting

Export vessels will use standard navigation and safety deck lighting, however any lighting footprint will most likely be confined to within a few hundred metres of the vessel and within surface to sub-surface depths. The light may attract small food species such as plankton that could in turn attract small cetaceans (e.g. dolphins), however they are more likely to be attracted by noise and activity. The likelihood of vessel lighting effects is assessed as not applicable to low and the significance level of residual effect is assessed as nil to negligible.

8.1.15.4 Entanglement

The mooring buoy to which the export vessels attach is 12 m in diameter and is anchored to the seabed by six sets of chains and anchors, each weighing 124 tonnes. Given the size of the chains, anchor and buoy, there is a negligible risk of entanglement to any marine mammals as the gear is too large and heavy to entangle even a whale. Other marine debris is generally non-existent in well-maintained coastal projects with proper waste management programmes in place (e.g. secure onboard storage of lines, ropes, and waste) in order to comply with the NZ Maritime Rules Part 180. The likelihood of entanglement effects is assessed as not applicable to low and the significance level of residual effect is assessed as nil to negligible.

8.1.15.5 Ecological effects

The assessment has considered the findings of the Marine Ecological Impact Assessment prepared by SLR (refer to section 8.1.14 of this report) and the Assessment of Effects on Coastal Processes and Landforms prepared by Tonkin & Taylor (refer to section 8.1.16 of this report) with respect to the effects of the sediment plume from the ship dewatering discharge on the marine environment. Based on these assessments, and the generalist feeding habitats of local marine mammal species including Māui dolphins, the discharge plumes generated from dewatering activities are assessed as not expected to have any detrimental or long-term flow-on effects to local marine mammals in the region. The likelihood of ecological effects is assessed as not applicable to low and the significance level of residual effect is assessed as nil to negligible.

8.1.15.6 Marine mammal effects summary

The assessment states that overall the effects on marine mammals will be less than minor or nil and therefore no specific mitigation measures are recommended within the assessment. However, the report recommends several industry standard best management practice measures for working around marine mammals to ensure that risks remain minimised throughout the thirty five year life of the consent. These include regular and proper upkeep of equipment and vessels, measurement of underwater noise levels and recording and reporting of marine mammal sightings.

8.1.16 Effects on coastal processes and landforms

The placement of structures within the CMA and the discharges containing sediments to the CMA could potentially affect coastal processes and landforms in this location. A Coastal Processes Assessment has been undertaken by Tonkin & Taylor Ltd and is attached to this report as **Appendix Q**. The assessment is based on literature review, discharge dispersion modelling[38] data

[38]Appendix FF - Discharge Dispersion Modelling Assessment.

on coastal change and land information from national databases. The findings from the assessment are outlined below.

- The volume of sediment contained within the plume released when the ship is dewatered is orders of magnitude below the natural yield from nearby catchments and is orders of magnitude below the capacity for wave driven transport of sediment alongshore. The overall effect of potential deposition from the dewatering plume is negligible on coastal processes and landforms on the open coast and adjacent harbours.
- The release of sediment associated with the discharge of stormwater and process water into the CMA is considered negligible, as the sediment type is mostly consistent with seabed sediments and would become part of the littoral system. The volume released is orders of magnitude below the volume of sand that waves can transport in a day.
- The occupation of the seabed by the export pipelines and SBM at Taharoa would have no discernible influence on waves, currents, or sediment transport processes because these structures are relatively small compared to the scale of physical processes at the site. The marine structures are not obtrusive to the flow of waves, currents, and the movement of sediment.
- Maintenance and renewal of the coastal and marine structures would cause a temporary disturbance that may temporally entrain seabed sediments. However, relative to the scale of natural sediment transport in the coastal zone any construction disturbance is expected to be temporary and undiscernible once the works are complete. Replacement of the pipeline could have a temporary effect on the foreshore, which can be mitigated by undertaking the dune and beach-based work during calm conditions, reinstating any excavated dune sediment and replanting any disturbed vegetation.
- The overall effect on coastal processes and landforms is assessed as negligible due to the small magnitude of deposition related to discharge activities and low impact footprint of the coastal marine structures. The natural coastal environment in this location is dynamic, high energy and turbid making it geomorphically insensitive to the volumes of sediment associated with the de-watering plume and stormwater discharge.

8.1.17 Navigation safety effects

The regular movement of ironsand export vessels has been an established component of the marine navigation environment in the area since 1972. The ship movements to and from the SBM themselves do not require resource consent under the RMA, rather they are an ancillary effect of the ongoing occupation of the CMA by the shiploading infrastructure.

The Taharoa Port (**the SBM**) is operated in compliance with the New Zealand Port and Harbour Marine Safety Code. Maritime New Zealand (**MNZ**) oversee the operation of the Taharoa Port through an appointed Harbourmaster. The Taharoa Port undertakes regular formal stakeholder workshops which the MZN Harbourmaster attends, along with informal monthly meetings between the MNZ Harbourmaster and TIL.

With respect to this application, MNZ in the capacity of the Harbourmaster for the Taharoa Port has been consulted regarding navigation safety and has advised that TIL will need to maintain systems and processes to manage navigation safety risks with a focus on:

- Ensuring appropriate scheduling to reduce risks to the ships calling at the SBM due to the ability for the SBM to only handle one vessel at a time, including appropriate management of vessels if weather conditions deteriorate.
- Ensuring any increase in scheduled ship calls does not affect the existing maintenance plans for the SBM and mooring infrastructure.

Refer to **Appendix Y** for the relevant correspondence.

TIL intends to comply with these requirements. In light of the response received from the MNZ Harbourmaster, potential adverse effects on maritime safety (to the degree they are relevant to the assessment of the resource consent applications under the RMA) of the proposed activities are less than minor.

8.1.18 Cultural effects

The cultural values and environment associated with Taharoa and the site are set out earlier in this report at Section 3.

The purpose of this section is to address the cultural effects associated with ongoing mining activities on the Central and Southern Blocks and in the CMA.

This assessment is largely based on information available from the 2020 RMA Application and information provided by Taharoa C, the Wetini whanau, the Taharoa Lakes Trust, Te Kooraha Marae, and through consultation on this application. A summary of these parties' feedback on cultural matters and how that feedback has informed the application is set out in the Consultation Summary, included in **Appendix Y**.

Relevant documents from the hearing on the 2020 RMA Application which address cultural effects and values which have been considered include:

(1) Taharoa C's written consent to undertake the Central and Southern Blocks Mining Project on the site;[39]

(2) Memorandum of Counsel of behalf of TIL dated 4 June 2024 filed to the Hearing Panel during the 2020 RMA Application;

(3) Statement of Evidence of Taituwha King on behalf of submitters on TIL's Regional Consent Application dated 17 June 2024 (attached as **Appendix HH**). Mr King has been identified by mana whenua as the person authorised to speak on behalf of Ngati Mahutu ki te Hauuarua;

(4) Primary Statement of Evidence of Hoturoa Barclay-Kerr, Chairman of The Proprietors of Taharoa C Block Incorporated, on behalf of TIL dated 23 January 2024 and the Supplementary Statement of Evidence of Hoturoa Barclay-Kerr on behalf of TIL dated 27 June 2024 (attached as **Appendix II** and **Appendix JJ**). Mr Barclay-Kerr provided evidence on behalf of Taharoa C; and

(5) The 2024 RMA Hearing Panel Decision.[40]

Each of these documents are enclosed to the application to assist the Panel.

The information set out above is sufficient to enable the Fast-rack Panel to determine the cultural effects of this application. An additional Cultural Impact Assessment was not considered necessary because it would likely repeat information already available.

An assessment of the Central and Southern Block Mining Project against the iwi environmental management plans for Waikato-Tainui, Ngāti Mahuta, and Ngati Maniapoto has been undertaken and is included in section 8.3 and **Appendix AA** of this report. These assessments should be read in conjunction with this cultural effects section.

In terms of cultural effects, it is important to note that the Māori landowners, Taharoa C, have provided their written consent to the Central and Southern Block Mining Project being

[39] See Appendix D and X to this report.
[40] See Appendix F to this report.

undertaken on Māori land and have cited the considerable social and economic benefits it provides. In their written consent (**Appendix D**), the Chair of Tahaora C, Mr Barclay-Kerr, notes that the mine has brought income for the shareholders of Taharoa C, local employment opportunities (and high wages) and the provision of community infrastructure, services and housing to support the local village. He notes that it has enable productive use to be made of the land which is otherwise largely uninhabitable and for which there are currently no other realistic commercial uses. Further, the Mine has enabled a number of tangata whenua to retain and remain on their ancestral land, strengthening their connection to that land.

The over-arching view gained from consultation with other tangata whenua groups is that mining activity on the Central and Southern Blocks should not cease. However, there are specific resource management matters and effects which are of particular interest that tangata whenua wish to see effectively managed. This includes on-going consultation, setbacks, rehabilitation, opportunities to exercise kaitiakitanga as it relates to the mining activity and management of surface water and ecology. This derives from their deep ancestral ties to the whenua, wai, and taonga species, particularly the Mitiwai Stream, Lake Taharoa, and Wainui Stream.

8.1.18.1 Effects on waterways and mauri and taonga species

There is a consensus amongst tangata whenua that Lake Taharoa, the Wainui Stream and the Mitiwai Stream are culturally significant for their mauri, wairua, and as mahinga kai, a traditional food source (in particular for tuna and grey mullet).

The Mitiwai Stream is described by Mr King as sacred and central to Ngati Mahuta tribal identity, wellbeing, and spiritual practice. It is a source of life, cleansing, baptism, and cultural continuity. The stream supports traditional practices (for example kānga wai preparation), ecological knowledge, and intergenerational teaching.

Feedback from tangata whenua in relation to this application has demonstrated that the ongoing operation of the ecological systems in the Wainui is critical, including the prevention of weed build up and the entrainment of fish. The effective operation of the first pass (installed in the late 2000's) to enable the migration of fish species past the dam in the Wainui Stream – to ensure that the mauri of the lake and stream are maintained.

Mr Barclay-Kerr's view is that the fish pass installed in the late 2000's, which is still in use, is effective at allowing for the passage of tuna and grey mullet (amongst other species) past the dam and effectively mitigates the effects on mauri in the waterway created by the dam.

Groundwater diversion is seen as potentially threatening the mauri of these water bodies and the ability of mana whenua to exercise kaitiakitanga. Mr Barclay-Kerr notes that ongoing mining near the Mitiwai Stream raises concerns about water quality and ecological integrity in the stream, although he supports the ongoing mining provided that the water quality and flow in the stream can be maintained. On the other hand, Mr King opposed the proposal to augment flow in the Mitiwai Stream (if required) through the introduction of fresh water, viewing it as a breach of its tapu status.

The proposed conditions of consent include a range of measures to avoid, remedy and mitigate potential effects on the Wainui and Mitiwai Streams, Lake Taharoa and their ecology, which will assist in reducing effects on their mauri and wairua. This includes measures to ensure the maintenance and effectiveness of the fish pass and maintenance and monitoring of stream flows.

8.1.18.2 Disturbance of wahi tapu and urupa

Mining in the dune system increases the likelihood of discovering koiwi (ancestral remains). As part of the 2020 RMA Application Mr Barclay-Kerr and Mr King stressed the importance of observing tikanga during discoveries, and reinterring remains in designated urupā. They seek to

ensure that consistent and transparent protocols are applied in managing sacred sites and ancestral remains. Wāhi tapu areas are demarcated, and no mining occurs near them. These practices are culturally sensitive and must continue to avoid the erosion of traditional practices.

Mr King specifically noted that Te Wharangi Urupā[41] is a registered wāhi tapu with ancestral and spiritual importance to Te Kooraha Marae. Expansion of the urupā was unanimously supported by Taharoa C shareholders, showing shared cultural values. The Central and Southern Block Mining Project is separate from and does not affect this urupā. However, TIL acknowledge the significance of the urupa (including Te Wharangi) and the importance of tikanga in managing koiwi.

Taharoa C has reviewed the Archaeological Authority Application and provided its support for the Application and the proposed Archaeological Management Plan. Taharoa C also provided a cultural values report for the purposes of the Application, which outlines the importance of archaeological sites and the protocols that are followed in accordance with tikanga, and is attached as part of **Appendix X**.

The documented protocols followed when koiwi are discovered on the site have been in place at Taharoa for several decades and require Ngati Mahuta kaumatua to be notified of discoveries. These protocols are cited in the Archaeological Management Plan forming part of TIL's Archaeological Authority Application.

As explained earlier, consultation with Heritage New Zealand/Pouhere Taonga has resulted in the conditions being proposed to apply to the Archaeological Authority sought for the site, rather than on the resource consents where they have resided in the past. The conditions will be implemented through an Archaeological Management Plan, providing a structured and transparent process for avoiding adverse effects on wāhi tapu and koiwi.

8.1.18.3 Impacts on kaitiakitanga and customary practices

Mining affects the ability to exercise kaitiakitanga over land and water at the site. As part of the 2020 RMA Application Mr Barclay-Kerr advised however that the continuation of mining for the benefit of the local landowners is a way to uphold kaitiakitanga, provided tikanga is respected. Mr King emphasised that kaitiakitanga must be active and rooted in whakapapa and oral traditions, and to that end he sought a greater involvement for mana whenua in environmental management and decision making at the mine.

The proposed conditions of consent include a requirement for mana whenua to be consulted during the preparation of the final EMP for the site, and during the preparation of the Site Rehabilitation Plan and Conceptual Site Closure Plan. The proposed conditions of consent also provide for co-development of a fish pass monitoring programme to confirm the ongoing effectiveness of the fish pass to enable a cultural monitoring framework. Mana whenua must also be regularly consulted in a structured manner during the implementation of the resource consents and will have access to a website where key environmental information and monitoring results will be available. The proposed conditions are generally consistent with the mechanisms that the 2024 Hearing Panel Decision considered would appropriately manage cultural effects, and all tangata whenua groups (outside of Taharoa C) support those conditions.

8.1.18.4 Effects on wairua and spiritual values

Mr Barclay-Kerr noted that visual and physical transformation of the landscape associated with the mining activity can affect wairua, and that the presence of koiwi, taonga, and ancestral sites

[41] Located in the north of the Northern Block and thus not within the scope of this Central/Southern Block FTAA application

means that spiritual values are constantly engaged. Any degradation of the environment is seen as a spiritual as well as a physical impact. Mr King proposed the inclusion of green corridors and buffer zones around wāhi tapu and sensitive habitats. He also noted that the nightscape disruption from light and sound emissions from mining activity is seen as diminishing the spiritual presence of guardians like the ruru and pekapeka. These changes affect the mauri of the land and the wellbeing of the people.

Consistent with Mr King's proposal, the proposed conditions include mining setbacks from perennial waterbodies, which need to be planted with appropriate vegetation to enhance the habitat and corridor values of the waterways. These include larger tree species that will in time act as potential roosting habitats for pekapeka (long-tailed bats) and ruru (morepork). The maintenance and enhancement of the waterbody setbacks will assist in creating the green corridors desired on cultural grounds once mining has been completed at the site.

8.1.18.5 Cultural risk from inadequate rehabilitation

Tangata whenua are aligned in their views that in order to uphold cultural values the site needs to be returned to a natural state when mining is completed, and that natural state includes areas of exposed dune interspersed with vegetated corridors along waterways.

Mr Barclay-Kerr supported TIL's proposed Site Rehabilitation Plan conditions as part of the 2020 RMA Application, which included consultation with marae and mana whenua. Mr King called for better rehabilitation plans including the creation of green corridors, habitat restoration, monitoring of impacts on native species, a reduction in light and noise pollution, and support for environmental education.

TIL's proposed resource consent conditions provide for effective rehabilitation and site closure by requiring progressive interim and final rehabilitation to be undertaken in accordance with a Site Rehabilitation Plan, consistent with its existing consents. However, it has proposed more detailed conditions requiring specific outcomes, including the provision of habitat suitable for bittern and long-trailed bats as well as NZ pipit.

The proposed conditions also include mining setbacks from perennial waterbodies, which need to be planted with appropriate vegetation to enhance the habitat and corridor values of the waterways. These include larger tree species that will in time act as potential roosting habitats for pekapeka (long-tailed bats) and ruru (morepork). The maintenance and enhancement of the waterbody setbacks will assist in creating the green corridors desired on cultural grounds once mining has been completed at the site.

Partly to recognise the link between cultural values and rehabilitation, the 2024 RMA Hearing Panel Decision imposed a bond to ensure adequate rehabilitation would be undertaken. The conditions proposed as part of this application also include a bond (and a covering note explaining the proposed bond condition), at **Appendix BB**.

8.1.18.6 Consultation and provision of information

Tangata whenua consulted with in relation to this application have sought structured, resourced, and ongoing consultation and engagement, rather than procedural hui.

Te Ruunanga conveyed during consultation that ongoing engagement is important to them from a cultural perspective; not consultation but engagement, when operations are changing or there is something that may be of interest to Te Ruunanga. They also expressed their desire for transparency of information and to review monitoring reports.

The way in which the application addresses these matters is set out in detail in section 7.2 of this report. The proposed conditions include structured on-going consultation meetings with key

parties and a range of measures to ensure that monitoring and reporting information is available to tangata whenua through a publicly available website, annual consultation meetings and the sharing of TIL's Annual Monitoring Report. The Annual Monitoring Report will provide a summary of all environmental monitoring, data analysis, rehabilitation efforts, compliance issues, and proposed changes to enhance environmental performance. Additionally, it will report on any complaints and/or feedback received during the stakeholder meetings set out above.

8.1.18.7 Cultural Disconnection

There are divergent views on whether the ongoing presence and operation of the mine enhances or jeopardises the cultural connection of tangata whenua to ancestral land. Mr Barclay-Kerr describes the mine as a cultural and economic anchor for Ngati Mahuta, and the employment generated by the mine has and will continue to enable tangata whenua to remain in Taharoa and maintain ahi ka, and support marae-based life. Mr King on the other hand saw the mine as a threat to cultural continuity unless cultural values are embedded in operations, however, he does not oppose the continued operation of the mine.

8.1.18.8 Conclusion on cultural effects

The land on which the mine is situated is owned by Ngati Mahuta hapu – Taharoa C leases the land to TIL and has provided its written consent to the Project being undertaken on Māori land, but there are broader mana whenua interests in Project mine and its potential effects on the environment and cultural values.

The potential cultural effects of the proposed mining activities relate to waterways, wāhi tapu, and the exercise of kaitiakitanga, and are well documented and known, as set out above.

The proposed conditions of consent have been developed in light of these potential effects and incorporate a range of mitigation measures (as described above, as well as in section 7.2 of this report and the Consultation Summary at **Appendix Z**).

These measures will ensure that potential effects on cultural values are well managed and that mana whenua will continue to be informed and consulted about the Project.

8.1.18.9 Cumulative effects

A consideration in assessing the proposed mining activities is the potential for cumulative effects arising as a result of mining across multiple blocks, including the Central and Southern Blocks in addition to mining of the Eastern Block, Te Mania Extension and Pit 1 on the Northern Block (refer to section 2.8.2 of this report). Cumulative effects are assessed below.

- As outlined in section 2.8.2 of this report, mining activities in the various blocks are interrelated, in that the resource consents currently sought for the Central and Southern Blocks in relation to damming/diverting of water, water takes, discharges and activities in the CMA will enable mining in other adjoining blocks.
- Consents on the adjoining blocks are for land disturbance, groundwater diversion, discharge to land (overburden), and discharge to air (i.e. do not include the above matters).
- Mining of the Eastern Block has now ceased and rehabilitation is underway. This reduces the potential for cumulative effects.
- The Pit 1 consents are for mining above the water table (i.e. there will be no diversion of groundwater) and therefore this part of the application will not contribute to cumulative groundwater effects.
- To date, monitoring has not shown adverse effects from groundwater diversion on adjoining blocks on surface freshwater bodies on Taharoa C Block or adjacent sites.

- In terms of cumulative dust generation, the Air Quality Assessment prepared by PDP (**Appendix S**) outlines that there is low risk of cumulative effects due to the significant separation distances between dust-generating blocks and sensitive receptors, the infrequency of wind conditions that would place receptors downwind of multiple blocks, and the implementation of effective dust mitigation measures across the site.

In conclusion, while the mine's activities span multiple blocks and involve a range of consents, the proposal is not expected to result in adverse cumulative effects.

8.1.19 Hazardous Installation and Substances Effects

Although not directly related to the effects of the consents sought, Clause 6(1)(b) of Schedule 5 of the FTAA requires "if the activity includes the use of hazardous installations, an assessment of any risks to the environment that are likely to arise from such use".

8.1.19.1 Hazardous Installations in the Central and Southern Block

The term 'hazardous installations' is not defined in the FTAA, or the RMA. The following provides an assessment of the hazardous substances used and stored at the site which could be considered to be 'hazardous installations'.

As set out in section 4.15 of this report, no hazardous substances are used in the processing of ironsand.

As outlined in section 4.15 of this report and section 7 of the draft EMP for the site (see Appendix T to this report), small volumes of oil, lubricants and other hazardous substances are stored at the site and are used for the operation and maintenance of machinery. This includes storage of the following:

- Diesel in three x 100,000 litre above-ground storage tanks located centrally within the Central Block.
- Unleaded petrol in an above-ground bulk storage tank with a capacity of 7,500 litres located near the administrative centre.
- Helicopter fuel in an above-ground storage tank with a capacity of 1,900 litres located near the Operations Centre and helicopter-pad.
- Mobile diesel tankers and moveable diesel fuel cells of various capacities.
- Other substances are stored in small quantities in the stores of the administrative centre.

All fixed fuel tanks are either contained within external bunds, and/or are double skinned tanks. Refer to Figure 7.1 in the EMP for the locations of the hazardous substance storage.

8.1.19.2 Assessment of potential risks to the environment

Unless properly carried out, the storage of hazardous substances generates risks to the environment in terms of soil and groundwater contamination, air discharges, and potential fires or explosions. Leaks can seep into the ground and potentially contaminate soil and groundwater, volatile substances can release harmful vapours into the air, and flammable materials can lead to fires and explosions in the presence of an ignition source.

All storage and use of hazardous substances at the site complies with relevant regulations and the performance standards contained within those regulations including the Health and Safety at Work (Hazardous Substances) Regulations 2017. No resource consents are triggered under the Waikato Regional Plan for hazardous substance use or storage at the site.

Section 7.3 of the EMP outlines the controls that are in place at the site for the use and storage of hazardous substances to minimise risks to human health and the environment as required by relevant regulations. This includes the following:

Documentation and storage:

- Use of a hazardous substance inventory which is kept up to date.
- Storage within suitable areas and segregation of incompatible substances.
- Storage within suitable containers that are appropriately labelled.
- Emergency Response and Spill Response Plans.
- Fire-fighting equipment within each hazard substance store.
- Adequate staff training for handling of hazardous substances and use of personal protective equipment.
- Spill kits located at each store and larger containment supplies stored within the administrative area.
- Designation of an Approved Handler to oversee hazardous substance storage and protocols.

Day to day activities:

- Pre-start checks for all machinery.
- All practical measures are taken to prevent oil and fuel leaks from vehicles and machinery.
- Refuelling at the site fuel facilities as far as is practicable.
- For fixed plant and equipment within the mining area, refuelling at least 50 m from any water body including wetlands and the coastal marine area.
- Use of cut-off valves for refuelling equipment.
- Use of Spill Kits and spill containment equipment for any unexpected spills.

With the fuel containment bunds around the fixed fuel tanks and the hazardous substance storage and refuelling measures in place as summarised above (and outlined more fully in the EMP), any potential risks to the environment from the use or storage of hazardous substances at the site is assessed as minimal.

8.1.20 Overall effects summary

Taking into account the assessments outlined above, when viewed overall the potential adverse impacts of continuing mining activities on the Central and Southern Blocks post-mitigation (and in light of the proposed conditions discussed below) are considered to be minor and acceptable. The regional and national benefits of the continuation of mining activity have been demonstrated to be extremely significant and clearly outweigh the potential adverse effects/impacts. It is thus clear that in terms of section 85(3) of the FTAA, the potential adverse impacts will not be out of proportion to the Project's substantial regional and national benefits.

8.2 Part 2 of the RMA

In accordance with Schedule 5, subclause 5(1)(g) of the FTAA, the following section provides an assessment of the activity against sections 5, 6 and 7 of the RMA.

8.2.1 Section 5 – Purpose

Section 5(1) states that the purpose of the RMA is to promote the sustainable management of natural and physical resources, with sustainable management defined in Section 5(2).

The proposal has been assessed against Section 5 and the proposed continuation of mining operations in the Central and Southern Block of Taharoa Mine is considered to be consistent with the overall purpose of the RMA as summarised below:

- Granting the consents to allow the ongoing operation of the Taharoa Mine will allow the ironsand resource to be used in a way and at a rate that will continue to provide for the social and economic well-being of the Taharoa community well into the future through employment

generation, and will contribute very significantly to the economic well-being of regional economy, and the national economy through the continuation of a resilient export industry. The site supports 350 full-time equivalent jobs, contributes over $316 million in export revenue annually, and is the largest single exporter by tonnage in New Zealand. It provides significant infrastructure and support to the Taharoa community, including subsidised housing, education grants, and the provision of essential services.

- The cultural well-being of Ngāti Mahuta will continue to be provided for through the sustaining of iwi and hapū connection to the whenua/land, the involvement of tāngata whenua in the preparation of an EMP, and the continuation by the consent holder of established and accepted protocols for mining activity to avoid identified urupā and for accidentally discovered koi iwi and taonga to be appropriately handled.
- Economically viable mining activity at the site has proven to be resilient to various economic cycles and external shocks (for example global pandemics) in the last 50 years and there is no reason to expect that this will change. The proposed 35-year consent term aligns with the scale of investment and the long-term nature of the activity.
- The life supporting capacities of air, water and soil and ecosystems will be safeguarded by robust operating practice and monitoring and management regimes, consistent with best practice for mine management
- Potential adverse effects from the ongoing operation of the mine will be avoided, remedied or mitigated through design, management measures and operational procedures (particularly as controlled through management plans and proposed conditions of consent), including:
  - Minimum lake and stream flow levels;
  - Wetland buffers and monitoring;
  - Dust suppression and air quality controls;
  - Rehabilitation and offsetting of wetland loss;
  - Monitoring and management of discharges to land and water.

8.2.2 Section 6 – Matters of National Importance

The following matters are of particular relevance to this Project:

i. The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use and development.

ii. The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.

iii. The maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers.

iv. The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga.

The activities for which consent is sought recognise and provide for the nationally important matters set out above for the following reasons:

- The natural character of the coastal environment, wetlands, lakes and rivers is preserved even with the continued presence of the mining infrastructure nearby through mining setbacks from perennial waterbodies and the CMA, rehabilitation of mined areas, the limits on water take and lake levels and the protection and enhancement of retained wetlands. While the presence of the dam represents an adverse effect on the natural character of the Wainui Stream in that locality, this should be considered in light of the positive effects created by the dam in terms of managing lake levels and contributing to wetland health

around the margins of the lake and stream. In light of all the above the mining activities do not constitute inappropriate use and development.

- There are areas of significant indigenous vegetation and significant habitats of indigenous fauna on the site which support long-tailed bats (Threatened – Nationally Critical) and several At-Risk and Threatened bird species. Mitigation measures include:
  - Habitat buffers and planting (including the retention of pine trees in the existing buffer around Lake Taharoa to provide continued habitat during pine tree harvesting).
  - Pest control.
  - Bat roost protocols.
  - Avoidance of nesting seasons for the New Zealand dotterel and New Zealand Pipit.

  There is also high value bird habitat is adjacent to the Taharoa C Block and therefore not affected by mining activities.
- Public access to and along the beach at Taharoa or to the adjacent lakes is not constrained by the proposed mining activity.
- The land remains Māori freehold and tāngata whenua maintain cultural and spiritual connections to the site. Their involvement in consultation and environmental management is proposed to be recognised.
- Archaeological sites are managed through an Archaeological Authority and a site-specific management plan.

8.2.3 Section 7 – Other Matters

Section 7 of the Act sets out other matters to which particular regard must be had when exercising functions and powers under the RMA. Of particular relevance to this proposal are:

i. Kaitiakitanga;
ii. The efficient use and development of natural and physical resources;
iii. The maintenance and enhancement of amenity values;
iv. Intrinsic values of ecosystems;
v. Maintenance and enhancement of the quality of the environment;
vi. Any finite characteristic of natural and physical resources.

Having regard to these matters, the following points are noted:

- The mine is unique in that the site is owned by the hapū with recognised mana whenua over the area and therefore, the hapū have a significant interest in the operation of the mine. Tāngata whenua continue to exercise kaitiakitanga through on-going consultation, procedures to be followed if an archaeological site or koiwi is discovered, and involvement in the development of environmental management plan and monitoring programmes.
- Mining of ironsands with economic value to the regional economy and use of existing mining infrastructure at the site is considered to be an efficient use of natural and physical resources. Additionally, water extracted from Wainui stream is used efficiently and is recycled within the mine.
- Potential impacts on amenity values and the quality of the environment including dust and noise will be managed through the conditions of consent and the management plans for the mine. Remediation and closure of mining areas involves the deposition and recontouring of tailings and remediation planting which blends into the existing environment and is consistent with the landscape character and amenity of the surrounding coastal area.

- Existing ecosystems on the site will be buffered by proposed setbacks and protected through on-going monitoring and remediation as required. Additional planting will enhance riparian areas.
- The operation of the Taharoa Mine is controlled through a suite of management plans and consent conditions which ensure that the quality of the environment is maintained and, where possible, enhanced.
- The ironsand deposit at Taharoa is a finite natural resource and as such, the mining activities on the site will cease when it is no longer economically viable to mine.
- As outlined in section 2.9 of this report, the Hydrology Assessment (**Appendix I**) prepared for the Project confirms the resilience of the mine to the impacts of climate change.

In summary, it is considered that the proposal has had regard to the relevant provisions of Section 7 of the Act.

8.3 Documents

Schedule 5, subclause 5(1)(h) requires an assessment of the activity against any relevant provisions in any of the documents listed in subclause (2). Under subclause 5(2), the documents referred to in subclause (1)(h) are the following:

(a) a national environmental standard:

(b) other regulations made under the RMA:

(c) a national policy statement:

(d) the NZCPS:

(e) a regional policy statement or proposed regional policy statement:

(f) a plan or proposed plan:

(g) a planning document recognised by a relevant iwi authority and lodged with a local authority.

Under Schedule 5, subclause 5(3) the application must include an assessment of the activity against:

(a) any relevant objectives, policies, or rules in a document listed in subclause 5(2); and

(b) any requirement, condition, or permission in any rules in any of those documents; and

(c) any other requirements in any of those documents.

The following sections provide an assessment of the Project against the relevant documents.

8.3.1 Resource Management (Measurement and Reporting of Water Takes) Regulations 2010

TIL proposes to abstract 27,200 m^3 of water per day for mining operations and 75,000 m^3 of water per day for shiploading processes from a water supply reservoir created by the damming of the Wainui Stream. This is consistent with the water take limits in its existing resource consents. The lesser of these equates to approximately 300 litres/second. As the water permit is for a take greater than 5 litres/second, and the water take is not non-consumptive (water will be used on site so not all of the water will be returned to the same waterbody), the Measurement and Reporting of Water Takes Regulations are applicable to this application. Records of the continuous measurement of the water taken will continue to be kept by TIL in accordance with Section 6 of these regulations. These records will continue to be provided to WRC once per year in accordance with Section 8 of the regulations.

8.3.2 National Policy Statement for Freshwater Management 2020

The NPS-FM provides guidance on how freshwater is to be managed in a manner that gives effect to Te Mana o te Wai. The overarching objective of the NPS-FM (Objective 1) is to ensure that natural and physical resources are managed in a way that prioritises:

- First, the health and well-being of water bodies and freshwater ecosystems;
- Second, the health needs of people (such as drinking water); and
- Third, the ability of people and communities to provide for their social, economic and cultural well-being, now and in the future.

The ongoing operation of the mine will be consistent with Te Mana o te Wai and the associated NPS-FM objective. Whilst this objective remains in the NPS-FM, as of 2024 individual resource consent decisions do not have to demonstrate how the hierarchy is met. The health of the water bodies at the site including the Mitiwai Stream, the Wainui Stream and the wetlands to be retained will be maintained as outlined in section 8.1 of this report. As outlined in sections 2.2 and 8.1.3 of this report, the on-going operation of the mine will provide social and economic benefits to the Taharoa community. Other key provisions of the NPS-FM are assessed below in Table 8.3.

Table 8.3: NPS-FM Policies

Topic	Policy/Clause	Assessment
Natural inland wetlands	**Policy 6:** There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted. **Policy 9:** The habitats of indigenous freshwater species are protected. **Clause 3.22(e)** – extraction of minerals	Regulation 3.22 contains exceptions to the requirement for the avoidance of the loss of extent of natural inland wetlands as per Policy 6. In terms of Clause 3.22(e): • The activity is necessary for the extraction of the ironsand mineral and the ancillary activities. • The extraction of the ironsand will provide significant national and regional benefits as outlined in section 2.2 of this report. • There is a functional need for the activity to be in this location because: The Project can only occur in this environment. The mine is already located in the environment. As such, alternative sites are not an option. The mine is located where the resource is located. The wetlands to be removed are located across the southern portion of the Southern Block. • The effects management hierarchy has been applied. The loss of the wetlands cannot be mitigated and an offset wetland is proposed

Topic	Policy/Clause	Assessment
		within the mine site to replace the low value, induced wetlands with a larger area of created wetland. The habitats associated with remaining wetlands will be protected and enhanced by applying a 30 m setback buffer from mining, and undertaking planting and pest management within the buffer area. Water levels within remaining wetlands will be monitored for water loss as a result of groundwater abstraction. Supplementary water will be added if required.
Streams	**Policy 5:** Freshwater is managed (including through a National Objectives Framework) to ensure that the health and well-being of degraded water bodies and freshwater ecosystems is improved, and the health and well-being of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved. **Policy 7**: The loss of river extent and values is avoided to the extent practicable. **Policy 9:** The habitats of indigenous freshwater species are protected. **Clause 3.24** – Rivers **Clause 3.26** – Fish passage	The values of the Mitiwai and Wainui streams will be maintained through: • Application of a 30 m setback buffer from mining activities and enhancement riparian planting. • Ensuring sufficient minimum flows including through the fish pass. • Maintenance and monitoring of the fish pass and monitoring of fish passage. • Application of erosion and sediment controls at the site. • Recycling of stormwater into the mine process water system and controls on discharges into the Wainui Stream.
Lake Taharoa	**Policy 5:** Freshwater is managed (including through a National Objectives Framework) to ensure that the health and well-being of degraded water bodies and freshwater ecosystems is improved, and the health and well-being of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved. **Policy 9:** The habitats of indigenous freshwater species are protected.	Minimum water levels for Lake Taharoa will be observed and monitoring of the ecological health of wetland species on the lake fringe will be undertaken to ensure lakeside ecosystems are not adversely affected by mining activities.
Freshwater allocation	**Policy 11:** Freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over-allocation is avoided. **Clause 3.28** – Water allocation	The Wainui Stream is not overallocated, however there will be limits on the volumes and rate of abstraction. Water levels downstream of the dam, and within the Mitiwai Stream will be monitored, with flow augmentation applied if required.

8.3.3 National Policy Statement for Indigenous Biodiversity 2023

The focus of the National Policy Statement for Indigenous Biodiversity (**NPS-IB**) is on establishing a consistent process for identifying and managing Significant Natural Areas through plans and through partnership with tāngata whenua.

Taharoa C Block is defined in the NPS-IB as "specified Māori land" as it is Māori freehold land. Under clauses 3.18(2)(c) and 3.18(2)(g) of the NPS-IB the occupation, use, and development of specified Māori land to support the social, cultural, and economic wellbeing of tāngata whenua should be enabled and there must be recognition that there are circumstances where development will prevail over indigenous biodiversity. This site is unique in that it contains deposits of ironsand in sufficient concentrations that it is economic to mine the site. As outlined within this report, mining of the site will have social, cultural and economic benefits to the landowners and the wider community.

Indigenous flora and fauna at the site includes a number of Threatened and At-Risk bird species, and long-tailed bats are present which have a threat classification status of Threatened – Nationally Critical. The Wainui Stream and the Mitiwai Stream have also been assessed as having high and moderate to high ecological value respectively. A number of avoidance and mitigation measures are proposed for the site including:

(a) Retention of a 100 m setback buffer from the MHWS from mining.
(b) Retention of a of a 30 m setback buffer from all perennial water bodies and wetlands from mining.
(c) Monitoring of stream flow levels with flow augmentation if required.
(d) Minimum water levels for Lake Taharoa.
(e) Riparian planting and pest management.
(f) Retention of a buffer of pine forest to maintain foraging habitat and replanting of fast-growing exotic species in adjacent areas.
(g) The implementation of Bat Roost Protocols for pine forest tree felling.

8.3.4 New Zealand Coastal Policy Statement 2010

This section assesses the relationship of the proposed activities to the relevant objectives and policies of the New Zealand Coastal Policy Statement 2010 (**NZCPS**). The purpose of the NZCPS is to state objectives and policies to achieve the purpose of the RMA in relation to the coastal environment of New Zealand.

Table 8.4: Assessment of the New Zealand Coastal Policy Statement 2010

Topic	Policy/clause	Assessment
Safeguarding environmental processes	Objective 1: To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries, dunes and land. Policy 1 Extent and characteristics of the coastal environment. Policy 11: Protecting indigenous biodiversity within the coastal environment. Policy 20: Use of vehicles on beaches, foreshore, seabed and adjacent public land to be controlled. Policy 23: Discharge of contaminants.	The form, functioning and resilience of the coastal environment will be sustained given the proposed continuance of the existing 100 m mining activity setback from MHWS (which has the practical effect of protecting the foredune); and the coastal water quality will be maintained because of the benign and rapidly dispersed nature of the discharges from shiploading. As outlined in section 8.1 of this report, adverse effects on threatened indigenous taxa (including the Maui dolphin and New Zealand dotterel) will be avoided. Vehicle use on the beach and foreshore will be incidental to the operation of the business and will be conducted without causing damage to dunes, shellfish beds, vegetated areas, bird nesting areas during nesting season or in any area identified as waahi tapu. As outlined in section 8.1 of this report, the discharge to the CMA from the shiploading activity is comprised of freshwater and a negligible quantity of sediment with respect to this environment. The small changes that have occurred to sediment mud and metal concentrations near the SBM due to the existing ship dewatering and stormwater/process water discharges have not had a significant adverse effect on the benthic macrofaunal community. This is expected to remain the case.
Preservation of natural Character and Landscape	Objective 2: To preserve the natural character of the coastal environment and protect natural features and landscape values. Policy 13: Natural Character to be preserved. Policy 14: Natural Character to be restored.	The site has not been identified as being inappropriate for further development (all of the Taharoa C Block is currently zoned Industrial in the Operative Waitomo District Plan and zoned Rural Production[42] in the Proposed Waitomo District Plan) and restoration of the site and its coastal margins will occur over time. The application recognises the specific characteristics that contribute to the natural character of the coastal environment, by providing a 100 m mining setback from the MHWS. Significant adverse effects on natural character will be avoided (as set out the

[42] Mining is a permitted activity in the Rural Production zone, which is the zone that recognises regionally significant activities in the Waitomo District.

Topic	Policy/clause	Assessment
	Policy 15: Natural features and landscapes to be protected from inappropriate use and development.	effects assessment within this report) and the site will be rehabilitated using appropriate coastal species as mining ceases.
Treaty of Waitangi Principles	Objective 3: To take account of the principles of the Treaty of Waitangi, recognise the role of tangata whenua as kaitiaki and provide for tangata whenua involvement in management of the coastal environment. Policy 2: Taking account of the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), and kaitiakitanga, in relation to the coastal environment.	Ngāti Mahuta as tāngata whenua maintain their role as kaitiaki and have an ongoing and enduring relationship with their land, rohe, and development of the ironsand resource while ensuring that their tikanga with regards to protection of areas of special value and treatment of accidental discoveries is observed during day-to-day mining activities. The proposed activities have been assessed against the Waikato-Tainui Environmental Plan, Maniapoto Environmental Plan and Ngāti Mahuta Environmental Management Plan (see section 8.3 and **Appendix AA**) and have been found to be consistent with those plans. Proposed conditions of consent enable on-going input from tangata whenua through participation in regular consultation meetings, consultation in respect of the development of the EMP and Wainui Stream Enhancement Plan. The conditions also provide for a range of resource management information about the on-going operation of the mine to be provided on a public website, and for the Annual Monitoring Plan to be circulated to relevant mana whenua groups. The Archaeological Management Plan and resource consent conditions (in respect of the CMA) also include protocols to involve kaumatua in the event of an accidental find of koiwi.
Public open space qualities and recreation opportunities are maintained and enhanced	Objective 4: To maintain and enhance the public open space qualities and recreation opportunities of the coastal environment. Policy 18: Public open space within and adjacent to the CMA is needed.	The mine operation will not interfere with or restrict public access to the beach or marine waters.

Topic	Policy/clause	Assessment
Coastal Hazards	Objective 5: To ensure that coastal hazard risks taking account of climate change are managed.	The site, being a sand mine, is not inherently at risk from coastal hazards.
Social, economic and cultural well-being of people and communities	Objective 6: To enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through subdivision, use, and development. Policy 6: Activities in the coastal environment. Policy 17: Protect historic heritage in the coastal environment from inappropriate use and development.	Objective 6 acknowledges that: • Some coastal uses and developments are important to community wellbeing; • Certain activities are functionally dependant on a coastal location; • Use and development are not precluded, provided they occur in appropriate places, forms and limits. The site, being a sand mine, is by its nature located with the coastal environment. Granting consents to enable the continuation of mining at the site will provide ongoing employment, economic growth, and community services for the people and community at Taharoa and the wider regional economy. This is line with Objective 6 which provides for social and economic community well-being through the use and development of the coastal environment. Policy 6 recognises that the extraction of minerals is an activity that is important to the social and economic well-being of people and communities. The mine has a direct connection with the people and community of Taharoa and the wider region. Its ongoing operation and development is vitally important to their well-being as outlined within this report. The mine's associated shiploading pipelines and SBM are infrastructure that has a functional need to be located in the CMA because their operation depends on direct access to deep water for vessel mooring and cargo transfer. This infrastructure cannot be feasibly relocated inland, as its core function is to connect marine transport with the coastal land-based facilities, and there is no alternative means of loading the product. As outlined within this report, mining can be carried out at the site while protecting habitats of living marine resources and historic heritage.

Topic	Policy/clause	Assessment
International Obligations	Objective 7: To ensure that management of the coastal environment recognises and provides for New Zealand's international obligations regarding the coastal environment, including the coastal marine area.	Granting consent to the proposed activities in the CMA will not affect New Zealand's international obligations in either the coastal environment or the CMA.
Precautionary approach	Policy 3: Adopt a precautionary approach towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood but potentially significantly adverse	The effects of the mining activity, taking into account that it has been in operation since the 1970's are generally well understood and are not assessed to be significantly adverse. Nevertheless, a precautionary approach for the activity will be adhered to through the ongoing environmental monitoring and adaptive action that will be undertaken. For instance, monitoring of Lake Taharoa water levels and reduction of water takes if required, monitoring of stream and wetland water levels with flow augmentation if required, and the monitoring of dust generation with measures implemented to reduce dust.
Integrated Management	Policy 4: Provide for the integrated management of natural and physical resources in the coastal environment, and activities that affect the coastal environment.	Given that the overall mining and shiploading activity spans the local authority boundary between the CMA and land, TIL will continue to work with WRC, DOC and local iwi as outlined in the proposed conditions of consent

8.3.5 Waikato Regional Policy Statement

The Waikato Regional Policy Statement (**WRPS**) is concerned with managing effects, but also with supporting and enabling regionally significant infrastructure to operate efficiently to support the population of the Waikato Region. As assessment against the relevant objectives and policies of the WRPS is provided below.

Table 8.5: WRPS Objectives and Policies Assessment

Objectives	Policies	Assessment
Air **AIR -O1 – Air Quality**	AIR-P2 – Manage discharges to air AIR – P3 – Manage adverse effects on amenity	The objective and policies seek to avoid unacceptable risks to human health and ensure discharges are manged to avoid, remedy or mitigate objectionable effects beyond the property boundary. As outlined in earlier sections of this report, an Air Quality assessment has been prepared for the Project by PDP. The assessment states that it is extremely unlikely that there would be effects on human health as a result of dust from the site, and that the dust management measures implemented by the mine will be effective in controlling dust so that there will be no objectionable dust effects beyond the site boundary. The applicant has proposed to include *Augier* conditions to manage dust effects in accordance with these policies.
Coastal environment **CE-O1 – Coastal Environment**	CE-P1 – Planning for development in the coastal environment CE-P2 – Safeguard coastal/marine ecosystems	The objective and policies seek the integrated management of the coastal environment. They are enabling of development whilst protecting natural character, coastal processes and ecosystems. There are no proposed changes to the current use of the coastal environment in respect of the mining activity. The mooring buoy and associated pipelines will continue to be used for ongoing mining operations. As outlined in section 8.1 of this report, there will be no adverse effects on marine ecosystems or mammals and the nesting habitat for the NZ dotterel will be protected by the 100 m mining setback from MHWS and the scheduling of maintenance works outside the peak breeding season.
Coastal marine area **CE-CMA-O2 – Mauri and health of marine waters**	CE-CMA-P3 – Interests in the coastal marine area CE-CMA-P4 – Marine water quality	The objective and policies seek to recognise and provide for the mauri and health of marine waters including natural character, ecosystems and cultural relationships while managing the use of the public space and discharges to marine waters. As outlined within section 8.1 of this report, the continued operation of the mine and the associated ship loading process in the coastal environment, will only have low adverse effects on marine water quality, ecological processes and habitats or the values of marine water.
Land and freshwater	LF-P2 – Outstanding fresh water bodies and significant values of wetlands	The objectives and policies within this section of the WRPS seek to maintain or enhance the mauri and identified values of fresh water bodies, manage allocation of and use of freshwater, maintain and enhance public access to riparian areas, coastal dunes and

Objectives	Policies	Assessment
LF-O1 – Mauri and values of fresh water bodies **LF-O2 – Allocation and use of fresh water** **LF-O3 – Riparian areas and wetlands**	LF-P3 – All fresh water bodies LF-P6 – Allocating fresh water LF-P7 – Efficient use of fresh water LF-P8 – Maintain or enhance the life supporting capacity of the soil resource LF-P9 – Soil contaminants	wetlands and amenity values; and maintain or enhance water quality, biodiversity, cultural values, riparian habitat and wetland quality and extent. As set out in section 8.1 of this report, freshwater bodies will be protected through (for example): • Sustainable water take limits; • Minimum water levels for Lake Taharoa; • Fencing and/or planting of stream riparian areas and wetlands which are proposed to be retained; • Fish passage through Wainui Stream via the fish pass; • Sufficient minimum flows in streams including through the fish pass; • Application of erosion and sediment controls at the site; • Augmentation of water levels in wetlands to be retained; • Replacement of mainly induced moderate value wetlands with a much larger area of replacement wetland; and • Ongoing ecological monitoring. Public access to riparian areas and wetlands within the site is not practicable or possible given the site is a privately owned sand mine with inherent safety hazards.
Ecosystems and indigenous biodiversity **ECO-O1 – Ecological integrity and indigenous biodiversity**	ECO-P1 – Maintain or enhance indigenous biodiversity	The objective and policies seek that that the full range of ecosystems types, their extent and their indigenous biodiversity exist in a healthy and functional state. This application is supported by four ecological reports covering terrestrial, freshwater, fauna and marine ecology as set out in section 8.1 of this report. The reports include various recommendations to maintain or enhance the natural ecosystems at the site and in the coastal marine environment. These recommendations have been accepted by TIL and incorporated as proposed conditions of consent. Refer to section 8.5 and **Appendix BB**.
Natural character **NATC-O1 – Natural character**	NATC-P1 – Preserve natural character	The objective and policies seek to protect the natural character of the coastal environment, wetlands, lakes, rivers and their margins from inappropriate use and development. Policy NATC-P1 states that where natural elements/influences are dominant adverse effects on natural character should be avoided, remedied or mitigated, where man-made elements/influences are dominant, it may be appropriate for further

Objectives	Policies	Assessment
		adverse effects on natural character, although opportunities to remedy or mitigate effects should be considered. As outlined within this report, the dunes, streams, wetlands and lake margines will be protected from mining by buffers, with riparian areas enhanced through planting and pest management.

8.3.6 Waikato Regional Plan

The WRP contains policies and methods to manage the natural and physical resources of the Waikato region to give effect to the WRPS. An assessment against the relevant objectives and policies of the WRP is provided below.

Table 8.6: WRP Objectives and Policies Assessment

Objectives	Policies	Assessment
Water Resources and the Management of Water Resources Objective 3.1.2	3.2.3 Policy 1: Management of Water Bodies Policy 3: Natural Character Policy 4: Waikato Region Surface Water Class Policy 7: Fishery Class	Objective 3.1.2 is encompassing with respect to water bodies and covers efficient use of water for social, economic and cultural wellbeing; improvement of water quality; avoidance of significant effects on ecosystems; maintenance/enhancement of flow regimes; increasing extent and quality of wetlands; the relationship of tangata whenua with water and preservation of the natural character of the coastal environment. The application will be consistent with these as outlined in the preceding sections of this report.
Water Takes Objective 3.3.2	3.3.3 Policy 11: Consent Application Assessment Criteria – Surface Water Policy 12: Consent Application Assessment Criteria – Groundwater	The objective and policies seek the efficient allocation of water and recognise that existing water takes contribute to social and economic wellbeing and significant investment can rely on the continuation of water takes. With suitable conditions regarding minimum lake levels, stream flow, and the monitoring and flow augmentation proposed, the water takes can be achieved without resulting in adverse effects, and the social and economic benefits of the mine can continue. TIL is not seeking to increase the water take limits the site has had in place since 2006.
Discharges Objective 3.5.2	3.5.3 Policy 1: Enabling Discharges to Water that will have only Minor Adverse Effects Policy 2: Managing Discharges to Water with More than Minor Adverse Effects Policy 3: Alternatives to Direct Discharge to Water Policy 4: Discharges to Land Policy 5: Ground Water Policy 6: Tangata Whenua Uses and Values Policy 7: Stormwater Discharges	The discharges to water at the site involve the incidental discharges of clean process water, the discharge of clean process water for stream flow augmentation purposes if required and the discharge of stormwater/washdown water. Proposed water monitoring conditions will ensure the discharges do not result in elevations of key contaminants that could adversely impact aquatic biota.
Damming and Diverting Objective 3.6.2	3.6.3	Proposed conditions of consent will ensure that minimum flows are maintained through the dam and fish pass within Wainui Stream and the reach of stream below

Objectives	Policies	Assessment
	Policy 2: Damming and Diverting of Water in Perennial Water Bodies Policy 3: Tangata Whenua* Uses and Values Policy 4: Wetlands and Peat Lakes Policy 5: Existing Lawfully Establishing Damming and Diverting	the dam will be monitored during periods of low flow with the addition of flow augmentation if required. Flow augmentation will be provided in wetlands to be retained to maintain water levels if required. The WRP provides for the continued operation of lawfully established dams as a controlled activity (Policy 5).
Wetlands Objective 3.1.2 and 3.A.1	3A Policy 3.A.2 Natural inland wetlands	Policy 3.A.2 outlines when the loss of natural inland wetlands can be acceptable. The loss of some natural inland wetlands at the site (which are assessed as induced and of moderate value) is considered to be in accordance with this policy as: it is necessary for the purpose of the extraction of minerals and ancillary activities; will provide significant national and regional benefits; there is a functional need for the mining activity in this location; and the effects will be managed through applying the effects management hierarchy. Adverse effects on remaining wetlands will be avoided through the application of buffer areas and flow augmentation if required.
Accelerated Erosion Objective 5.1.2	5.1.3 Policy 2: Use of Regulatory and Non-Regulatory Approaches of Management for Soil Disturbance/Vegetation Clearance Activities in High Risk Erosion Areas	The proposed mining activity will not result in accelerated erosion at the site in a way that would reduce soil productivity, result in adverse effects on surface water quality or create flooding/natural hazards. The dune systems that are adjacent to the CMA are not proposed to be mined and will be protected by a 100 m buffer setback. Measures will be taken at the site to ensure the mining activities are not the cause of air quality effects beyond those permitted by the plan as outlined in section 4.13 of this report. The activity is not therefore inconsistent with this objective and policy.
Discharges Onto or Into Land Objective 5.2.2	5.2.3 Policy 2: Other Discharges Onto or Into Land	The various discharges to land are not expected to result in contamination of soil or water for the reasons outlined in section 8.1.6 of this report. The discharge is in accordance with this objective and policy.
Air Module Objective 6.1.2	6.1.3 Policy 2: Managing effects of other discharges	As outlined in earlier sections of this report, with the proposed dust management procedures at the mine, dust emissions from the site are not expected to result in adverse effects on ambient air quality, ambient particulate matter levels, human health, air quality or the values of tangata whenua. Policy 5 recognises the positive

Objectives	Policies	Assessment
	Policy 5: Positive Benefits of Resource Use	benefits to people and communities arising from activities that may affect air quality, provided adverse effects on air quality are avoided, remedied or mitigated. The mine undertakes measures to ensure potential adverse effects arising from dust generation are appropriately managed to avoid adverse effects.

8.3.7 Waikato Regional Coastal Plans

The WRCP and PWRCP apply to the CMA of the Waikato Region, from the line of MHWS out to 12 nautical miles and includes the pipelines for the shiploading system, the mooring buoy and associated tethering structures, and the discharges to the CMA. The WRC notified its decision on the PWRCP on 13 October 2025.

The objectives and policies of the WRCP and PWRCP are assessed below.

Table 8.7: WRCP and PWRCP Objectives and Policies Assessment

Objectives	Policies	Assessment
Tangata Whenua WRCP Objective 2.4 Tangata Whenua Relationship with the Coast PWRCP IGM-O1 Integrated management of resources	WRCP Policy 2.3.1 Tangata Whenua Values WRCP Policy 2.3.2 Participation WRCP Policy 2.4.1 Kaitiakitanga PWRCP IGM-P1 Ki uta ki tai (Mountains to the Sea) PWRCP IGM-P12 Use and development PWRCP IGM-P13 Interconnected nature of the coast PWRCP IGM-P14 Functional and operational need	The matters relevant to these policies have been considered and assessed throughout this application. Of particular relevance: The application recognises mauri, wairua, and kaitiakitanga and seeks to avoid significant adverse effects. It incorporates cultural monitoring, ensures that Site Closure is undertaken in accordance with the wishes of the Ngati Mahuta landowner, and ensures the protection of wāhi tapu and koiwi. Employment from the mine supports tangata whenua remaining on ancestral land is consistent with cultural continuity objectives. Protocols for koiwi discovery and urupā management reflect tikanga and uphold spiritual values. Measures like fish passes and ecological monitoring uphold mauri and the life-supporting capacity of Lake Taharoa, Wainui, and Mitiwai Streams. Mana whenua are involved in the preparation of the EMP and fish pass monitoring supporting active guardianship. Mitigation of visual, light, and sound impacts (e.g. green corridors, setbacks) addresses effects on wairua and spiritual guardians. The application considers upstream and downstream effects, consistent with ki uta ki tai and interconnected coastal systems. The above application addresses cumulative effects and interconnected impacts. The proposal balances cultural and economic needs, enabling development while embedding cultural safeguards. A bond and detailed rehabilitation plans ensure the site is returned to a culturally appropriate natural state post-mining.
Natural Character WRCP Objective 3.1 Preservation of Natural Character WRCP Objective 3.3 Amenity Values PWRCP NATC-O1 Preserve and protect natural character	WRCP Policy 3.1.2 Protection of Other Natural Features WRCP Policy 3.1.4A Use of and Occupation of Coastal Space WRCP Policy 3.3.1 Amenity Values PWRCP NATC-P2 Avoid significant adverse effects on other natural character	The SBM and pipelines are existing structures in the coastal environment. The pipelines are not visible and the SBM is located 3.5 km offshore. The structures are considered appropriate for the location and are regularly maintained. The natural character of the coastal environment will be maintained. We note that PWRCP STR-P1 recognises and provides for "structures that have a functional need or operational need for infrastructure to be generally located in the [CMA] and are associated with the following activities [that] are generally appropriate … 2. Port of Taharoa".

Objectives	Policies	Assessment
Structures and Occupation of Space WRCP Objective 5.1 Development, Maintenance and Removal of Structures PWRCP STR-O1 Recognise and provide for structures in appropriate locations PWRCP STR-O2 Location and design of structures PWRCP STR-O3 Construction, maintenance and removal of structures	WRCP Policy 5.1.3 Appropriate Structures WRCP Policy 5.1.4 Notification of Structures and Works WRCP Policy 5.1.5 Location, construction and maintenance of mooring structures PWRCP STR-P1 Recognise and provide for structures PWRCP STR-P2 Location of structures to avoid adverse effects PWRCP STR-P3 Design of structures PWRCP STR-P5 Occupation of space in the coastal marine area PWRCP STR-P7 Maintenance and repair of existing structures	
Coastal Processes WRCP Objective 3.4 Protection of Coastal Processes PWRCP DD-O1 Protect coastal processes and ecosystems from inappropriate disturbance, dredging or removal of natural material	WRCP Policy 3.4.2 Recognising Coastal Processes WRCP Policy 3.4.3 Biodiversity PWRCP DD-P1 Recognition of dredging, disturbance and deposition activities PWRCP DD-P2 Recognising the appropriateness of minor disturbance activities	As outlined in section 8.1 of this report, the SBM and the loading of ships will not result in excessive deposition of sediment, affect coastal processes or adversely affect marine ecology and marine mammals.

Objectives	Policies	Assessment
Water Quality WRCP Objective 4.1 High Water Quality Maintained PWRCP WAQ-O1 Maintain and improve water quality PWRCP WAQ-O2 Protect the mauri and life supporting capacity of coastal water **Discharges to water** PWRCP WD-O1 Discharges to coastal water	WRCP Policy 4.1.1 Maintaining or Enhancing Water Quality Characteristics WRCP Policy 4.1.3 Point Source Discharges PWRCP WAQ-P1 Water quality PWRCP WD-P1 Discharge of contaminants to the coastal marine area PWRCP WD-P2 Extent of reasonable mixing for discharges PWRCP WD-P9 Discharges of hazardous substances PWRCP WD-P10 Discharges of water containing contaminants	As outlined in section 8.1 of this report, the small changes that have occurred to sediment mud and metal concentrations near the SBM due to the existing ship dewatering and stormwater/process water discharges have not had a significant adverse effect on the benthic macrofaunal community. Discharge dispersion modelling shows the estimated concentrations of suspended sediment in the water column from the ship dewatering discharge will be low, within the range of natural variability and highly unlikely to cause adverse effects in fish. It is therefore considered that water quality will be maintained. These policies seek to ensure that discharges of contaminants are appropriately managed to avoid adverse effects on the environment and avoid the discharge of hazardous substances. These policies were introduced to ensure that the effects of discharges are assessed to ensure significant adverse effects do not occur. As explained above, the Marine Ecology assessment by SLR Consulting concludes that the effects of the proposed activity on the marine environment is low from an ecological perspective.
Moorings PWRCP MOA-O1 Provide for mooring areas	PWRCP MOA-P1 Enable moorings in mooring areas PWRCP MOA-P2 Management of moorings within a mooring area	The "Taharoa Harbour mooring area" identified in the PWRCP is the SBM operated by TIL and is included the PWRCP as a controlled activity. The SBM is an efficient use of space and will not adversely affect navigational safety as outlined in section 8.1 of this report.
Noise and vibration PWRCP Noise-O1 Manage noise and vibration	Noise-P1 Apply best practicable option Noise-P3 Underwater noise Noise-P4 Adverse effects of noise on marine fauna	P3 provides for the generation of underwater noise, subject to the management of any adverse effects, where noise is associated with the generation of noise from the operational requirements of noise. P4 directs that assessment of noise is only required for high impact activities including blasting and piling. The small amount of noise likely to be generated by the export ships is in accordance with this objective and associated policies.
Foreshore and/or Seabed Disturbances WRCP Objective 7.1 General Disturbances	WRCP Policy 7.1.2 Control of Vehicles WRCP Policy 7.3.2 Disposal Material	As outlined within this report, the deposition of small amounts of sediment on the seabed will not result in adverse effects. Vehicles may be required to be used on occasion along the foreshore associated with maintenance activities. This use is in accordance with the relevant policies as

Objectives	Policies	Assessment
WRCP Objective 7.3 Deposition or Disposal of Material on the Foreshore or Seabed PWRCP DD-O2 Manage adverse effects from deposition or disposal of material	PWRCP DD-P3 Restricting the use of vehicles on the foreshore and seabed PWRCP DD-P5 Activities disturbing or depositing on, the foreshore and seabed	the vehicles have a functional need to be in the CMA and effects will be minor and temporary.
Ecosystems and indigenous biodiversity PWRCP ECO-O1 Maintain, enhance, restore and protect ecosystems and indigenous biodiversity PWRCP ECO-O2 Prevent loss of ecosystem processes and habitat quality	PWRCP ECO-P1 Avoid adverse effects on significant indigenous biodiversity PWRCP ECO-P2 Adverse effects on indigenous biodiversity PWRCP ECO-P3 Assessment of adverse effects on indigenous biodiversity	As outlined in section 8.1 of this report, effects on indigenous biodiversity as a result of activities in the coastal environment and CMA will not result in adverse effects on indigenous biodiversity. The primary habitat of the New Zealand dotterel will protected by the mining setback buffer (100 m from MHWS) and maintenance works inside the CMA between the months of September – January (inclusive) will be avoided unless prior written approval is obtained from WRC and DoC. Potential adverse effects on marine ecology are assessed as low and potential effects on Maui dolphins are assessed as minor in terms of vessel noise, but are otherwise nil or negligible. Overall effects on marine mammals are assessed as less than minor or nil Refer to section 8.1.5 of this report.

8.3.8 Ngāti Mahuta Environmental Management Plan

The Ngāti Mahuta Environmental Management Plan (**NMEMP**) was developed by and for Ngaati Mahuta ki te Hauaauru hapuu (**NMKTH**) on behalf of Te Ruunanga o Ngaati Mahuta ki te Hauaauru (**Te Ruunanga**), Te Kooraha Marae, Aaruka Marae and Maketuu Marae.

The purpose of the Plan[43] seeks to ensure that the balance and mauri within the rohe of NMKTH is protected through collective protection of kaitiakitanga, taonga and support/education of whanau; decision making and resource management processes with respect to taonga and NMKTH interests, and adequate engagement with stakeholders.

Reflecting the fact that Ngaati Mahuta ki te Hauaauru marae are members of Te Whakakitenga o Waikato (the Waikato-Tainui Iwi Authority), the NMEMP has been prepared to be consistent with Tai Tumu, Tai Pari, Tai Ao - the Waikato-Tainui Environmental Plan (**WTEP**). The assessment set out in the following sub-section of this report concludes that the TIL applications on the Central/Southern Block are consistent with the WTEP.

An assessment of the Project against the relevant sections of the NMEMP is contained in **Appendix BB**.

8.3.9 Waikato-Tainui Environmental Plan

As the site is within the rohe of Waikato-Tainui, it is appropriate to consider the relationship of the proposal to the WTEP.

The Plan is set out in chapters which outline the iwi's history, overarching principles, and its connection to the RMA and most importantly the objectives, policies and methodology which guide Waikato-Tainui to achieve the overarching principle outlined above. Table 8.8 below provides an assessment of the Project against the relevant sections of the WTEP.

The proposed mining works are considered to be consistent with the relevant sections of the WTEP for the following reasons:

i. Mitigation measures will be in place throughout the duration of the mining works (Section 8.2 of the WTEP).
ii. The proposed mining activities will not limit access to surrounding water bodies including the coast and will not necessarily inhibit customary activities to be undertaken by mana whenua (Section 14.7 of the WTEP).
iii. Procedures for discovery of archaeological sites and koiwi for the mine will continue to be applied during mining of the Central and Southern Blocks. (Section 16 of the WTEP).

[43] Page 11.

Table 8.8: Assessment of the Project against the WTEP

Relevant section	Comment
Vision – He Maimai Aroha	
Section 7.1.1 – Towards Environmental Enhancement outlines that WTTKI aims for an enhancement approach rather than only sustainability. This approach recognises that those that utilise an environmental resource for some type of benefit (whether economic, social, cultural, spiritual, and/or environmental) have a responsibility to show a reciprocal benefit back to the environment. This reciprocal approach is not intended to undermine the benefit from using environmental resources but rather to ensure that the use or depletion of environmental resources does not create a burden for future generations.	The application for the continuation of ironsand mining on the Central/Southern Blocks provides enhancement through the ecological mitigation measures and through the site remediation management plan and consent conditions: • The application includes conditions requiring the progressive rehabilitation of mine areas. This includes tailings placement and landform recontouring as well as and indigenous vegetation planting and dune stabilisation. The Conceptual Site Closure Plan will be developed with the input of the landowner, however, it is generally anticipated that it will require TIL to return the site to a dune environment that replicates the overall site prior to mining, with vegetated corridors. Whilst the ironsand is a finite resource and mining will eventually cease within the area, tailings placement, contouring and replanting will not leave the site as a burden to Ngati Mahuta. • The removal of 4.25 ha of lower value wetlands will be offset by the creation of 8.3 ha of new wetland habitat, exceeding the loss and providing a net ecological gain. • Pest management measures are proposed to protect restored and planted habitats. • Minimum lake levels and stream flows are set to protect aquatic ecosystems. Flow augmentation is proposed for the Mitiwai Stream if groundwater drawdown occurs, ensuring ecological resilience.
Section 8.2 of the WTEP outlines that mitigation measures are required when managing an activity	A range of avoidance and mitigation measures are proposed (as explained in detail in the assessment above), several of which are a continuance of established practice at the site – some examples include (but are not limited to) mining setbacks from coastal foredunes and perennial waterbodies, maintaining minimum levels within Lake Taharoa, maintenance of a fish pass at the dam in the Wainui Stream, and ensuring that mining avoids identified urupa and waahi tapu. These measures will be embedded through the consent conditions proposed, the management plans that will

Relevant section	Comment
	be in place during operation of the mine and the archaeological management approach in place. As such, the works are consistent with Section 8.2.
Section 10.3 – Strategic Objectives These objectives strive to: (a) Retain WTKKI's historical role as Kaitiaki o te Kiingitanga (b) To ensure Kiingitanga remains an eternal symbol of unity	The land is owned by Ngāti Mahuta through Taharoa C and has never been alienated from Māori ownership. Extending the operation of the mine into the future will further provide for kaitiakitanga over the hapū land as they benefit from this arrangement. In addition: • The AEE acknowledges Ngāti Mahuta ki Tai as mana whenua and the largest hapū of Waikato-Tainui, with ancestral ties to the site and the Kiingitanga movement. • Established tikanga for koiwi discovery and urupā protection are embedded in the application, reflecting Waikato-Tainui's guardianship responsibilities. • The application includes structured, ongoing engagement with marae and hapū, including Te Kooraha, Aaruka, and Maketuu Marae — all of which play key roles in Kiingitanga events. • The proposal includes rehabilitation plans, wetland offsets, and ecological monitoring that uphold Waikato-Tainui's values of environmental guardianship. • The land and mine provides significant economic and employment benefit to the people of Taharoa and the wider regional and national economy. Operation of the mine into the future will provide further economic stability for the people of Taharoa.
Section 14.7 outlines the objectives and policies in relation to customary activities which are summarised as: • WTKKI access to and ability to undertake customary activities and resource use, including along the margins of waterways, is protected and enhanced. • The ability of Waikato-Tainui to undertake customary activities is protected and enhanced within the rohe, particularly on, in, and around waterways and their margins, including wetlands and reserves.	Gaining the necessary consents to allow mining to continue on the Central/Southern Block (as well associated activities in the CMA), will not limit access to surrounding water bodies including the coast and does not inhibit customary activities to be undertaken by mana whenua.
Section 15 – Natural Heritage Of relevance in this section are the following objective and policy;	In addition to what is already set out above, no changes are proposed to the current water abstraction rates or discharge locations/volumes. As such, no new adverse

Relevant section	Comment
• 15.3.2 Cultural, spiritual and ecological features of the Waikato landscape that are significant to Waikato-Tainui are protected and enhanced to improve the mauri of the land. • 15.3.2.1 To ensure that there is greater protection and enhancement of cultural, spiritual and ecological features of significance to Waikato-Tainui.	effects on the environment are anticipated through the continuation of mining activity at Taharoa. Overall, it is considered that the avoidance and mitigation measures that are proposed to be implemented on site are appropriate to manage any adverse effects and ensure that the site can be returned to an appropriate state once mining has finished.
Section 16 outlines the requirements for protecting ngaa taonga tuku iho, ngaa waahi tapu and ngaa waahi tupuna	The current accidental discovery protocol in place at the mine will continue to be applied to the new consents and ongoing mining activities in the future, with variations so that it forms part of an Archaeological Management Plan prepared by a Project archaeologist. The protocol was historically formulated through consultation with kaumatua and kuia and reflects the tikanga of Ngāti Mahuta. This role will continue in the new Plan. Therefore, wāhi tapu and urupā, and any identified sites of significance to iwi are considered to be appropriately protected from continued mining operations.
Chapter 19 Te Waai Maaori – Water Of relevance in this section are the following objectives and policies: 19.4.2 Water quality is such that fresh waters within the rohe of Waikato-Tainui are drinkable, swimmable and fishable in all places (with water quality to the level that kiingi taawhiao could have expected in his time). 19.4.2.1 regulators to set clearer and higher water quality targets, and to develop and incentivise methods to achieve these targets. 19.4.4 Water allocation is consistent with restoring and protecting the health and wellbeing of water bodies within the rohe of Waikato-Tainui. Those regulating the use of water (including water take, and direct and indirect discharges to water): 19.4.4.1 ensure that any water allocation framework operates under consistent principles, is equitable and efficient and restores and protects the health and wellbeing of Waikato-Tainui water bodies.	TIL requires consents to continue taking water from the impounded section of the Wainui Stream for mining and ship loading activities. The potential adverse effects of the takes on water quality in the Wainui Stream and in Lake Taharoa have been assessed as very minor. In any case, the Stream is acclimated to the presence of the dam and has been for many years. One of the matters to be considered in regards to water allocation is access to the resource for other users (i.e. would the takes sought by TIL lock other potential abstractors out of being able to access the water resource). In this case there is no evidence that the catchment is over-allocated, nor are there any other consented water takes on the Wainui Stream, and there is no credible chance of any other takes being sought by any other party in the future. This is because the full length of the Wainui Stream is contained with the site, which is owned by Taharoa C. This means that there are no other existing take holders, or applicants for water take, that might be adversely affected by the take sought by TIL. Water supply for Taharoa Village comes from a groundwater take on the edge of the village, the consent for which is also held and exercised by TIL.

Relevant section	Comment
19.4.4.3 resource consents granting, monitoring, and reassessment ensures any allocation of water has regard to best practice and the objective of restoring and protecting the health and wellbeing of Waikato-Tainui water bodies.	It should be noted that water is critical to TIL's business, so it is continually adopting best practice in terms of efficient water use and in recent years have invested in water re-use and recycling processes to reduce water use at the mine. It should also be noted that the water taken from the Wainui Stream by TIL is a critical part of the operation of the mining and ship loading activities, which in turn provides significant benefit to Ngati Mahuta and the wider regional and national economy.
Chapter 20 Wetlands – Ngaa Repo 20.3.1 existing wetlands are protected and enhanced 20.3.1.1 to encourage improvements to local hydrology (where possible) to support healthy wetland function, and restoration of locally appropriate wetland biodiversity within local planning and land management practice. 20.3.1.2 to ensure that all land use practices that have the potential to impact on wetlands have efficient sediment, drainage, discharge, fertiliser application, and riparian buffer control practices in place to ensure that adverse impacts on wetlands are prevented. 20.3.2 the relationship of Waikato-Tainui with its wetlands is enhanced through the restoration of wetlands and enhanced/permitted access for cultural purposes. 20.3.2.1 to ensure that the relationship of Waikato-Tainui with its wetlands is enhanced through the restoration of wetlands and enhanced/permitted access for cultural purposes.	TIL is seeking consent to remove seven wetlands with moderate value on the site to allow mining to occur of the sand resource that underlies them. Most of these are in areas that have previously been mined and that have been induced by past mining practices. High value wetlands exist around the margins of Lake Taharoa, immediately adjacent to the site. These wetlands have acclimated to the lake levels as influenced (in part) by the operation of the water takes for the mine since the early 1970's. TIL has historically operated the mine in accordance with consent conditions that require monitoring of the lake level, and for water takes to cease if a minimum lake level occurs - noting that this has very rarely, if ever, happened. TIL is proposing additional consent conditions that require ongoing monitoring of the health of the lake margin wetlands and for management responses to be undertaken if the health of the wetlands is showing signs of decline (taking into account natural seasonal variations). In addition to the above, TIL will supplement wetland water levels as required to ensure the lake margin wetlands are not adversely affected.
Chapter 21 Te Whenua – Land 21.3.1 activities that accelerate soil erosion are managed effectively, including through the reforestation and retirement of marginal lands from existing intensive and environmentally unsustainable land uses.	The mining of the ironsand resource at the site is undertaken in accordance with geotechnical recommendations as to the acceptable slope of embankments and proximity of works to waterways and other sensitive areas. Mining exclusion areas will be observed within 30 metres of perennial waterbodies.

Relevant section	Comment
21.3.1.2 all major excavation works that have the potential to impact on waterways shall have sufficient erosion and sediment control measures in place to ensure that adverse effects on water bodies are managed. 21.3.1.3 to ensure that riverbank erosion, including the erosion of river islands is effectively managed.	This mining exclusion setback has proven to be an effective method of ensuring that potential adverse erosion and sediment control effects on waterways are avoided.
Chapter 22 He Mahinga Ika – Fisheries 22.3.2 taonga species are protected, restored and managed, consistent with the tikanga, kawa, maatauranga, and mana whakahaere of Waikato-tainui. 22.3.2.1 to ensure that taonga species are protected, restored and managed, consistent with the tikanga, kawa, maatauranga, and mana whakahaere of Waikato-Tainui.	In the Taharoa context, grey mullet are a taonga fisheries species to Ngati Mahuta present in Lake Taharoa. The dam in the Wainui Stream presents a potential barrier to the up and downstream migration of grey mullet (and other species such as tuna) from the ocean to the lake. However, there is a fish pass which is maintained on an ongoing basis, which allows for grey mullet and other freshwater species to move downstream pass the dam. A monitoring programme is proposed to monitor their movement to confirm the ongoing success of the pass. A minimum flow downstream of the dam will also be observed to ensure downstream fish movements can occur. The monitoring program will be developed in consultation with Ngāti Mahuta (being the largest hapu of Waikato-Tainui).
Chapter 23 Te Ararangi – Air 23.3.1 the quality and amenity of discharge to air is such that the life supporting capacity and quality of air within the rohe is retained at a level that does not compromise human health, amenity values, or property. 23.3.1.1 to ensure that the quality of any discharge to air is retained at a level such that it does not compromise human health, amenity values, or property.	In terms of air discharges, the mine continues to operate under Permitted Activity Rule 6.1.16.1 in the WRP. That rule allows for discharges to air from mineral extraction activities, subject to compliance with (amongst other things) the permitted and controlled activity standards in Rule 6.1.8 of the WRP as follows: a) There shall be no discharge of contaminants beyond the boundary of the subject property that has adverse effects on human health, or the health of flora and fauna. b) The discharge shall not result in odour that is objectionable to the extent that it causes an adverse effect at or beyond the boundary of the subject property. c) There shall be no discharge of particulate matter that is objectionable to the extent that it causes an adverse effect at or beyond the boundary of the subject property. d) The discharge shall not significantly impair visibility beyond the boundary of the subject property.

Relevant section	Comment
	e) The discharge shall not cause accelerated corrosion or accelerated deterioration to structures beyond the boundary of the subject property. To allow for mining activity on the Central/Southern Block to comply with Rule 6.1.16.1, a range of mitigation measures to address the potential for dust emissions from the site will be set out in the site's EMP, which will be the subject of regular review. One of these measures is the use of real time monitoring equipment to record Total Particulate Matter (TPM) discharges at strategic locations such as Te Kooraha Marae and adjoining dwellings. There are several TPM monitors in use at the site at present.
Chapter 24 Te Taiao Moana – Coastal Environment 24.3.1 The mauri of marine waters in the Waikato-Tainui coastal area is protected and enhanced and the marine biodiversity in the Waikato-Tainui coastal area is restored and protected. 24.3.1.1 To ensure that the mauri of marine waters in the Waikato-Tainui coastal area is protected and enhanced and that the marine biodiversity in the Waikato-Tainui coastal area is restored and protected. 24.3.3 Waikato-Tainui access to coastal areas for customary activities is protected and enhanced. 24.3.3.1 to ensure that Waikato-Tainui access to coastal areas for customary activities is protected and enhanced.	Extraction and processing of the ironsand resource at Taharoa occurs on land (i.e. above MHWS). The product is exported as a slurry (sand mixed with freshwater) through offshore pipelines to be loaded onto bulk carrier ships at a SBM approximately 3.5kms offshore. The loading process results in a discharge of sediment laden water to the ocean, which produces a temporary sediment plume. The sediment plume is comprised of naturally occurring materials. The mauri of the coastal waters affected by the plume is maintained because the receiving environment is not sensitive to such discharge and has a significant capacity to dilute and disperse the discharge within a relatively small area. The discharge also does not create adverse impacts on sensitive marine species that are known to traverse the Taharoa coastal waters such as the Maui Dolphin. Vehicle access to Te Kooraha Marae (located adjacent to the eastern boundary of the Taharoa C Block) is currently obtained across the Northern area of the Taharoa C Block. Access to the beach and lakes at Taharoa is similarly available at all times.
Chapter 28 of the WTEP is of the most significance and relevant chapter to the proposal. This chapter focusses solely on the effects of mining. Each Objective and Policy is outlined below: **Issue**	Changes within the landscape of the site occur while active mining is undertaken. TIL makes an ongoing effort to minimise the adverse effects of mining through progressive rehabilitation. Rehabilitation takes time in this harsh coastal environment. However, the placement, contouring and revegetation of tailings areas

Relevant section	Comment
28.2.2 Landscapes may be forever altered, particularly in the case of open cast mining. There is concern that arguably 'low impact' mining may result in unintended or unanticipated long-term effects. For example, if the removal of iron sand or limestone from an area altered the ecosystem characteristics so the ecosystem's capacity or capability to support certain flora and fauna changed. This could be a positive or negative effect on an ecosystem's life supporting capacity and capability. **28.2.3** Wāhi tapu and sites of significance may be intentionally or accidentally altered or destroyed. **28.2.4** Mining activity is often relatively long life and mine operators have an ongoing part to play in mitigating the effects of their operations. It is not sufficient to wait until consents expire; there needs to be an ongoing effort to investigate ways to minimise the adverse effects of mining. *Local cost, local benefit* **28.2.5** Waikato-Tainui considers that, ultimately, it is the Crown that determines and controls the nature and overall direction of mining in Aotearoa, New Zealand. The Crown's actions, including land confiscation led to lack of access and opportunity for Waikato-Tainui to participate in mining activities. This has had a detrimental flow on effect in the ability of Waikato-Tainui to provide for its social, cultural, spiritual, and economical health and wellbeing. **28.2.6** Often the benefits of these mining activities are seen nationally or even internationally while the costs of such activities are borne locally including customary ways of life being forever disrupted. Therefore Waikato-Tainui is keen to ensure local benefit from local mining activity. *Objective – mining*	over time returns the landscape to a state similar to what it was prior to establishment of the mine in the early 1970's (e.g. coastal dune land with pockets of vegetation generally following the existing watercourses). Rehabilitation and Site Closure Plan conditions provide a framework for the long-term rehabilitation of the site. The consent application has demonstrated that the adverse effects will be managed effectively through mitigation, management of direct effects and rehabilitation of the mined areas. The ecosystems in the area, particularly within and adjacent to Lake Taharoa and within the CMA, have acclimated to the long standing presence of the mining and shiploading activities and associated infrastructure. A wide range of freshwater and terrestrial species are present in the area, while a number of marine species are known to traverse the coastal waters adjacent to the mine. Subject to compliance with the proposed conditions of consent, the ecosystem health in the area will be appropriately maintained. Procedures for the discovery of archaeological sites and koiwi to be followed as part of an Archaeological Management Plan for the site (related to the Archaeological Authority being applied for see **Appendix X**). TIL actively investigates and implements ways to minimise the adverse effects of the mining activity. Examples include introducing new water efficiency and re-use processes that have reduced the amount of water used in the mining process, and significant research and investments in measures to stabilise the dune environment on the site to reduce and mitigate windblown sand emissions. The mine is a relatively unique operation as it operates on land that has been in the uninterrupted ownership of Ngāti Mahuta shareholders. As such, there is significant direct local and regional benefit from the local mining activity. The mine provides a significant economic and social benefit to the people of Taharoa and Ngāti Mahuta with on-flow economic benefits to the wider region. Taharoa Village and the wider area relies on the operation of the mine for employment and business services. Closing of the mine would result in significant adverse economic and social effects to the community of Taharoa and wider region with Taharoa residents most likely having to relocate to gain employment.

Relevant section	Comment
28.3.1 In partnership with Waikato-Tainui existing and new mining activities effectively manage adverse social, cultural, spiritual, environmental, and economic effects. *Policy – mining* **28.3.1.1** In partnership with Waikato-Tainui, to ensure that existing and new mining activities effectively manage adverse social, cultural, spiritual, environmental, and economic effects. *Policy - remediation* **28.3.1.2** To ensure that existing and new mining activities effectively remediate and restore mining sites. *Objective – Local cost, local benefit* **28.3.2** Mining activities demonstrate a direct community benefit for the communities near their activities. *Policy – local cost, local benefit* **28.3.2.1** To ensure that mining activities demonstrate a direct community benefit for the communities near their activities.	

8.3.10 Maniapoto Environmental Management Plan

A relevant statutory acknowledgement in Schedule 11 of the RMA has been made in favour of Ngāti Maniapoto[44] arising from the Maniapoto Claims Settlement Act 2022. The statutory acknowledgement area is large and includes the Mitiwai Stream and the land contained within the Northern Block.

The Maniapoto Environmental Management Plan (**MEMP**) is a high-level direction setting document and describes issues, objectives, policies and actions to protect, restore and enhance the relationship of Maniapoto with the environment including economic, social, cultural and spiritual relationships.

The MEMP is very similar to the WTEP in terms of layout and overarching principles. Of significance is that the Plan recognises Ngāti Mahuta as a hapū of Maniapoto and also recognises that some hapū have shared interests with other iwi. Ngāti Mahuta do not affiliate themselves with Maniapoto however do recognise a genealogical relationship of some hapu members to Maniapoto.

An assessment of the proposed continuation of mining activity on the Central and Southern Blocks against the provisions of the MEMP has identified no inconsistencies with the relevant provisions in that plan because:

i. The access to Te Kooraha Marae will not be adversely affected by the proposed mining works (MIEM Part 9.3)
ii. An Archaeological Management Plan will be followed during the mining activity (MIEM Part 10)
iii. The proposed mining will not result in any significant adverse effects on the mauri of freshwater systems on the site (MIEM Part 14)
iv. The areas that are mined will be appropriately remediated upon completion of the works to ensure the landscape is rehabilitated (MIEM Part 19.3)

Table 8.9 below assesses the Project against the relevant sections of the MEMP.

Table 8.9: Assessment of the Project against the MEMP

Relevant section	Comment
Part 9.3 – Access and Customary Rights These objectives and policies aim to enhance and protect the ability of Maniapoto to access resources and undertake customary activities.	As discussed in Table 8.8 above, the operation of the Taharoa Mine will not result in restricted access to the coast.
Part 10 – This section addresses the protection and management of Maniapoto cultural heritage and includes wāhi tapu sites, places and traditions. *Objectives:* **10.3.4 –** To ensure procedures are in place to manage the discovery and accidental discovery of taonga and archaeological sites.	Procedures for the discovery of archaeological sites and koiwi to be followed as part of an Archaeological Management Plan for the site (related to the Archaeological Authority being applied for) will be complied with. Therefore, any sites of significance to iwi are considered to be appropriately protected from continued mining operations.

[44] The post-settlement governance entity on behalf of Maniapoto is called Te Nehenehenui

Part 14 – Freshwater The objectives and policies aim to restore and enhance the mauri of freshwater.	No changes are proposed to the current water abstraction rates or discharge locations/volumes. As such, no new adverse effects on the environment are anticipated through the continuation of mining activity at Taharoa. Runoff from tailings will be free from contamination as no additional material or substances are used except for water. It is therefore considered that the mauri and quality of the surrounding waterbodies will be unaffected. Restoration of the Wainui Stream is managed through the Wainui Stream Enhancement Management Plan for the purpose of improving the indigenous biodiversity values within the lower Wainui Stream (below the dam) including the management of identified inanga spawning areas. The Plan covers planting and weed/pest control within the area. The plan is regularly reviewed and updated in consultation with iwi and contributes to restoration and enhancement the mauri of the Wainui Stream.
Part 17.0 – Coastal and Marine Environment *Objectives:* **17.3.1** – To recognise and provide for the cultural relationships and values that Maniapoto have with the coastal and marine environment. **17.3.5** – To eliminate discharges to the coastal marine area and avoid land use practices that generate contaminants and pollution to coastal areas. **17.3.6** – To protect and enhance Maniapoto access to coastal and marine areas.	Ironsand mined from the Taharoa C Block will be pumped through the existing pipe to the buoy and an awaiting ship as per the existing practices and processes of TIL. The effects of this were assessed within the existing resource consents that permit this process and were considered to have minor effects. There will be no change to this process. Access to the coast will not be restricted to hapū or iwi, as discussed in Table 8.8 above.
Part 18.0 – Land The objectives and policies within this section aim to enhance and protect the holistic functioning and interconnected relationships of the natural environment from land management and land use. This section is similar to the WTEP in that a sustainable approach is required for land use activities.	As discussed within the WTEP assessment in Table 8.8 above, the proposed mitigation measures are focused on avoiding or mitigating effects on the land. The resource is finite; however, rehabilitation and placement of tailings will enable achievement of a similar landscape profile post mining.
Part 19.3 – Landscapes *Objective* **19.3.2** – To protect and enhance significant cultural, spiritual, natural and ecological landscapes, features and locations in the Maniapoto rohe and to protect and enhance Maniapoto relationships and associations with these features.	The effects on the landscape have been discussed in Table 8.8 above.

Part 23.0 – Mining and Quarrying, oil, gas and minerals **Objective 23.3.1** states that the people of Maniapoto participate at the highest level of decision making for mining and exploration activities that affect Maniapoto.	This section is of particular relevance to this application for resource consent. The issues, objectives and policies are similar to those of the WTEP and therefore, are not repeated here. Taharoa C is the owner of the underlying land (Taharoa C Block). Taharoa C is a Māori incorporation with a wide shareholder base made up of iwi. The majority of Taharoa residents are shareholders in Taharoa C Block. Profits made by mining and distributed to trustees and therefore also benefits the Taharoa Community.

8.4 Matters relevant to certain applications - sections 104, 105 and 107

In accordance with Clause 17(1), Schedule 5 of the FTAA, the Panel must take into account the provisions of Parts 2, 3, 6, 8 and 10 of the RMA (excluding section 104D). Relevantly, this includes the consideration of sections 104, 105 and 107.

8.4.1 Section 104 of the RMA

Section 104 of the RMA sets out the matters which must have regard to, subject to Part 2 of the RMA, when considering an application for resource consent.

Section 104(1) includes:

- Any actual and potential effects on the environment of allowing the activity;
- Measures proposed to offset or compensate for adverse effects on the environment;
- Any relevant provisions of a national policy statement, a coastal policy statement, regional policy statements and plans; and
- Any other matter the consent authority considers relevant and reasonably necessary to determine the application.

An assessment of the actual and potential effects of the proposed mining activities is contained in section 8.1 of this report. A range of potential effects have been identified and overall, subject to proposed mitigation, effects can be managed and mitigated to an acceptable level. The mine will also have considerable on-going positive effects in terms of local and regional economic benefits, social and development benefits for the Taharoa village and surrounding communities, and environmental enhancements at the site are proposed.

Under section 104(1)(ab) of the RMA, consideration must be had with respect to proposed measures to ensure positive effects on the environment to offset or compensate for any adverse effects on the environment that will result from the proposed activity. Of relevance to this application is the substantial 8.3 ha of wetland re-creation which will offset the 4.25 ha of moderate value, mainly induced wetlands that fall within the proposed area for mining.

The relevant provisions of the applicable national and regional planning documents are assessed in section 8.3 of this report, along with the planning documents recognised by the relevant iwi authorities. Whilst no consents are triggered under the Operative or Proposed Waitomo District Plans (and hence no specific analysis of objectives and policies), it is emphasised here that these plans specifically recognise and provide for the mine at this site as a regionally significant activity, as set out in section 5.1.7 of this report. There are no additional matters that are considered to be of relevant or of reasonable necessity in the determination of the resource consents required.

Section 104(2A) requires the Panel to have regard to the value of the existing investment that TIL has made in the Mine.

As explained above, the Mine has been operating for over 50 years. However, when TIL took over the operation of the Mine it had huge financial liabilities. The then owner was not prepared to invest additional substantial capital needed to ensure a long-term and viable mining operation.

The Mine requires significant continued investment. More specifically the actual financial investment has included:

a. Taharoa Port is currently one of New Zealand's largest ports by bulk tonnage. It requires significant capital investment, which has total $85 million since May 2017. Maintenance and repairs are also substantial and have totalled $450 million over the last 7 years. [20]

b. TIL has also begun negotiations to acquire replacement shipping capacity post 2035, when the current fleet reaches the end of its economic life. The total replacement cost of these vessels is $600m. The first replacement vessel will enter service in 2030 and will have an economic lifespan of 25 years.[21]

c. TIL has invested $221 million in new plant and equipment since May 2017.[22]

This investment is significant and is an important factor that needs to be given weight in considering the Application.

8.4.2 Sections 105 and 107 of the RMA

Section 105 requires the consent authority to have regard to the nature of the discharge and the sensitivity of the receiving environment, the applicant's reasons for the proposed choice and possible alternative methods of discharge.

Section 105 requires the consent authority to have regard to the nature of the discharge and the sensitivity of the receiving environment, the applicant's reasons for the proposed choice and possible alternative methods of discharge. These matters have been addressed throughout this report, particularly in section 3 which describes the receiving environments, section 8.1 which assesses the effects on the environment, and section 4.20 which addresses potential alternatives.

Section 107(1) restricts the granting of discharge permits in certain circumstances, namely if, after reasonable mixing, the contaminant or water discharged (either by itself or in combination with the same, similar, or other contaminants or water), is likely to give rise to all or any of the following effects in the receiving waters:

c) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;

d) Any conspicuous change in the colour or visual clarity;

e) Any emission of objectionable odour;

f) The rendering of fresh water unsuitable for consumption by farm animals;

g) Any significant adverse effects on aquatic life.

8.4.2.1 Discharges in the Coastal Marine Area

In terms of the section 107 criteria set out above the ship loading does not contain any conspicuous oil or grease films, scums or foams, or floatable materials. The discharge does contain suspended sediment in a freshwater discharge that is initially buoyant in seawater, however the dynamic marine environment at the discharge location results in rapid dispersion and dilution. This ensures that the mixing zone for the discharge is reasonable, especially given

the absence of any other discharges or takes in the CMA around the discharge location and the uncontained nature of the CMA along the Taharoa coastline.

Because the discharge contains suspended sediment it is turbid at the point of discharge and as a result a localised change in the colour and clarity of the water column occurs in the discharge plume. Given that the discharge will occur 3.5 km off-shore, there is no potential for the plume to be conspicuous from the shoreline. The depth of water in this location coupled with the high wave energy prevalent at the site produces dynamic mixing conditions that are effective in reducing water quality effects.

The discharge does not emit objectionable odour, and nor does it affect freshwater that is consumed by farm animals.

Monitoring of the ship loading discharge has identified that heavy metals may be present in the discharge, but at very low levels that are typically within ANZECC guideline limits. Copper was found to occur at levels slightly higher than the ANZECC limits, however dilution and dispersion of the discharge plume will rapidly reduce levels to a point where adverse effects will not occur. Suspended sediment entering the environment would be dispersed very quickly within the water column and the naturally mobile nature of sediment on the seabed in this dynamic environment minimises any impact on benthic habitats.

Overall, the discharges meet the tests set out in section 107(1)(c) to (g).

8.4.2.2 Discharges into the Wainui Stream

There may be a small/incidental discharge of settled stormwater and washdown water from around the workshop, stores compound and administration building into the Wainui Stream from time to time during high rainfall events. This water will reach the stream on a diffuse basis, and as such is unlikely to create erosion that would result in suspended particles or a change in water colour/clarity. The discharge will not result in any oil or grease films, scums or foams. Conditions of consent are proposed on this basis.

8.4.2.3 Discharges to ground where contaminants may enter water

There are other proposed discharges of water to land where the discharge could enter ground or surface water, including the placement of tailings (as a slurry), the discharge of process water to land, and incidental discharges associated with components of the processing system. For the reasons outlined in section 8.1.6 of this report, these discharges are not likely to result in contamination of ground or surface water.

8.4.3 Duration of consents sought

Section 1.2.4 of the Waikato Regional Plan includes the following policy:

"Policy 6: Consent Duration

When determining consent duration, there will be a presumption for the duration applied for unless an analysis of the case indicates that a different duration is more appropriate having had regard to case law, good practice guidelines, the potential environmental risks and any uncertainty in granting the consent."

There is no case law that suggests a shorter duration than 35 years is appropriate. A consent duration of this term is consistent with other consents for large scale industrial activities where commercial certainty is required.

Likewise, there are no Good Practice Guidelines that would indicate that a duration less than 35 years is appropriate, especially in light of the considerable investment associated with the mine.

This term is suitable because the life of the mining activity in the Central and Southern Blocks is likely to be 35 years (or more).

Providing this term will provide certainty for TIL and Taharoa C that the mine can continue to operate in the long term and recognises the significant level of capital investment which has been made in the mine. In particular, investment will be required in the next 5-10 years in three new replacement ships.

This term will enable TIL to make further investment decisions, will support TIL's proposals to expand the mine in to other areas, and will provide flexibility in respect of production rates (in light of changing technology and variability in the market. This term also provides certainty for the landowners who receive royalties from the mine and the local community which is reliant on the financial support of the mine as explained in section 2.2 of this report. A term shorter than 35 years reduces the commercial certainty for the operation for TIL and certainty for those who benefit from the mine.

A review condition is proposed (refer to section 8.5 of this report and **Appendix BB**) that enables WRC to review the conditions of consent to take into account any National Environmental Standard, National Policy Statement, or change to the Waikato Regional Plan or Waikato Regional Coastal Plan which has become operational or effective since granting of the consent. Accordingly, the RMA section 128 review process also acts as a safety net to ensure that there is no prospect of a consent locking in discharge limits or other parameters that are subsequently proven to be inadequate or inappropriate.

8.5 Proposed conditions of consent

In accordance with Schedule 5, subclause 5(1)(k) of the FTAA, TIL has proposed a suite of conditions to apply to the resource consents sought (refer to **Appendix BB**). Conditions that are proposed to apply to the Archaeological Authority and Wildlife Act permit sought are provided in **Appendix X** and **Appendix KK** respectively.

The proposed resource consent conditions reflect the findings of the various technical reports that support the resource consent application for the Central and Southern Blocks, respond (where appropriate) to the pre-lodgement comments of those parties consulted on the application, and build on the conditions prepared by the 2024 RMA Hearing Panel Decision. The Panel's conditions have been used as a starting point. The proposed conditions have also been developed in recognition that the Fast-track Panel must not set conditions that are more onerous than necessary to address the reason for which those conditions are set.[45]

A number of the conditions (such as mining setbacks) have been continued from TIL's current resource consents, on the basis that they have proven to be efficient and effective over several decades at managing the effects of the various components of the overall mining activity.

The proposed conditions are detailed and comprehensive. In general, the proposed conditions require (but are not limited to):

1. Mining operations to be excluded from specified areas – this is achieved through specifying setback distances from certain features (e.g. 100 m from Mean High Water Springs, 30 m from perennial water bodies) and by requiring avoidance of known urupa and waahi tapu areas.
2. Planted buffers to be maintained within the 30 m setback around perennial waterbodies and retained wetlands.

[45] FTAA s83

3. Dust to be monitored for PM10 at both on and off-site locations, and to be managed to avoid adverse effects on human health and offensive and objectionable effects beyond the boundary of the site.
4. Restrictions on the volumes and rates at which water can be taken from the impounded section of the Wainui Stream, and the purposes for which the water can be used (i.e. for either operational mining use or for ship loading use).
5. Water takes to cease completely when the water level in Lake Taharoa is less than 8.53 m RL, and monitoring and reporting of the health and extent of the wetlands on the margins of the lake to be undertaken if the level of Lake Taharoa is less than 9.6 m RL for a continuous 30 day period.
6. A minimum flow to be maintained in the Wainui Stream downstream of the dam and in the fish pass around the dam, which may require flow augmentation during dry periods.
7. Monitoring of the base flow in the Mitiwai Stream and augmentation of the flow if required to achieve a minimum base flow.
8. Bat and avifauna effects measures.
9. Avoiding planned maintenance works on the export pipelines in the beach environment during the dotterel nesting season (September-January inclusive).
10. Restrictions on the volume of ship loading and stormwater/process water discharge that can occur in the CMA, and monitoring and analysis of the composition and effect of the discharges.
11. Preparation and certification of an overall EMP for the site to include component Site Rehabilitation, Conceptual Closure, Pest Management, Erosion and Sediment Control, Dust Management, Wetland Offsetting and Enhancement, and Water Management Plans.
12. Consultation with the Department of Conservation, The Proprietors of Taharoa C Incorporation Limited, Taharoa Lake Trustees, Te Runuanga o Ngaati Mahuta ki te Hauaauru, Te Kooraha Marae, and Aaruka Marae in the preparation of the overall EMP.
13. Sharing of monitoring and reporting information via a public website and the dissemination of the site's Annual Monitoring Plan to key interested parties.

The conditions are considered appropriate to manage the effects of mining and associated activities.

8.6 Conclusion in relation to the resource consents that would otherwise be applied for under the RMA

As outlined in detail within the above sections of this report, the key conclusions reached with respect to the resource consents are outlined below.

1. The application is supported by a suite of technical assessments and management plans, including ecological, hydrological, groundwater, archaeological, and air quality reports.
2. The benefits and potential effects of the project (both positive and adverse) are well known given the Central and Southern Blocks of the mine have been in operation since the 1970's – over time, management measures have evolved and improved. This experience has been reflected in the mitigation measures that have been proposed in respect of the application.
3. The Project will have significant regional and national economic benefits, and benefits for the economic and social wellbeing of the Taharoa community which are also considered to be positive effects of the proposal.

4. The land on which the mine is situated is owned by Ngati Mahuta hapu – Taharoa C (the landowner) leases the land to Taharoa C, benefits and has provided its written consent to the Project being undertaken on Māori land citing a range of socio-economic and cultural benefits, but there are broader mana whenua interests in the Project and its potential effects on the environment and cultural values. Consultation feedback and the 2020 RMA application process has informed the assessment of cultural values and measures to address potential effects on these values. The potential cultural effects of the proposed mining activities relate to waterways, wāhi tapu, and the exercise of kaitiakitanga, and are well documented and known. The proposed conditions of consent have been developed in light of these potential effects and incorporate a range of mitigation measures to ensure that these potential effects are well managed

5. With the mitigation, monitoring and offsetting measures proposed, the environmental effects of the Project are considered overall to be minor and acceptable. A range of specific effects, including those on groundwater, wetlands, terrestrial and aquatic ecology, and the marine environment, have been assessed as less than minor.

6. None of the potential adverse effects of this application are significant and none are sufficiently significant to be out of proportion to the substantial regional and national benefits of the Project.

7. The application includes comprehensive mitigation, monitoring, and offsetting measures, including riparian enhancement, wetland re-creation, pest control, maintenance of fish passage, and dust management. The proposed conditions of consent are proportionate, workable, and informed by previous RMA processes. These are a combination of existing and proposed new measures to ensure that all environmental effects are appropriately managed over the next 35 years.

8. The Project is consistent with relevant national and regional planning instruments, including finding direct policy support with aspects of the relevant policy direction. It is also generally consistent with the Ngāti Mahuta Environmental Management Plan, Tai Tumu, Tai Pari, Tai Ao - the Waikato-Tainui Environmental Plan and the Maniapoto Environmental Management Plan.

9. Under the FTAA, the Panel must decline an application only if the adverse impacts are sufficiently significant to be out of proportion to the Project's benefits. This threshold is not met with respect to this application.

9 Fast-track Approvals Act Schedule 7 Requirements – Wildlife Act 1953

A general Wildlife Approval to capture, temporarily hold and relocate, and kill native lizard species is sought for the Central and Southern Blocks of the Taharoa C Block. A Lizard Management Plan (LMP) has been prepared by Boffa Miskell to support the application. The Wildlife Approval application, and the LMP are attached to this report as **Appendix KK**.

Clause 2(1)(n) of Schedule 7 of the FTAA requires that an application for a Wildlife Approval provide proof and details of all consultation, including with hapu and iwi, on the application specific to wildlife impacts.

Copies of TIL's initial consultation letters and the attached nine-page summary of the application which were sent to the consulted parties specified in the Consultation Register (Appendix Y) are enclosed in Appendix KK.

The summary of the application indicates that TIL is seeking a wildlife permit to manage lizards if they are identified prior to works and indicates that the loss of grassland may result in the potential injury or death of native skink present in low numbers in the grassland. It further indicates that the overall level of effect has been assessed as low.

Following the issuing of the initial consultation letters, a number of parties requested further consultation by way of meetings (which are noted in the Consultation Register):

- The approvals being sought as part of TIL's Fast-track application, including the Wildlife Approval, were further discussed in consultation hui with Te Kooraha Marae (which was attended by the Taharoa Lakes Trust) and with Te Runnanga o Ngāti Mahuta ki to Hauaaruru Charitable Trust. A copy of the calendar invites for these hui and the meeting agendas are enclosed in Appendix KK. The Wildlife Approval and potential impacts on native lizards was outlined by TIL's consenting team in relation to item 2a of the agendas.

- The approvals being sought as part of TIL's Fast-track application, including the Wildlife Approval, were described during consultation meetings with Waikato-Tainui, Waikato Regional Council and the Wetini Whanau. No agendas were pre-circulated for these meetings but proof of each meeting has been provided.

- As indicated in the Consultation Register, TIL discussed the Project, the approvals being sought as part of TIL's Fast-track application, including the Wildlife Approval, the ecological surveys undertaken, the species identified, and the proposed management of ecological effects in a consultation meeting with DOC. No agenda was pre-circulated but proof of the meeting has been enclosed.

No specific feedback was provided by any of the consulted parties in relation to the impacts on lizards of the Project or TIL's proposed application for a Wildlife Approval and therefore there is no heading or topic called "impacts on lizards" in the Summary of Consultation (Appendix Z). Accordingly, there is no additional correspondence on this matter with consulted copies that would be valuable to provide to the EPA. As set out in Appendix M – Terrestrial Ecology Fauna Assessment, no native or invasive skinks/lizards were identified on the Central and Southern Block during site surveys so wildlife impacts were not identified as a key issue. The Wildlife Approval is being sought on a precautionary basis.

10 Fast Track Approvals Act Schedule 8 Requirements – Heritage New Zealand Pouhere Taonga Act 2014

An Archaeological Application for a general Archaeological Authority is sought for the Central and Southern Blocks of the Taharoa C Block, as well as an application for approval of an archaeologist to carry out the activity to be authorised under the Authority. The Archaeological Authority Application relates to the recorded sites outlined in Table 10.1 and to any accidental finds across the site.

Table 10.1: Archaeological sites included in Archaeological Application

Reference	Description	Location*	Status
R16/52	Midden/Oven	Southern Block – Southern Area	Unknown
R16/58	Midden/Oven	Southern Block – Northern Area	Partially intact
R16/61	Midden/Oven	Central Block	Unknown
R16/88	Midden/Oven	Southern Block – Northern Area	Partially intact
R16/89	Midden/Oven	Southern Block – Southern Area	Unknown
R16/117	Midden/Oven	Central Block	Partially intact
R16/150	Midden/Oven	Southern Block – Northern Area	Intact
R16/151	Midden/Oven	Southern Block – Northern Area	Intact
R16/155	Midden/Oven	Southern Block – Northern Area	Unknown
R16/327	Burial site	Southern Block – Northern Area	Unknown
R16/572	Pit/Terrace	Southern Block – Southern Area	Partially intact

*Refer to the Archaeological Assessment in **Appendix Y** for additional location details.

The following documents prepared by Clough & Associates are attached to this report which support TIL's application for an archaeological authority (**Appendix Y**):

- Archaeological Authority Checklist;
- Archaeological Assessment;
- Archaeological Authority Application, including proposed conditions;
- Archaeological Management Plan;
- A letter providing the landowners consent to the Archaeological Authority Application; and
- Cultural Values Report.

11 Conclusion

This substantive application by TIL seeks approvals under the FTAA to continue mining operations within the Central and Southern Blocks of the Taharoa Mine and the CMA. The application is informed by over 50 years of operational experience, a robust technical evidence base, and engagement with iwi, stakeholders, and regulatory authorities over a lengthy consenting history.

It is considered that the Project is appropriate and can be approved for the following reasons:

1. Consistency with the Purpose of the FTAA

The Project will have significant regional and national benefits. It contributes over $316 million in annual export revenue, supports 350 full-time equivalent jobs, and has generated $1.2 billion in regional spending since 2017. The mine is a critical economic anchor for the Taharoa community and a major contributor to New Zealand's export economy.

2. Consistency with the requirements of the FTAA

The Project seeks the relevant approvals required under the FTAA including resource consent application, a Wildlife Approval and an Archaeological Authority (and associated approval for an authorised person). It is not for an ineligible activity and granting the application would not breach section 7 of the FTAA regarding Treaty settlements and recognised customary rights. This application contains the information required under the FTAA as outlined in section 2.4 of this report**.**

3. Comprehensive environmental assessment

The application includes a detailed assessment of environmental effects, supported by technical reports and expert input. Potential effects on groundwater, surface water, wetlands, terrestrial ecology, and the marine environment have been assessed as less than minor/low. Mitigation, monitoring and offsetting measures are proposed with respect to potential environmental effects. Overall, when incorporating the proposed set of mitigation and offsetting measures, the actual and potential adverse effects of the application are considered to be no more than minor.

4. Alignment with planning instruments and Iwi Management Plans

The Project is consistent with the relevant provisions of the RMA, including Part 2 and sections 104, 105, and 107; and aligns with national and regional planning instruments and iwi management plans.

5. Robust and workable conditions of consent

TIL proposes a suite of conditions that are proportionate, workable, and informed by previous RMA processes. These conditions build on those previously imposed under the RMA and have been refined through consultation and expert input.

6. Appropriate management of archaeological sites and native lizards through the associated approvals

Archaeological sites that are encountered will be appropriately managed through the implementation of an Archaeological Management Plan in accordance with an Archaeological Authority. Implementation of the LMP will ensure that any impacts on native lizards are appropriately managed and monitored under the Wildlife Approval.

7. No grounds for decline under the FTAA

Under section 85(3) of the FTAA, a Panel may decline an application only if the adverse impacts are sufficiently significant to be out of proportion to the Project's benefits. This threshold is not met. The potential adverse effects will be mitigated and are not significant. There are no

mandatory or discretionary grounds under the FTAA or RMA that would justify declining the application.

In conclusion, this application presents a well-considered and technically supported proposal for the continuation of a long-standing mining operation. It will deliver substantial ongoing economic, social, and cultural benefits, with environmental effects that are well understood and appropriately managed. The application satisfies all statutory requirements and is entirely consistent with the purpose of the FTAA.

12 Applicability

This report has been prepared for the exclusive use of our client Taharoa Ironsands Limited, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

We understand and agree that our client will submit this report as part of an application under the Fast-track Approvals Act 2024 and that an Expert Panel as the consenting authority will use this report for the purpose of assessing that application. We understand and agree that this report will be used by the Expert Panel in undertaking its regulatory functions.

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