

Appendix C Economic Assessment



Taharoa Ironsands Limited

Economic assessment of
benefits of the Central and
Southern Block Mining Project

24 July 2025

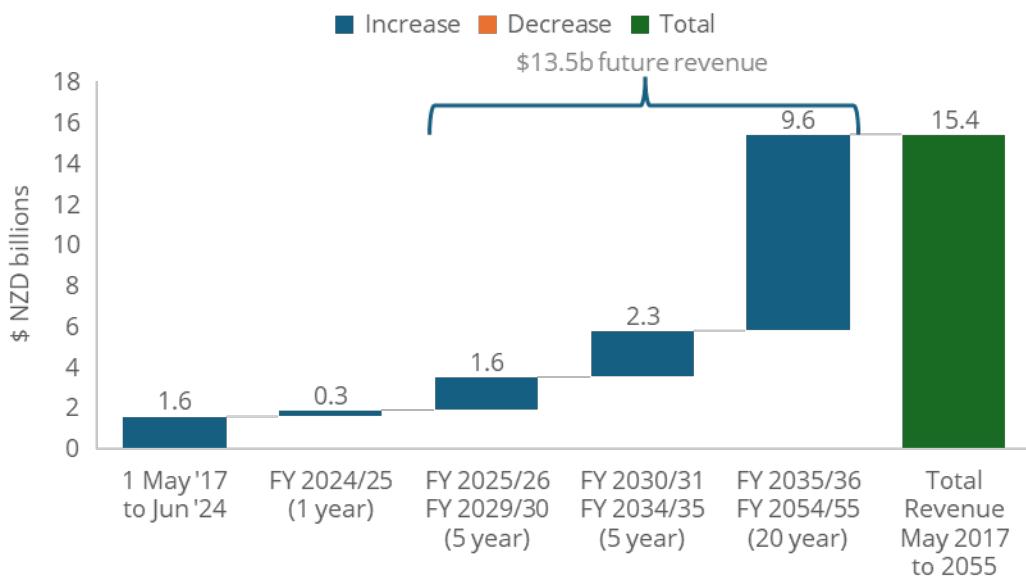


Key Points

Taharoa Ironsands is a national economic powerhouse...

- Taharoa Ironsands Limited (Taharoa Ironsands) currently runs the largest ironsands mining operation in the world driving a macro-scale contribution to New Zealand's value-added production.
- Taharoa Ironsands is seeking the necessary environmental approvals under the Fast-Track Approvals Act 2024 (FTAA) to continue mining across the two main blocks of the mine (the Central and Southern Blocks) and to continue ship-loading operations and other services while supporting the balance of the mine. This is known as the 'Central and Southern Blocks Mining Project'. The approvals for the Project are sought for a period of 35 years.
- The mine currently has an annual production rate of 3.6 million tonnes of iron ore concentrate. This is expected to increase to over 5 million tonnes next year and in future years if the sought after approvals are granted.
- Taharoa Ironsands projects \$14 billion of export revenue over the next 30 years from mining the Central and Southern Blocks of Taharoa Mine (see Figure below). This revenue stream is based on: (i) the operation's track record that draws on 50 years of experience (ii) the size of the resource established by the company's extensive drilling programme and (iii) 10 years of future sales contracts.
- The projected economic benefits of the Project are significant for the Waikato region and the national economy as a whole.

Figure: The mine will make a major economic contribution over the next 30 years
Total revenue from mine activity, various time periods.



Source: Taharoa Ironsands Ltd., Sense Partners Analysis



...with demonstrated scale and economic significance

- The scale and significance of the business spans many dimensions, including:
 - Freight:
 - Based on information provided by Taharoa Ironsands Limited on their planned exports in 2026, the Port of Taharoa is projected to be the 2nd largest port in New Zealand by export tonnage in 2026, despite being dedicated to a single operation.
 - Export production from Taharoa Ironsands currently generates close to 9% of New Zealand's annual export tonnage, which is expected to grow unless the balance of New Zealand's export tonnage continues to grow at the same rate.
 - Taharoa Ironsands has New Zealand's largest dedicated commercial fleet of any domestic operation. The Taharoa fleet consists of three purpose-built Capesize vessels capable of slurry loading, the only ones of their kind in the world.
 - Export revenue:
 - Priced in today's dollars, the export contribution of the mine to the New Zealand economy to date, exceeds \$5 billion.
 - The operation currently returns \$316 million export revenue annually.
 - Annual future earnings associated with the Central and Southern Blocks Mining Project are roughly on par with New Zealand's entire wool industry and currently outstrip the arable sector as a whole.
 - Tax revenue:
 - The mine generates considerable tax revenue on a national scale. Before returning to New Zealand ownership in May 2017, the mine was Australian owned. Since then, the company has achieved \$2 billion in export revenue.
 - The mine has provided the New Zealand government with [REDACTED] [REDACTED] in the last eight years under the current ownership.

The operation creates significant regional economic benefits and opportunities for local workers

- 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.
- These purchases of goods and services support numerous regional firms and workers that provide upstream inputs into the mine operation.
- The mine is a significant contributor to the regional labour market, indirectly employing 350 full-time employees in the local area.



- Direct royalties, interest payments and dividends to local landowners are substantial totalling \$180 million to date since the mine was returned to New Zealand ownership.
- Given the remoteness of the location, the mine provides extraordinary opportunities for Māori development in the region. The mine's location enables tangata whenua to connect to labour markets without relocating and losing connection to the land.
- Location also helps make the mine extremely efficient. Without the need to haul product by truck as well as significant technological investments, the mine's CO₂ emissions footprint per tonne will be one of the lowest of iron ore producers in the world, at only 35% of its competitors.

Obtaining the necessary approvals is the largest risk to continued economic benefits

- The government is making strenuous efforts to attract new investors to New Zealand with the goal of promoting new industry investment.
- Taharoa Ironsands' investment plans have credibility and existing commitment. Authorising the Project will unlock the substantial regional and national economic benefits that come with enabling the mine to operate as it has over the last 50 years.



Context

As noted above, Taharoa Ironsands is seeking the necessary environmental approvals for the Central and Southern Block Mining Project under the Fast-Track Approvals Act 2024 (**FTAA**). Taharoa Ironsands is seeking to continue mining the Central and Southern Block and undertake ship-loading facilities and other services supporting the balance of Taharoa Mine for a period of 35 years.

In April 2025, Taharoa Ironsands approached Sense Partners to evaluate the economic benefits of the Taharoa Ironsands mining operation for the purpose of its Fast-track application for the Central and Southern Block Project. Our assessment is based on publicly available data and financial and other operational information provided by Taharoa Ironsands.

In the report we describe the economic activity associated with the Central and Southern Block Mining Project. This is not identical to the financial activity of Taharoa Ironsands.

All monetary figures in this report are New Zealand dollars unless explicitly stated otherwise.

This report has been prepared in accordance with the Environment Court's Code of Conduct for expert witnesses, contained in the Environment Court's Practice Note 2023. The authors of this report agree to comply with the Code of Conduct, and confirm that unless otherwise stated, the issues addressed in this report are within the area of expertise of the authors. No material facts have been omitted that might alter or detract from the opinions expressed in this report.



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1. Background to the mining operation

The mine itself is only one of four distinct, yet highly interdependent, parts of the overall operation. These components are the mine, the port, shipping, and in-market sales and development.

1.1. The mine

Taharoa Ironsands considers the mine to be the largest and most efficient ironsand mine in the world. The mine has been in operation for over fifty years (see Figure 1).

Figure 1: The mine began operating in 1972

Taharoa ironsands mining circa 1974



Source: Ingram, John et. al. 1974

The mining process

Mining at Taharoa Ironsands consists of two types of extraction: dredging and dry mining.

Dredging (alluvial mining) is the original mining method used at Taharoa and dates back fifty years. This process involves using dredges to extract the sand, creating a combination of ironsand and water known as slurry, which is then pumped to a processing plant.

The mine produces a titanomagnetite iron ore concentrate that also contains other commercially valuable minerals including Vanadium (V2O5) and Titanium Oxide (TiO2).



Dry mining (surface mining) was introduced to Taharoa after 2000. This process consists of bulldozers pushing raw material into a Dry Mining Slurification Unit that filters out large debris and mixes it with water to create a slurry. The slurry is then pumped to a processing plant.

Figure 2: The mine uses dry mining methods that then form a slurry for shipment
Dry mining methods at Taharoa



Source: Taharoa Ironsands Ltd, 2024

Processing

Like the mining stage, the processing stage is free of chemical or energy-intensive processing methods often associated with mineral mining. The two stages of refinement used by Taharoa Ironsands are magnetic separation and spiral separation:

- Magnetic separation uses magnet drums to separate the magnetic iron sand from the non-magnetic material.
- Spiral Separation uses helix-shaped chutes to separate the heavy (iron rich) material from the lighter material through gravitational forces.

After processing, the iron ore concentrate is sent to Taharoa's stockpile. The leftover material, called tailings, is distributed to designated tailing areas where it is contoured and planted over as part of the mine's rehabilitation programme.



Location

The mine is located at Taharoa, south of Kawhia Harbour on the west coast of the North Island. The mine covers about 1,328 hectares of sand dunes that are extremely exposed to the seas and predominant west winds in the area.

This location and land use means the mine avoids the crowding out of limited local resources some other exporting industries can face in intensely competitive industries.

Taharoa Ironsands reports that there is limited alternative economic use for the land or the resource at the mine. Before the mine was established, residents had already started leaving the area due to large sand-dunes encroaching on Taharoa and surrounding farmland (see Figure 3).¹

Figure 3: The mine uses remote resources, not used for other economic production
Taharoa Iron Sands, Kawhia South, Waikato [16 September 1958].



Source Alexander Turnbull Library, Wellington, New Zealand. Ref: WA-47757-F.

Because there are few major employers in the surrounding region, the mining operation absorbs resources – such as labour and infrastructure - which may otherwise go unused, be unemployed or have transitioned away. As a result, Taharoa stands out with the highest GDP per capita of any significant rural community in New Zealand.

Because Taharoa Ironsands's product is unique and all operating revenue is sourced from the export operation, there is no threat to other New Zealand businesses. This means that

¹ Story: King Country Places - Page 1: West Coast; [West coast | Te Ara Encyclopedia of New Zealand](#)



revenue received by Taharoa Ironsands would not have otherwise been produced by a different New Zealand company or project.

1.2. Port and shipping

The company operates one of New Zealand's largest ports by bulk tonnage and commands the country's largest commercial fleet.

The iron sands are refined before being pumped to Capesize vessels anchored offshore for transfer to international export markets at least 20 times a year.²

TIL advises that these are the largest dry cargo vessels that enter New Zealand at around 290 metres in length, custom-designed for the purpose of taking bulk commodities like iron sands to international markets. The ships employ 120 seamen.

TIL advises that these ships are New Zealand's largest commercial vessels and have a replacement value of NZD\$600m. This is based on recent negotiations to replace the three ships.

Figure 4: Significant commercial investment has unlocked the iron sands opportunity
The Taharoa Providence moored at the Port Taharoa buoy.



Source: Taharoa Ironsands Ltd

² "Capesize" vessels are so named since they originally could not pass through Panama Canal and had to sail around the capes (either the Cape of Good Hope or Cape Horn).



The port operation is considerable and requires significant capital investment. International capital investment has been \$85 million since May 2017 and an additional \$200 million is required to purchase a Capesize vessel in the next five years.

On land the stockpiled concentrate is fed onto a conveyor leading to the pumphouse. Once re-slurried, the mixture is pumped 3 km along the sea floor through 2 pipelines, up through the 12m diameter buoy, and into the ship's six holds.

A CAA certified fleet of support helicopters, 2 support vessels, and a service barge also support the business's port operation. These machines cover a range of tasks including crew changes, supply drops, and urgent transport tasks. Back-up critical infrastructure includes a spare 11m diameter buoy weighing 190 tonnes.

Servicing and support of the port operation is significant. This requires flying in specialist pilots and staff to lead the operation.

The maintenance required is also substantial. Repairs and maintenance over the past seven years total \$50 million. These services are primarily procured locally providing a substantial boost to marine servicing firms.

1.3. In-market sales and development

The business is connected into global supply chains. This includes the key steel-making markets of China and Japan serviced by the establishment of strong shipping logistics and marketing support from the company's Shanghai and, newly opened, Singapore offices.

These connections and international presence are valuable for other New Zealand firms looking to export or expand existing export operations in these markets. For example, the company has become a cornerstone member of Primary Collaboration NZ (Shanghai) Limited (PCNZ), appointing a non-executive director to the board since 2024. The business is considered a global leader in ironsand production and logistics, whose expertise is sought after for consultation on international projects.



2. Proven economic performance

2.1. History and background

To understand the current and future economic contribution of the business to New Zealand it is critical to understand the mine's history and operating model.

Taharoa Ironsands is a unique business with a proven track record of large-scale exporting, spanning more than half a century. The business's national and regional economic contribution places it amongst a handful of privately owned export companies.

Since its origin, the business has operated with essentially the same business model, featuring full value capture from resource to market (foreign ports: Cost and Freight [CFR]). This drives the performance of the current period and underwrites the reliability, sustainability and credibility of the forecasts of export revenue. Taharoa's revenue is 100% export based.

Period 1: From the beginning in the early 1970s to 2015

From 1972 to 2015 Taharoa essentially ran a one ship delivery model. Ironsands were slurried through a pipeline on the sea floor three kilometres from the shore to a moored buoy. This in turn was used as a mooring point by way of a hawser connection to the ship and for connecting hoses to load the slurried iron sand material. Through that period the size of the single operating ship was increased from Panamax, less than half the size of what they are today.³

Period 2: 2015 to new ownership

In 2015 the Australian owners, Bluescope, launched an expansion plan. This involved the charter of three new Capesize slurry vessels, and an upgraded mooring buoy.

The final part of the expansion plan was an investment of more than \$100 million in new plant and equipment, to increase production to satisfy the new shipping capacity. Confronted with challenging markets and a lack of easy-to-mine resource, Bluescope chose to terminate its investment. Closure was the preferred option.

At that point, today's existing shareholders made a successful offer to purchase the mine and to complete the expansion programme. The acquisition was completed on May 1st, 2017, and the business was placed in 100% New Zealand private ownership.

Period 3: 2017 to Present

From May 2017 to June 2025, the New Zealand owners have managed a successful expansion and transition of the business, averting what would have been catastrophic economic and social losses for the regional and wider economy.

³ Panamax vessels referred to a vessel designed to pass through the Panama canal. Typically the deadweight tonnage of these vessels is 65,000 to 80,000. Deadweight tonnage of Capesize vessels, like the *Taharoa Providence*, is typically about 175,000.



2.2. The current economic contribution

Taharoa ironsands is a very large operation

Taharoa is a very large business by New Zealand standards. We consider that the company's national and regional economic contribution places it amongst a handful of privately owned export companies.

Scale of tax revenue:

Company taxes paid to the New Zealand government since May 2017 [REDACTED], not including tax revenues from PAYE. The scale and size of the freight, export business and investment story are worth drawing out.

Scale of the freight operation:

The freight operation is unique. To put its scale in perspective, TIL advises that:

- The business's three Capesize vessels have more than double the freight capacity of the current fleet of Cook Strait ferries. Each ship is longer than three rugby fields and more than twice the size of any bulk carriers currently entering New Zealand ports.
- The port is expected to reach the rank of 2nd largest port in New Zealand by export tonnage in 2026, despite being dedicated to a single operation.⁴
- This will be three times the bulk exports of Port Auckland and accounts for over 10% of the country's bulk exports.

Size of the export business

For a small, isolated trade dependent economy, export revenue is crucial for New Zealand's economic growth and for funding our consumption of imported goods and services. Exports make for revenue in addition to the domestic economy. Taharoa's export profile is substantial:

- Taharoa Ironsands is the largest single export company in the Waikato region and is the country's largest single exporter by gross tonnage.
- Priced in today's dollars, the export contribution to the New Zealand economy to date, exceeds \$5 billion. Shipping tonnages to date exceeds 65 million tonnes.
- Current annual export revenue of \$316 million.
- Planned export sales of \$14 billion NZD to 2055 (see 'Appendix A' for the assumptions underlying these forecasts).

⁴ It was the 4th largest port in New Zealand by export tonnage during the last 8 years.



- In 2026, the exports of Taharoa Ironsands are forecast to be on par with New Zealand's wool export industry and already generates greater export revenue than New Zealand's entire arable industry.⁵

Size of the regional investments in labour and capital

Taharoa Ironsands has made significant investments to boost the mine's efficiency. These investments include:

- The invention and development of higher recovery technology. Much of this has been built and now operates as mobile rougher plants and high-performance mobile processing plants.
- The investment of \$221 million in new plant and equipment since the current owners of the mine acquired the business in May 2017, including the acquisition of a slurry ship.
- A 30% increase in employment. Labour services of nearly \$300 million (currently). The mine now directly employs 240 staff and provides regular business to over 100 contractors.
- Over the last 8 years, Taharoa Ironsands has spent \$1.2 billion on goods and services supplied from the regional economy.

Track record provides surety about ongoing operations

The mine has been in operation for 52 years and uses a tested business model and proven technologies.

This makes assessing the economic benefits more certain, and a very different proposition to assessing new mining activity as part of a consent process.

Assertions about future economic performance often rely heavily on assumptions of resource estimates, untested cost structures, and volatile market indices.

But in this case, Taharoa Ironsands is unique given its proven resource, technology, management, and well-tested business model. The market and cost assumptions are conservative, providing credibility to the forecast of operations and export revenue.

Not only is Taharoa a very large exporter, but it contributes high quality export revenue. Poor quality export revenue may incorporate a high level of intermediate goods, often imported. In contrast Taharoa is a high added value exporter.

⁵ See for example Ministry for Primary Industries 2024, who list arable sector export revenue at \$300-million (see <https://figure.nz/chart/RRMLH2hOykpOy0Q3>) and forecasts of wool exports static at \$390 to \$380 million, lower than forecast mine revenue once production increases.



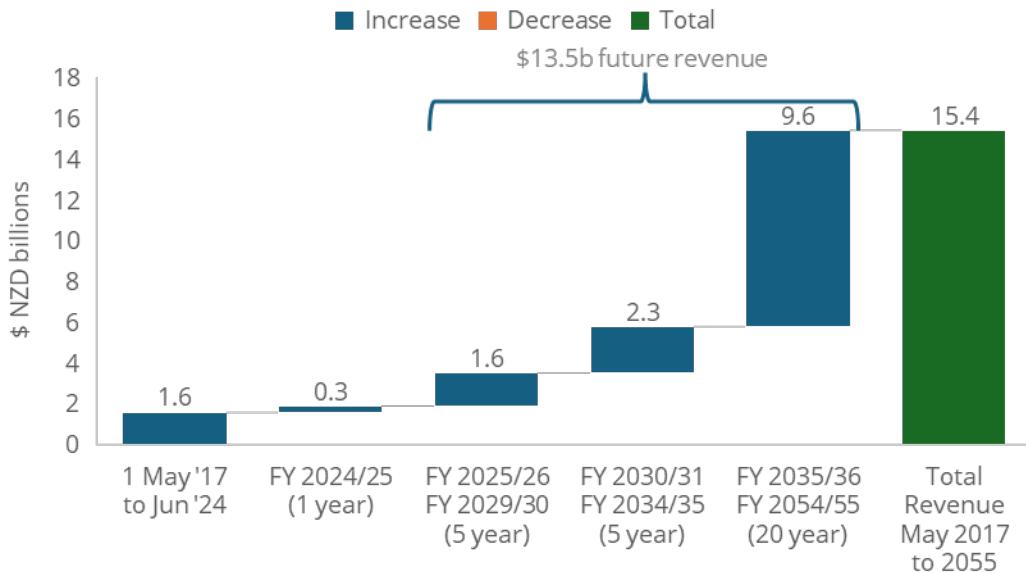
2.3. Future revenue will continue to provide these substantial benefits

Assessing future revenue

To quantify the Project's direct economic benefits at a national level, Taharoa Ironsands Ltd created a projection of its revenue stream from the mining operation over the next 30 years. Revenue has been projected for the next 30 years (rather than the proposed consent term of 35 years) as a conservative forecast to account for external events outside of Taharoa Ironsands control such as severe weather events, other market variables and to provide sufficient time to complete final stabilisation and rehabilitation.

Figure 5 shows the revenue over 2 periods – the past, and the future operation of the mine.

Figure 5: Expect the mine to continue to make a major national economic contribution
Total revenue from mine activity, various time periods.



Source: Taharoa Ironsands Ltd., Sense Partners Analysis

The forecast is underpinned by a set of reasonable assumptions about output, input costs, the iron ore price and the exchange rate that are set out in Appendix A.

This includes assumptions about export volumes. Taharoa Ironsands Limited expects production – and ultimately export volumes – to increase to 5 million tonnes annually.

The mining operation has secured sales contracts for the next ten years. Long-term contractual arrangements provide suppliers – like Taharoa Ironsands with the business certainty to make the large-scale investments needed to operate. Ten years of sales provides some surety about future revenue track despite the inherent financial risk in what is a competitive global economic environment.



2.4. Revenue stream brings significant tax revenue

The forecast revenue track set out in Figure 1 is substantial. For example, MBIE uses Statistics New Zealand data to estimate local contributions to national GDP.⁶ The latest available MBIE data estimates the region of Taranaki's GDP was \$9.5 billion in 2020 or about \$11.6 billion today – smaller than the forecast revenue provided by the mine to 2055.⁷

This revenue stream generates tax revenue that is significant on a national scale. Since the mine was returned to New Zealand ownership in May 2017, we assess corporate tax to be [REDACTED]

2.5. The mine delivers significant regional benefits

Taharoa needs local resources to work the mine. This includes primarily labour inputs, but also capital that is purchased, maintained and delivered by regional suppliers. These firms are located through the region, including Kawhia, Te Kuiti, Otorohanga and Hamilton.

The mine will generate an additional spend of \$9 billion, or \$298 million per year, on regional goods and services over the next 30 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. Domestic capital purchases include for example:

- i. a new fleet of bulldozers,
- ii. new excavators,
- iii. two mobile rougher plants,
- iv. a new scavenger plant,
- v. a new mobile cleaner plant designed for finer enriching of product,
- vi. a new buoy at the port, and
- vii. four new dredges.

Taharoa Ironsands has also purchased outright one of the three slurry vessels that are dedicated to delivering Taharoa iron sands to market, reducing dependency on charter contracts by one-third.

Further new plant and equipment required for future resource processing has also been secured and is in the delivery and commissioning phases.

⁶ See <https://www.mbie.govt.nz/business-and-employment/economic-growth/regional-economic-development/modelled-territorial-authority-gross-domestic-product>.

⁷ Guidance from New Zealand Treasury (New Zealand Treasury 2024) is to also present discounted sums at present real interest rates of 8 % for commercial projects (such that a dollar in thirty years' time is worth 0.09 cents, and an alternative interest rate of 2.0, so a dollar in thirty years' time is worth 56 cents). These assumptions generate present value sums of \$4.8 billion and \$10 billion dollars of export revenue. Given the forecast projection already makes an inflation adjustment for costs but not revenue, this guidance produces an extremely conservative estimate of the present value of the revenue stream, understated by as much as three percent per annum – the assumed rate of inflation.



These are large investments that are required to enable future production. These types of investments are only possible with regulatory certainty about the outlook of the mining operation.

2.6. Securing the future economic contribution

Due to the investments that have been made since its acquisition, Taharoa Ironsands has been able to secure its future. However, to ensure the viability of the operation, further investment is required.

To comfortably make these investments, certainty is required. Many factors are aligned:

- Taharoa Ironsands Limited's extensive core sample drilling of the site has identified sufficient resource to fill its shipping capacity for the next 30 years. Future extraction relies fundamentally on existing technology.
- Future production is presold for the next 10 years to the largest steel producing companies globally, primarily in China and Japan.
- The new plant and equipment required for processing future resource has been secured and is in the delivery and commissioning phases.

Negotiations are also underway to acquire replacement shipping capacity for the period post 2035, when the current fleet reaches the end of its economic life. The total replacement cost of these vessels is \$600m, an investment that demands strong investor confidence. The new vessels will have an economic lifespan of 25 years each, securing Taharoa's economic viability until 2055. The first replacement vessel will enter service in 2030 with its economic life coinciding with the lifespan of the resource consent.

Future production targets are dictated by this three-ship model that requires significant investment.

We understand that renewing the consent to operate for the next 35 years is the largest potential constraint on investment. Renewing the consent unlocks the significant national economic benefits that come with enabling the mine to operate as it has over the last 50 years.



3. Other local environmental and development benefits

3.1. Location and technology reduce emissions

Globally many steel producers are looking to decarbonise their production methods and supply chain to help reduce emissions.⁸ Some producers struggle to reduce emissions without purchasing offsets.⁹

In comparison, the Taharoa Ironsands operation has (and will continue to have) a very low emissions footprint.

The remote location of the mine is critical for the low CO₂ emissions footprint compared to competitors at other locations. The coastal location removes the need to haul product by truck, lowering the total emissions footprint of the operation.

Using Australian mines as a comparator, a life cycle assessment makes clear the importance of location:¹⁰

"The results showed that loading and hauling made the largest contributions (approximately 50%) to the total GHG emissions from the mining and processing of iron ore."¹¹

Combined with significant technological investments that are contingent on receiving consent to operate, this will make the emissions footprint of the mine one of the lowest in the world.¹² These investments include increasing the maximum mains electrical capacity. This lowers reliance on diesel generators and is expected to enable 100% reliance on renewable energy sources.

These investments are estimated to decrease emissions to 4.2 Kg of CO₂ equivalent per tonne – only 35% of typical competitors that are estimated to be 11.9 Kg of CO₂ equivalent per tonne using a life cycle assessment appraisal.

This makes the operation one of the most environmentally efficient locations to mine iron ore globally.

3.2. Implications for local development

Since Taharoa Ironsands is remote, the mining operation provides practically all the employment in Taharoa village and nearby area. Local labour market outcomes are effectively

⁸ See <https://www.mckinsey.com/industries/metals-and-mining/our-insights/decarbonization-challenge-for-steel>

⁹ See <https://www.reuters.com/markets/commodities/top-four-iron-ore-miners-carbon-emissions-reduction-promises-2024-06-26/>

¹⁰ Farjana, et al. 2019 lay out the importance of using life cycle assessments.

¹¹ See Haque and Norgate 2015.

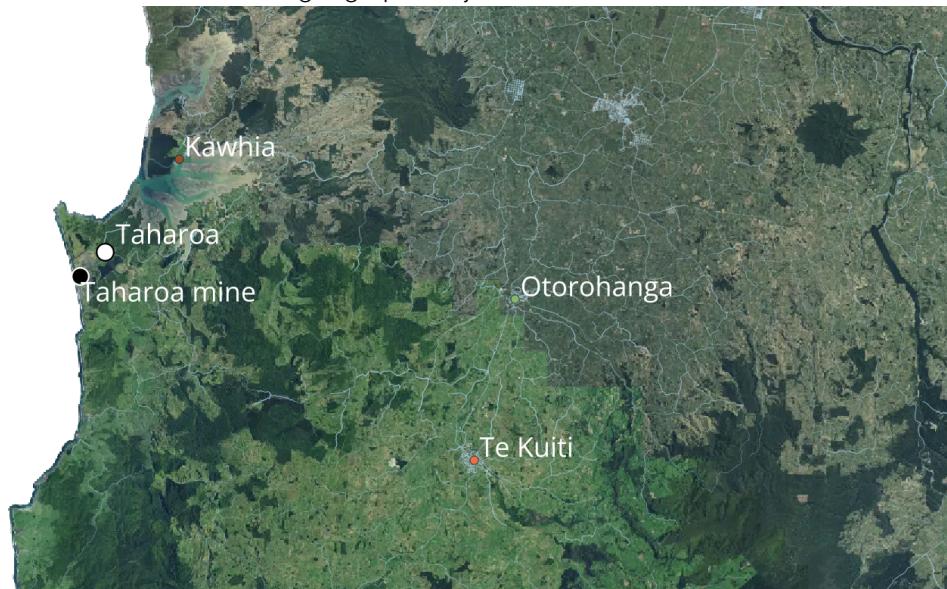
¹² See Taharoa Ironsands Ltd 2023



determined by the success of the mining operation. Locals can access high wages through employment at the mine.

Total average remuneration of personnel engaged in relation to the mine is about \$150,000 per annum, well above the average income in New Zealand. As a point of comparison, Trade me report the average advertised salary at \$72,815.¹³ Statistics New Zealand report average weekly income for Full-time employees as \$1,666 or in March 2025.

Figure 6: The mine at Taharoa is geographically isolated



Source: Land Information New Zealand; Sense Partners

Tahora Ironsands also has generous employment policies. These include:

- a 10% contribution towards superannuation
- generous sick leave, annual leave,
- subsidised healthcare, additional leave and long service leave allocations
- subsidised medical, life, and health disability schemes.

The mining operation facilitates additional benefits

In addition to the royalties of approximately \$5 million per annum that go to the Maori incorporation that owns the land on which the mine is located, there are several direct benefits to the local and regional community provided by the mining operation.

Mine employees occupy 95% of local dwellings in the village, which would have otherwise closed. Without the mine, there would be no village.

¹³ See stuff.co.nz/money/360459351/average-national-salary-reaches-record-high-trade-me-jobs



Taharoa Ironsands also provides:

- housing for employees and their families in Taharoa Village that is close to the mine, renting 75 houses to employees at a heavily discounted rate of \$28 per week
- the community hall, school, shop, two large sports facilities, the local marae and in the Taharoa Village
- maintenance on village infrastructure and housing, including water and sewage services
- stand-by helicopters for medical emergencies
- subsidised freight services for the village store
- access to the Mine's petrol and diesel supplies for the local community
- 100% of all village infrastructure costs (water, wastewater, power, rubbish collection, maintenance of public areas).
- support for education through the provision of staff education subsidies
- local school would not exist without the local business.
- education payment for travel and boarding for employees' high-school aged children, at a cost of up to \$18,000 per child annually.

These are non-trivial benefits that supplement already high incomes that accrue to staff.

Limiting the mining operation limits economic opportunity

The future economic contribution to the local and regional economy from the execution of the plan for the mining operation is substantial.

- Over the 30-year period, the mine is expected to spend an additional \$9 billion on local goods and services, an average of \$298 million annually.
- Anticipated domestic capital expenditure is expected to be over \$42 million.
- Further payments of royalties to local iwi landowners are expected to be more than \$600 million, or \$20 million per year.



4. Conclusion

Our assessment demonstrates that the mining operation should be expected to continue to deliver significant national benefits. These include a large contribution to value added production sustained by the creation of a substantial stream of export revenue, expected to be about \$14 billion of export revenue over the next 30 years.

Since the change in ownership in 2017 the mining operation has delivered significant amounts of tax revenue. These nationally significant tax revenues should continue to be realised given the outlook for export revenue.

The mining operation delivers already delivers substantial regional benefits that include 350 jobs for 350 full-time equivalent roles, higher wages than available elsewhere in the local community and support for many firms in the region needed to supply goods and services for the continued operation of the mine.

Ongoing investment in the mining operation and its remote location makes the mine a sensible location for mitigating CO₂ emissions from the inputs to steel production. The remote location enables connection to the labour force for locals that would otherwise be forced to move to obtain work

The scale of these national and regional benefits distinguishes the mining operation as making a substantive contribution to the economy overall.

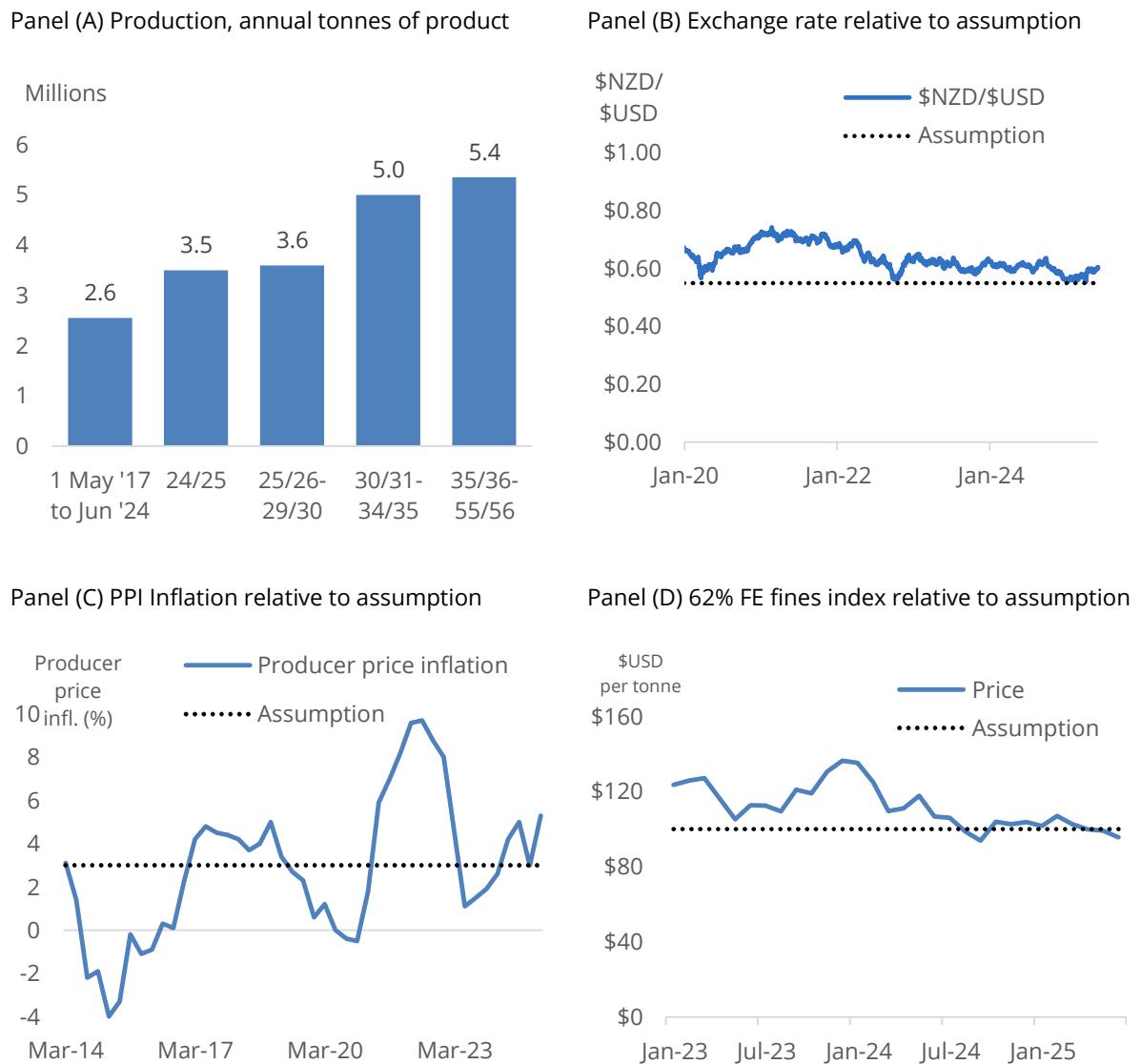


Appendix: Forecasts and assumptions

The revenue forecast is based on assumptions about the operation:

- Mine production up from 3.5 million tonnes per annum to 5 million tonnes per annum over the next 30 years.
- The exchange rate is expected to be 0.55 USD to the New Zealand dollar – a conservative assumption.
- The relevant commodity price issued by Platts is the 62% FE fines index that is conservatively assumed to be \$100 USD over the forecast period.
- Producer price inflation is assumed to be 3 % over the 30 year period.

Figure 7: Revenue outlook is based on sensible assumptions



Source: Varied, including Reserve Bank of New Zealand



References

Coffey, Wayne 2024, "Statement of Evidence of Wayne Coffey for Taharoa Ironsands Limited, Corporate", In The Matter of applications by Taharoa Ironsands Limited for all necessary regional resource consents to continue to operate Taharoa Mine at Taharoa C Block, Taharoa Road, Waikato (application number APP142035), Date 23 January 2024

Encyclopedia of New Zealand (n.d) <https://teara.govt.nz/en/king-country-places/page-1>

Farjana, Hisana Shahjadi, Nazmula Huda, M A Parvez Mahmud, R Saidur, 2019 "A review on the impact of mining and mineral processing industries through life cycle assessment", *Journal of Cleaner Production*, [Volume 231](#), pages 1200-1217

Haque, N and T Norgate 2015, "Life cycle assessment of iron ore mining and processing", *Iron Ore*, Woodhead Publishing, pages 615-630, ISBN 9781782421566.

Ingram, John et. al. 1974 "Symposium on Taharoa iron sands project", *New Zealand Engineering*, Vol. 29:5, May, pages.129-133.

Ministry for Primary Industries 2024, "Situation and Outlook for Primary Industries", June 2024, available at: <https://www.mpi.govt.nz/resources-and-forms/economic-intelligence/situation-and-outlook-for-primary-industries/sopi-reports/>

New Zealand Treasury 2015, "Guide to Social Cost Benefit Analysis", available at: <https://www.treasury.govt.nz/sites/default/files/2015-07/cba-guide-jul15.pdf>

New Zealand Treasury 2024, "Treasury Circular 2024/15 Updated Public Sector Discount Rates For Cost Benefit Analysis, October, available at: <https://www.treasury.govt.nz/sites/default/files/2024-10/treasury-circular-2024-15.pdf>

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