Belmont Quarry – Winstone Aggregates

Assessment of economic effects of proposed Land Exchange for Fast-track approval

3rd December 2025

m.e consulting

Belmont Quarry –

Assessment of Economic Effects of proposed Land Exchange for fast track approval

Prepared for

Winstone Aggregates Ltd.

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Executive Summary

Winstone Aggregates have commissioned Market Economics Ltd to prepare an assessment of the economic effects and benefits associated with the proposed land exchange between Belmont Quarry and the Department of Conservation - being considered under the Fast Track Approvals Act 2024 ('the Act').

The purpose of the Act is to '*facilitate the delivery of infrastructure and development projects with significant regional or national benefits.' As part of the Panel's decision making under the Act, '* the Panel will consider whether the land exchange will achieve those benefits. This report considers the economic benefits of the proposed land exchange, and examines how the project will lead to regionally or nationally significant economic benefits.

Background

Belmont is a large quarry within the Wellington context, supplying approximately 41% of aggregate required within the Wellington economy and a regionally significant aggregate resource. The quarry has been in operation for approximately 120 years, therefore its presence is consistent with the planning regime that has arisen around it. During its operation, it has contributed to a large proportion of Wellington's buildings and other infrastructure. The quarry operation over the past year produced around 600,000 tonnes of aggregate, but on average over the past 7 years has delivered over 900,000 tonnes of rock to support Wellington infrastructure and development projects. Actual production is driven by demand, which in recent years has been high due to large projects such as the Transmission Gully motorway. Future demand will be driven by economic growth in general and by new large projects including the Riverlink Project along the Hutt River, the Seaview Wharf Hutt City Pipeline replacement, Wellington Water's ongoing repairs and upgrades and potentially wharf development to cater for new Cook Straight Ferries and other fast track projects.

In normal years, production at Belmont Quarry averages between 700,000 to 800,000 tonnes annually. The quarry as a business, employs approximately 25 FTEs directly, an additional 37 employees work across associated businesses (Firth Concrete, Firth Masonry and Fulton Hogan Asphalt) and are supported by contractors (approximately 25 – 28) working through the quarry operations. These operations are supported by employment across a large number of other industries – in particular the transport sector, mechanical servicing as well as smaller sectors such as laboratory and technical services. The quarry provides a wide range of aggregate products to a large number of Wellington Regional clients (NZTA, Wellington City Council, Wellington Water and numerous construction sector clients sourcing concrete and aggregate for other uses). Belmont Quarry is well located with respect to Wellington's CBD, major transport routes and growth areas. The quarry in its current configuration (i.e. without the proposed land exchange) has the potential to remain operational for approximately 2 years due to the fact that it has exhausted options for overburden disposal within its existing site.

All of Wellington's quarries are fully engaged in meeting both the growth and maintenance needs of the city, with each new single house requiring 250 tonnes of aggregate (more for attached dwellings), roading requiring 20,000 tonnes of aggregate per km of 6 lane motorway, or 4,000 tonnes per 1 lane km of standard roading. The Aggregate and Quarry Association of New Zealand estimates that aggregate demand in New Zealand is

approximately 8.5 tonnes per person per year.[1] Based on Wellingtons urban population (Porirua, Upper and Lower Hutt and Wellington City), annual demand for aggregate is approximately 3.7 million tonnes, this is expected to grow to 3.9 million tonnes in 2028 and to almost 4.2 million tonnes by 2043.[2] This means that Wellington needs to identify at least 230,000 tonnes of new aggregate annually over the next 3 years, and almost 500,000 tonnes annually by 2043. This is effectively a new quarry's worth of rock.

Within this environment, the loss of Belmont as a key source of aggregate will not be able to be covered by increasing production in the remaining other large Wellington quarries with consented supply (Horokiwi, Willowbank and Kiwi Point). It is critical to the efficient functioning of the Wellington economy that Belmont remains viable and in production.

Application

The purpose of this report is to provide an economic assessment and identification of benefits associated with the proposed land exchange between Belmont Quarry and the Department of Conservation, under the Fast Track Approvals Act (2024). The exchange involves swapping approximately 23.2 ha of Belmont Regional Park Land for 34.1 ha of Fletcher Construction and Infrastructure land (Winstone's parent company). The land exchange is integral to facilitating the continued operation of the quarry, as it will provide space to accommodate overburden, which must be removed from the quarry to expose usable quarriable aggregate. Securing an area for overburden disposal adjacent to the quarry, will secure the quarry's future and provide access to the remaining aggregate resource. Securing the land in the proposed land exchange provides future opportunities for efficient overburden disposal from the quarry.

Winstone also intend to seek approval for consents for an OBDA on the exchange land that will be estimated to extend the active life of the quarry by 40 years. However, securing the land provides opportunities for other OBDA options to be developed if those are unsuccessful.

Summary of Economic Impacts

The land exchange itself generates a number of economic effects that are tied to the opportunity for future production from the Belmont Quarry as opposed to sourcing aggregate from less efficient locations (potentially from outside the region). Granting consent for the land exchange is not sufficient to generate the effects associated with the quarry's continued operation, without the consent these effects and the benefits that come from them will not occur.

In summary, the effects of not approving the land exchange are;

- Closure of the existing business within 2 years: $17m - $20m in trade per annum and between 25 and 35 direct jobs, up to 30 additional contractors and potentially 37 jobs in associated businesses on site (Asphalt and concrete plant workers)
- Direct impact on the Wellington economy of between $8m and $10m per annum in direct contribution to GDP. Once flow on effects are included, this increases to between $15m and $20m per annum.[3]

[1] Aggregate and Quarry Association of New Zealand, Fact Files.

[2] Market Economics Aggregate Demand Model, 2025

[3] Depending on whether only the indirect effects are included, or the indirect and induced effects are counted.

- Investment in plant and machinery and to upgrade the site is estimated to be $30m over 3-5 years and $5m to obtain approvals for the proposed expansion. If the land exchange is not approved, this investment will not occur.
- This one off investment has a total economic impact in terms of contribution to GDP of between $39m and $43m in the Wellington economy.
- The Quarry has future production volumes of between 700,000 tonnes and 850,000 tonnes annually over thirty years. Wellington's growth and maintenance will rely on this resource.
- The value of this aggregate is between $22m and $25m annually.
- Wellington is currently operating in an aggregate deficit position. Aggregate is very expensive to transport in proportion to its value as a commodity. This means it quickly becomes uneconomic to move it over large distances. Increased cost of aggregate, puts significant price pressure on Wellingtons construction sector and increases the costs of housing, roading and other key infrastructure.
- Avoiding these costs represents a significant economic benefit, if the land exchange is granted.

Economic Benefits

Economic benefits are a subset of the economic impacts and consist of changes to household incomes, increased tax revenues, increased infrastructure investment and lower costs of goods. In the context of the land exchange and the economic benefits that flow, I have estimated the following;

- Increases in Household Incomes – $3m annually. Once the flow on effects of the quarry are included, overall Wellington household incomes increase by $7.1m. This is compared to the closure of Belmont Quarry scenario.
- Contributions to tax revenues for central government – equated to approximately $3m annually (based on an average tax rate of 17.3% of operating surplus).
- Lower cost aggregate – This assumes that the aggregate replacement travels further to meet client needs than if sourced from Belmont. Transport costs increase by a minimum of at least $2.4m annually.
- Employment – currently Belmont Quarry and associated businesses has around 53 FTEs and a further 25 – 30 contractors (approximately). The flow on effects of the quarry as a business within Wellington sees total employment sustained of 180 FTE's each year.

Over a 35 year time horizon (assuming that is the length of consent), the benefits associated with the continued operation of Belmont Quarry amount to;

- Household Incomes $248.6m
- Tax Revenues $105m
- Aggregate cost saving $84.3m
- **Total Benefits of Belmont Quarry as a business** **$438m**

This works out to more than $12.5m every year. In NPV terms (at 2% discount rate as per Treasury guidance) the total benefits of Belmont Quarry as a business are **$313m**.

Future investment plans

Future investment plan also generate economic benefits (missed if the land exchange does not proceed). Winstone's plan to spend approximately $30m in both plant and machinery and site reconfiguration along with an estimated $5m investment in the consenting process over a 3 to 5 year period. I have assumed that the split in costing is as follows

- Plant and Machinery $15m
- Site Reconfiguration $15m
- Consenting Process $5m

Benefits associated with the economic impact of these activities area as follows;

- Household Incomes Direct change in Household incomes of $9.5m. Once the flow on effects are included this grows to $20.4m in total.
- Tax Revenues $3.3m to central government
- Employment Direct employment is 231 FTEs. Once flow on effects are included this rises to 557 FTE's.

In summary, these investment benefits will only occur if the land exchange is granted and the overburden disposal area (OBDA) consents are secured. Monetizable benefits amount to almost $24m if the site reconfiguration and investment in plant and machinery[4] occurs.

Economic Costs

Economic costs will be small and limited to;

- Some fragmentation of the park.
- Some loss of amenity for users of the land that would now become part of the Belmont Quarry overburden disposal area. These effects will be (at least) partially offset by the improvements in utility and amenity offered by the land that is exchanged and now forms part of the park.
- Some change to the conservation values associated with the land to be exchanged and the land that would now be utilised by the quarry are similar[5]. Therefore, any reduction in these values is expected to be very small.

There may also be some financial implications associated with the exchange. While the land to be acquired by DOC as part of the exchange is to be used as reserve, there is a slight difference in the value of the land being exchanged. While land values don't impact the assessment of economic costs, they may mean a

[4] This assumes that the machinery is built within the Wellington economy. If machinery is imported then the benefits associated with the $15m are distributed differently as Winstone's are likely to purchase machinery via a machinery wholesale business, rather than from a local manufacturer. In net terms the effects are slightly lower total Gross Output (1.3%) but slightly higher Household Incomes (9%).

[5] A comparative values assessment is contained within the Land Exchange Report that accompanies this application.

difference in ratable value over time for both parties. Give the difference in value is only $112,000[6], the rate related impacts are minimal.

In addition, there are also costs associated with the rehabilitation of the land being exchanged to become reserve. These costs include;

- Weed control – blackberry, pampas, exotic vines and others
- Pest control – Brushtail possum, goats and rats
- Revegetation – 1.2ha of revegetation plus wetland replanting of 200 Swamp Maire.

In summary, it is highly likely that the economic costs described above are insignificant when compared with the ongoing economic benefits of the land exchange. This is because they are mostly impacts at the margin and are often offset by benefits (at least partially).

Net Economic Benefits

- The net economic benefit of allowing the land exchange to occur is estimated to be $313m in NPV terms over 35 years, or the consent lifetime of the Belmont quarry.
- In addition, expansion plans that are foregone without the land exchange add a further $20.4m in household income to Wellington.
- The above estimates of economic benefits assume that Horokiwi, (and other quarries within Wellington such as Willowbank or Kiwi Point) could respond to cover the volume lost from Belmont. However this is unlikely to be the case. Currently Wellington Region is a net importer of aggregate. Demand growth and current production levels at the existing quarries mean that in the absence of Belmont, Wellington will need to increase the amount of rock it imports significantly.
- Aggregate is low value and high mass meaning that at approximately 30km travel distance a truck of aggregate will have doubled in cost.
- Finally, there are significant costs to develop a new quarry within Wellington to cover any loss of Belmont production (750,000 tonnes annually), or to transport the aggregate from further afield (Kapiti Coast or the Whanganui Region). Therefore, the most economically efficient approach is to grant consent for the proposed land exchange to allow the continued operation of Belmont Quarry.

Conclusions

Based on my assessment of the impacts costs and benefits that arise from the proposed land exchange between Winstone's Belmont Quarry and the Department of Conservation, **I find that the economic benefits are significant at the regional level and will be ongoing**.

[6] The value of the Belmont Quarry land to be swapped is $540,000 (according to a Colliers International report prepared for Fletcher Concrete and Infrastructure Limited) and the value of the Crown land is $480,000.

1 Introduction

Winstone Aggregates, a division of Fletcher Building Limited, is seeking approval under the Fast-track Approvals Act 2024 to exchange land with the Crown adjacent to the Belmont Quarry to allow it to establish a new overburden disposal area (OBDA) at its Belmont Quarry operation in Lower Hutt.

The application includes a proposed land exchange involving approximately 23.2 ha of Crown-owned reserve land, currently managed by Greater Wellington Regional Council as part of Belmont Regional Park, and 34.1 ha of privately owned Winstone land. This exchange is integral to facilitating the continued operation and expansion of Belmont Quarry, providing space to accommodate overburden removed to expose usable aggregate. Further approvals (Resource Management Act (RMA), Wildlife, New Zealand Historic Places Trust (NZHPT) approvals) will be sought as part of the substantive application process.

I confirm that, in my capacity as author of this report, I have read and agree to abide by the Environment Court of New Zealand's Code of Conduct for Expert Witnesses Practice Note 2023. A copy of my qualifications is set out in the brief form CV in Appendix 1

1.1 Wellington's significance to New Zealand

Wellington is the seat of government and a hub for innovation, public administration, and knowledge-intensive industries. It holds national strategic importance. While not the largest city in terms of population, it is central to New Zealand's public sector governance and economic resilience. The region's infrastructure enables both national government functions and local urban growth. A critical input to this infrastructure is aggregate, the foundation material used in roads, rail, housing, and civic buildings. Belmont Quarry, located in Lower Hutt, plays a vital role in supplying this material to the region.

Wellington is home to around 540,000 people, approximately 10% of New Zealand's population, spread across a polycentric urban region that includes Wellington City, Lower Hutt, Upper Hutt, Porirua, and the Kapiti Coast. Over the decade from 2012 to 2022, the region grew by around 11%, with growth concentrated in areas such as Kapiti, which has experienced strong residential development due to lifestyle appeal and improved connectivity through projects like the Transmission Gully Motorway and Kapiti Expressway.

Looking forward, the Wellington Region is projected to grow by a further 3% to 2028, and by 13% over the following two decades. While this is slower than Auckland, the cumulative growth will place increasing demands on already stretched infrastructure, particularly in water, transport, and housing systems, as well as compounding ongoing legislative requirements for earthquake strengthening across the built environment.

Economically, the region contributes around $41.5 billion in GDP (2022), making up approximately 12% of national output. Wellington's economy is highly productive, with GDP per employee around 10% above the national average, due to its concentration in high-value sectors including public administration, professional services, ICT, and scientific research. Between 2012 and 2022, the region's economy grew at an average rate of 3.1% per annum in real terms, slightly above the national growth rate. From 2001 to 2022, the Wellington Region contributed 11% of New Zealand's total GDP growth.

This economic activity drives demand for infrastructure, particularly:

- Urban redevelopment and intensification (e.g., Porirua, Johnsonville, and Kapiti growth nodes),
- Roading and transport upgrades,
- Water infrastructure replacement and resilience building,
- Educational and healthcare facilities,
- Government and commercial office space,
- Civic and cultural buildings.

Ensuring the continued functionality and competitiveness of the region requires a reliable supply of construction materials. Aggregate sourced locally, such as from Belmont Quarry, reduces the need for long-haul transport from the Manawatu-Whanganui, or even further afield. A secure regional aggregate supply chain is essential to support this economic and population growth cost-effectively.

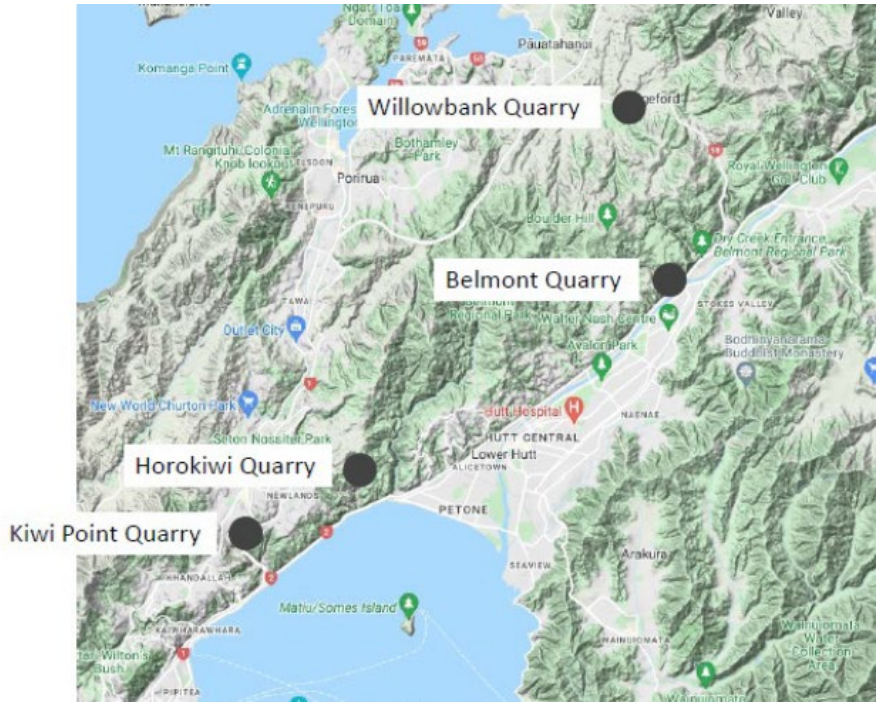
1.2 Belmont Quarry in Context

Belmont Quarry is one of the Wellington region's most significant sources of aggregate, supplying around 41% of the region's demand. The quarry has operated continuously for approximately 120 years, supporting a large proportion of Wellington's buildings and infrastructure. Over the past year, Belmont produced roughly 600,000 tonnes of aggregate, with a seven-year average of over 900,000 tonnes annually. Production is demand-driven, influenced by major projects such as the Transmission Gully motorway, and future demand is expected from projects including the Riverlink Project along the Hutt River, the Seaview Wharf Hutt City Pipeline replacement, ongoing Wellington Water upgrades, and potential ferry terminal developments.

The quarry directly employs approximately 25 full-time equivalents, with broader economic support provided through contractors and related sectors, particularly transport, laboratory, and technical services. Its location near major transport routes and regional growth areas makes it strategically important. In its current configuration, Belmont Quarry has an operational life of around two years without expansion.

1.3 Aggregate Resources in Wellington

Figure 1.1: Quarries within 30km of the Wellington CBD



Greywacke is the only viable source of aggregate in the Wellington region, extracted from either hard-rock deposits of Mesozoic age or younger Holocene alluvial gravels. While hard-rock greywacke is extensive, its accessibility is limited by the presence of suitable sandstone facies, land availability, and quarry siting constraints near faults. Crushing and faulting also limit the maximum aggregate size produced.

Within 30 km of the Wellington CBD, there are only four major hard-rock quarries: Belmont, Horokiwi, Kiwi Point, and Willowbank (Figure 1.1). These quarries form the backbone of the region's aggregate supply, with Belmont being the largest single contributor.

1.4 Regional Demand Pressures

Aggregate underpins Wellington's infrastructure and housing. A typical new dwelling requires around 250 tonnes, while a kilometre of six-lane motorway requires approximately 20,000 tonnes. The Aggregate and Quarry Association of New Zealand estimates national demand at 8.5 tonnes per person per year[7], translating to 3.7 million tonnes annually in urban Wellington, rising to 3.9 million tonnes by 2028 and nearly 4.2 million tonnes by 2043. Meeting this growth requires an additional 230,000 tonnes annually over the next three years, and almost 500,000 tonnes annually by 2043, effectively the equivalent of opening a new quarry.

Loss of Belmont Quarry would create a significant supply gap, as the four major quarries each hold a substantial share of the regional market. The withdrawal of any one of these quarries would create a shortfall, and the loss of Belmont in particular would leave a gap that could not easily be met by the others. Maintaining

[7]https://contractormag.co.nz/contractor/quarrying-industry-brief/

Belmont's viability is therefore critical to meeting regional housing, infrastructure, and maintenance needs, and to supporting the Wellington economy.

While Wellington's population growth is more moderate compared to other major cities, the region faces significant pressures related to infrastructure renewal and resilience. Ongoing investment in buildings and infrastructure continues despite broader economic challenges, including recent inflationary conditions. In addition to addressing current and future growth needs, Wellington must contend with a substantial infrastructure deficit. The New Zealand Infrastructure Commission has noted that without a step change in how renewals and upgrades are approached, this deficit is likely to worsen.[8] Much of the shortfall reflects underinvestment during the 1980s and 1990s. Subsequent investment is catching up with demand and renewing aging infrastructure, for which a steady and cost-effective supply of aggregate is vital.

Cost effective infrastructure relies on the construction sector being able to deliver projects efficiently, which means that the entire supply chain must be efficient to ensure that can occur. Infrastructure efficiency, and maximising the return on infrastructure spending, are critical. Estimates suggest New Zealand's infrastructure spending would need to increase from 5.5% of GDP to 9.6% of GDP to deliver the infrastructure we need – a significant increase. This relies on steady and reliable long term sources of aggregate.

The Wellington aggregate market is already in deficit. As outlined below, the region imported around 1.5 m tonnes of aggregate in 2024, this is expected to rise over the next 20 – 30 years as the existing quarries have limited ability to cater for the level of increases in demand anticipated. Enabling the continuation of supplies from existing quarries within the region minimises economic and environmental costs.

1.5 Fast-track Approvals Act 2024

The Fast-track Approvals Act 2024 was enacted to "facilitate the delivery of infrastructure and development projects with significant regional or national benefits" (section 3).

The Belmont Quarry project is identified in Schedule 2 of the Act. This means the project does not need to be referred to the Minister under section 22. However, the guidance in section 22 remains instructive when considering whether a project will have significant regional or national benefits. Under section 22(2): *the Minister may consider –*

S22(2)(a) whether the project—

> *(ii) will deliver new regionally or nationally significant infrastructure or enable the continued functioning of existing regionally or nationally significant infrastructure:*
>
> *(iii) will increase the supply of housing, address housing needs, or contribute to a well-functioning urban environment (within the meaning of policy 1 of the National Policy Statement on Urban Development 2020):*
>
> *(iv) will deliver significant economic benefits:*

[8] Hon Chris Bishop (2024). Speech to Apōpō Congress: Addressing New Zealand's infrastructure asset management challenge. Beehive.govt.nz. Available at: https://www.beehive.govt.nz/speech/speech-apōpō-congress-addressing-new-zealand's-infrastructure-asset-management-challenge

(v) will support primary industries, including aquaculture:

(vi) will support development of natural resources, including minerals and petroleum:

The application also involves a land exchange under Schedule 6 of the Act. Clause 26 requires the Director-General of Conservation to report on cl26(1):

(a) the conservation values of the land concerned, including how threatened or abundant they are, and a comparative assessment of the values that relate to each area of land concerned,

(b) the financial implications for the Crown of the land exchange, and

(c) whether the consequences of the land exchange would be practical to manage on an ongoing basis.

Clause 29 sets out the matters the panel must consider when assessing a land exchange.

Under cl 29(1)(a)(i), the panel must take into account *the purpose of this Act*, and must give that factor the greatest weight. Further, under cl 29(2), the panel must not grant the approval unless it is satisfied that the land exchange … *will enhance the conservation values of land managed by the Department of Conservation*.

Section 81(4) instructs the panel to "*…consider the extent of the project's regional or national benefits.*", when assessing a land exchange under the Act. Therefore, in order to assist the panel in reaching a decision, it is important to understand the economic impacts and economic benefits that flow from the proposed land exchange.

In addition, section 85 of the Act requires the panel to decline a land exchange if clause 29(2) is not satisfied. The panel may also decline if it considers that:

s85(2)(b)) those adverse impacts are sufficiently significant to be out of proportion to the project's regional or national benefits that the panel has considered under section 81(4), even after taking into account—

(i) any conditions that the panel may set in relation to those adverse impacts; and

(ii) any conditions or modifications that the applicant may agree to or propose to avoid, remedy, mitigate, offset, or compensate for those adverse impacts.

The land exchange approval is necessary for Winstone Aggregates to develop the overburden disposal area (OBDA), but it is not sufficient in itself to generate the full range of economic benefits that will arise as Belmont quarry takes advantage of the land exchange, redevelops its operation and invests in plant and machinery to extract the aggregate resource removal of the overburden enables. Further approvals will be required as part of the substantive Fast-track process to consent those aspects. The purpose of this report is to assess the economic benefits and costs of granting the land exchange approval, recognising its role as a prerequisite to the continued operation of Belmont Quarry.

1.6 Purpose of this Report

This report has been prepared by Market Economics to provide an economic assessment of the proposed land exchange at Belmont Quarry. It forms part of Winstone Aggregates' application under the Fast-track Approvals Act 2024, which is designed to expedite approvals for nationally significant projects while considering relevant environmental, social, and economic effects. The report identifies and evaluates the economic benefits, costs, and net outcomes of the proposed land exchange, considering both the direct impacts on quarry operations and the wider Wellington regional economy. It provides evidence to support the application process,

demonstrating the role of Belmont Quarry in sustaining regional infrastructure, housing supply, and economic activity, and assessing the consequences of not proceeding with the proposed expansion.

1.7 Information sources

A number of sources were consulted as part of preparing this economic assessment, including:

- Information provided by Winstone Aggregates.
- Market Economics Limited in-house regional economic dataset.
- Wellington Regional Council information and data.
- Recent consenting information for Horokiwi, Willowbank and Kiwipoint.
- Central government guidance and datasets:
    - Ministry of Transport
    - New Zealand Transport Agency
    - Ministry for the Environment
    - StatsNZ
- Industry sources and information releases.

1.8 Report Structure

The balance of this brief report is structured as follows:

- Section 2 describes the assessment approach adopted for this project.
- Section 3 outlines the Wellingtons aggregate market and growth - of both production and demand for aggregate.
- Section 4 outlines Belmont Quarry's current and future production and role within Wellington
- Section 5 focuses on economic impacts and the economic benefits that flow from those.
- Section 6 outlines the key conclusions to this paper.

2 Assessment Approach

The assessment of economic effects for the Belmont Quarry land exchange was undertaken using a structured approach consistent with best practice impact evaluation.

The first step was to define the counterfactual. Without the land exchange approval, Belmont Quarry would reach the end of its life within a short timeframe, resulting in closure of the operation. This would mean the loss of existing quarry business activity and employment, and a need to source aggregate from less efficient locations, potentially from outside the Wellington region.

The next step was to identify the direct effects of closure, including the loss of ongoing trade and employment, as well as the contribution currently made to regional GDP – the economic impacts of the closure. The analysis also considered the investment effects associated with the expansion scenario enabled by the land exchange, including costs of obtaining necessary approvals and capital investment in plant, machinery, and site upgrades.

Future production volumes were then projected under the expansion scenario, assessing how much aggregate could be supplied and what types of economic activity that production would support. This provides the basis for evaluating the role of Belmont Quarry in enabling development across housing, commercial and industrial construction, roading, and infrastructure projects within the Wellington region.

The assessment also considered wider economic effects from maintaining Belmont as a local source of supply. These include avoided transport costs from not having to import aggregate from outside the region, greater supply certainty for infrastructure and housing projects, and reduced risk of construction cost escalation and project delays.

From the economic impacts associated with the closure of Belmont Quarry, economic benefits have been estimated arising from the land exchange. In effect, these are the reverse of the disbenefits associated with Belmont's closure.

It is important to note that the quarry and aggregate industry faces high barriers to entry, meaning that the loss of Belmont Quarry could not easily be replaced by a new operation. The Commerce Commission[9] has identified the following key barriers:

- the need for an appropriate rock resource of sufficient quality;
- the availability of suitable land adjacent to that resource;
- the significant capital investment required to establish and operate a quarry, particularly a hard rock quarry; and,
- the requirement to secure resource consents, which can be complex and time-consuming.

These barriers restrict the ability of new entrants to establish quarries quickly, reinforcing the importance of retaining existing operations such as Belmont. In Wellington in particular it is difficult to find sites for new greenfield quarries in close proximity to populations where aggregate is needed, many of these areas have been sterilised by urban development.

[9]Commerce Commission decision: Fletcher-Building-Holdings-NZ-Ltd-Higgins-Group-Holdings-Ltd-and-Horokiwi-Quarries-Ltd clearance-application-16-February-2016

Finally, potential economic costs of the land exchange were considered, including non-market impacts such as possible changes to the reserve configuration or amenity values for recreational users. These were weighed against the broader benefits in order to assess the net economic effect of the proposal.

3 Aggregate market and outlook

Economic growth is in part related to urban development and expansion, meaning that the ability to cater for increases in population and economic outputs, is heavily reliant on (and directly linked to) the sustained availability of aggregate.

Sustaining GDP growth and economic performance aims, (as well as catering for sustained housing growth) requires continued secure access to locally available, high-quality aggregate in sufficient quantities. Ensuring local sources of sustainably mined aggregate ensures it can be provided to market at a cost-effective price.

Aggregate supply has a central role in infrastructure delivery. Infrastructure investment in response to housing growth, high impact weather events, and new roading and other transport projects to meet economic growth requirements, need secure access to quality and appropriately located aggregate. There is no alternative to aggregate, including high quality aggregates used in concrete production.

Aggregate is used in construction as part of concrete applications, as well as for roading and drainage projects. It is also used across residential, community and business infrastructure development. Aggregate can be divided into a range of product categories, based on size and grade. Different aggregate products are used in different areas of the economy. For example, transport infrastructure uses base course and chip seal for roads as well as aggregate in concrete for bridges, culverts and barriers.

Aggregate supply in Wellington does not currently meet the region's total aggregate needs. Despite having a large aggregate resource and quarries within good proximity to urban areas, aggregate is imported from outside of the region in order to meet demand. Aggregate is a high volume, low value commodity – importing it and transporting it add considerable cost to end users.

3.1 Aggregate Production in Wellington

New Zealand Petroleum and Minerals (NZP&M), a division within MBIE, oversees the administration of the Crown Minerals Act. This division compiles and releases data on a range of aggregate production classifications. The NZP&M dataset spans from 1993 to 2023[10] and is categorised by usage and region, enabling a spatial overview of relevant mineral commodities. Aggregate is recorded as:

a. rock for reclamation and protection;
b. rock, sand and gravel for building;
c. rock, sand and gravel for roading; and
d. sand for industry.

These categories are established at a 'purpose' level and are not reported in a more finely disaggregated manner. Aggregate products produced at Belmont Quarry align with the above classification. However, NZP&M's production figures are sourced from a voluntary survey which means that the accuracy of the results depends on the responses received by NZP&M. Market Economics have adjusted the NZP&M survey results to better reflect actual production volumes. This is based on our own national database of quarry production,

[10] Annual minerals industry statistics and survey - New Zealand Petroleum and Minerals

industry information (where available) and a factoring up process to align reported coverage with industry totals.

The adjusted production estimates are shown in Table 3.1. The adjusted production volumes show Wellington region's aggregate production of 2.3m tonnes in 2023. Manawatu/Whanganui Region is included in the table as it is most likely that any shortfall in aggregate within Wellington Region is supplemented by surplus production in Manawatu/Whanganui Region. This is because the production rate of aggregate in Manawatu Whanganui is 2 – 3 times the rate of Wellington on a per capita basis (10 – 15 tonnes per capita compared with 3 – 5 tonnes per capita in Wellington Region). The demand for this aggregate is not arising from the Manawatu Whanganui population (which is less than half that of Wellington Region), the aggregate is being trucked south to meet the shortfall in Wellington

Table 3.1: Adjusted New Zealand Aggregate Production (million tonnes) 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Wellington	2.1	1.8	2.1	1.4	2.0	3.8	2.0	2.6	1.6	2.3
Manawatu/Wanganui	3.3	1.7	1.2	2.0	2.4	2.3	2.1	0.0	0.2	2.0
Total New Zealand	41.1	39.7	33.4	40.5	44.5	42.2	36.5	31.3	36.7	44.2

Over the last five years, 2019-2023, the adjusted average annual aggregate production in Wellington was 2.3m tonnes, while in Manawatu/Whanganui it was 1.3m tonnes. The future supply of aggregate in Wellington is unlikely to keep pace with growth in demand as population growth is expected to increase demand by 230,000 tonnes annually by 2028 and by almost 500,000 tonnes by 2043.

Information on future production from existing quarries based on either resource consents or reported future production volumes is scarce. This is because for most quarries, there is no need to provide production information. It is usually not required as part of existing consent conditions, especially for long established quarries. Nor are future consent conditions (usually) limited by the volume of rock that might be extracted from the quarry. The key issues are usually truck movements, operational hours, dust and noise.

The information that is available is reported in the bullet points below. This means that there is a degree of uncertainty about the supply picture in Wellington. However, the most up to date information has been used to generate estimates of current and future production.

There are currently 4 largish quarries that produce most of the aggregate for Wellington, they are;

- Belmont Quarry – Winstone's expected to produce over 730,000 tonnes in the current financial year
- Horokiwi Quarry – Horokiwi Quarries Limited currently producing around 650,000 tonnes annually. Their current consent expired in January 2025 and they have applied for a 35 years consent to continue quarrying operations on their 44ha site.
- Kiwi Point – provides approximately 300,000 tonnes annually
- Willowbank – Fulton Hogan and Willowbank Trustee Ltd, gained a 35 year consent to operate this Porirua City quarry in January 2023. They are currently producing around 600,000 tonnes annually.

Collectively they account for the vast majority of Wellington aggregate production.

In general, aggregate production trends in Wellington region follow the production profile observed across New Zealand as a whole. That is, aggregate production follows economic cycles as it is a key component to housing, commercial and industrial buildings, shopping centres, roading, and other infrastructure (rail lines, pipes, drainage, walls and wharfs).

Wellinton's aggregate production is low relative to the size of the population. The aggregate sector in Wellington produces around half the rate seen across New Zealand, on a per capita basis. This indicates that aggregate is being sourced from outside the region to help meet regional needs. Manawatu Whanganui is the logical source for this.

3.2 Future Aggregate Demand

Significant new infrastructure investments along with housing growth and the recovery of the Wellington economy will determine future demand for aggregate. In addition, improvements in resilience to climate change and other natural hazards (such as earthquakes) will see investment in things like seawalls, motorway strengthening and changes to building regulations to improve earthquake resilience. All of these changes are likely to require more rather than less aggregate.

To understand the potential future role that an extension of the Belmont Quarry will play, it is important to understand future aggregate demand. Given Wellington's unique geography, it is important to focus on the urban areas of Wellington – rather than the region as a whole. Aggregate from the 4 identified large quarries will be directed to these urban market (Porirua, Upper Hutt, Lower Hutt and Wellington City itself)

Market Economics have developed an estimate of future aggregate demand based on population projections (as a proxy for overall economic growth) and an average national level demand for aggregate on a per capita basis. Note that these estimates do not account for where aggregate is sourced – rather they are raw demand estimates. Other influences on aggregate demand such as infrastructure investment catchup will be on top of these projections. Therefore, they can safely be considered a minimum level of demand.[11]

Figure 3.1: Wellington Medium Population Projections 2024 - 2043

Area	*2024*	2028	2033	2038	2043
Wellington Region		570,200	584,200	595,800	605,300
Porirua City	*61800*	65,200	67,100	68,800	70,300
Upper Hutt City	*47500*	50,100	51,400	52,400	53,200
Hutt City	*113400*	117,000	119,100	120,700	121,800
Wellington City	*209900*	227,500	233,900	239,600	244,500

Source: Stats NZ.

[11] Assuming a medium population projection eventuates.

3.2.1 Aggregate Demand Estimates

Demand for aggregate in "Urban" Wellington is expected to increase from 3.7m tonnes in 2024 to over 4.16m tonnes by 2043 – annual production must increase by over 25,500 tonnes each year over 19 years (Figure 3.2).

By 2043, the total demand of 4.16m is almost 2 million tonnes more than is currently being produced by the 4 large Wellington "Urban" quarries (2.3m tonnes). Given the long lead times to identify and consent new quarries, it is vital that existing quarries are enabled to continue to operate and to increase their production to help meet some of this potential shortfall.

Figure 3.2: Wellinton Aggregate Demand Projections (medium) 2024 – 2043 (tonnes)

Area	*2024*	2028	2033	2038	2043
Wellington Region	*0*	4,846,700	4,965,700	5,064,300	5,145,050
Porirua City	*525300*	554,200	570,350	584,800	597,550
Upper Hutt City	*403750*	425,850	436,900	445,400	452,200
Hutt City	*963900*	994,500	1,012,350	1,025,950	1,035,300
Wellington City	*1784150*	1,933,750	1,988,150	2,036,600	2,078,250

Source: M.E Aggregate Demand Model

4 Belmont Quarry Application

4.1 Current and future production

It is in this environment of aggregate shortfall and market demand growth that Belmont Quarry, operated by Winstone Aggregates is seeking land swap as the first step necessary to enable an effective extension of the production life of their quarry.

Currently the Belmont Quarry produces around 0.7m tonnes of aggregate annually making up approximately 41% of Wellington's total aggregate production. However, the quarry has less than two years of exposed resource remaining before another overburden strip is required and has exhausted opportunities to dispose of overburden on the Quarry site. Off-site disposal is not an economic option, as it would involve transporting large volumes of low-value material significant distances, adding substantial haulage costs, fuel use, and vehicle movements to local roads. Given the sheer scale of overburden involved in accessing future resource, the costs of trucking it off-site would quickly outweigh the value of the aggregate recovered. In effect, without an adjacent overburden disposal area, the continuation of quarrying is not financially viable.

Winstone Aggregates wish to undertake a land exchange to accommodate the overburden strip which will allow for the extension of access to the existing aggregate resource of the site. This will allow the quarry to maintain its current production level of approximately 0.73m tonnes annually and gradually increasing production over the course of 40 years.

Belmont Quarry is well placed relative to market demand within the Wellington Region. Situated in Hutt City, it is strategically located to supply the region's main urban growth areas, including Hutt City, Upper Hutt, Porirua City, and the Kapiti Coast. These areas are expected to see substantial residential intensification and greenfield development over the next three decades, with around 99,000 new dwellings planned under the Wellington Future Development Strategy[12], alongside additional intensification plans in Wellington City, Hutt City and Upper Hutt City. In addition to housing, major planned and ongoing investments in retail, commercial, and employment hubs—such as the Eastern Porirua regeneration, the redevelopment of central Lower Hutt, and new mixed-use precincts on the Kapiti Coast—will create sustained demand for aggregate. Significant transport projects, including, the Melling Interchange, and upgrades to SH1 and SH58, alongside large-scale three waters infrastructure works, a number of fast track consented projects (Victoria Tunnel and potential future projects) and ongoing earthquake strengthening of public and private buildings will further drive strong local demand for aggregate for at least the next 30 years.

Table 4.1 shows the projected future aggregate demand of the Wellington region and the current level of local aggregate supply with and without Belmont Quarry. The additional production able to be extracted from the Belmont Quarry over the next 40 years is necessary to maintain Wellington's aggregate supply, minimising the current deficit (expected to increase from around 1.5m tonnes to 2.6m in 2043).

Assuming that the project receives all necessary approvals including land exchange approval, Winstone Aggregates will be able to maintain production above the 0.7 m they are currently delivering to the Wellington market. The aggregate production over the lifetime of the quarry represents a significant contribution to Wellington's construction sector. While the market deficit will still exist, the rock it displaces (from quarries

[12] Wellington Regional Leadership Committee — Future Development Strategy

outside of Wellington) will not generate the significant volumes of traffic and greenhouse gas emissions needed currently to move it to Wellington.

The effects of these changes are significant and will be felt widely through the Wellington economy. These effects are facilitated by the Land exchange in the first instance.

Table 4.1: Belmont Quarry Production and Wellington Aggregate Output Gap (million tonnes)

Scenario	2024	2028	2033	2038	2043
Belmont Production	0.7	0.7	0.8	0.8	0.8
Urban Wellington Market Position With Belmont Quarry					
Medium Demand	- 1.5	- 1.6	- 1.7	- 1.8	- 1.9
Urban Wellington Market Position Without Belmont Quarry					
Medium Demand	- 1.5	- 2.4	- 2.5	- 2.6	- 2.6

5 Economic Impacts and Benefits

The economic impacts of the proposed land exchange centre on the continued operation of Belmont Quarry as a business within the Wellington economy.

5.1 Multi Regional input-output Approach

The general approach is described in Section 2 above. In terms of estimating estimates of economic impacts and the economic benefits and costs that flow from the land exchange, I have utilised Market Economics Multi Regional Input Output model (MRIO). The MRIO separates out Wellington Region from the Rest of the North Island and the Rest of New Zealand to produce a three region model. This allows the estimation of cross border flows and therefore more accurate estimation of effects that impact the local economy and the rest of the country.

The MRIO contains a 109-sector model of the Wellington economy and captures the interactions between sectors as businesses within them purchase goods and services from each other and make sales to each other as well as sectors of final demand (such as households, Central Government on behalf of households or to export market both inter regionally and internationally). The model also captures payments made to workers in the form of wages and salaries, taxes paid to local and central government and profits paid to owners. International exports and imports are represented in the model as is depreciation and any subsidies paid. The model represents the complete Wellington and New Zealand economies at a single point in time (2020 in this case).

By transforming the model using matrix algebra, it is possible to trace the effects of change. This means that events such as an expansion in a particular sector that is a result from increased final demands can be traced through the economy to provide an understanding of how the entire economy must adapt.

Summing up all the changes as a result of increases in demand (or the opposite), shows how the entire economy changes in terms of changes in output, changes in contributions to GDP, Household Incomes and employment.

5.1.1 Assumptions

The MRIO makes a number of assumptions that impact interpretation. The most important ones include:

- The model represents a fixed level of technology. Given it is a static representation of the economy as at 2020, it makes no allowance for significant technology change. This means that in the short to medium term the results will be accurate as technology change is generally slow. However, over the long term, today's technological mix is at best a guide, and the results should be seen as a guide to actual levels of change.
- The model assumes constant returns. This means that a certain level of demand growth results in an exact level of output change. Economies of scale are not captured, nor are changes or substitutions of products or inputs.
- Demand growth can be met by increased output and that labour is available to carry out the additional work required. This assumption does not have a significant impact on my findings, as the assessment looks at the effect of removing a business from the

Wellington economy (Belmont Quarry) and the size and shape of the 'hole' that leaves (in terms of contribution to GDP, household incomes and government revenue).

- Prices do not adjust to reflect the effects of change in demand and supply. This is a significant assumption, as in reality as supply levels drop (should Belmont close), aggregate prices will rise and new sources of supply that might not have been commercially viable, may come online to meet some of the need. While it is beyond the scope of this assessment to quantify or even identify where they might be, the reality is that they are less efficient than Belmont and will lead to increased costs.

5.1.2 Economic measures

The MRIO generates estimates of; **Gross Output** (the broadest measure of economic activity that captures the full value of all goods and services sold in an economy regardless of where they come from); **Value Added** (this is synonymous with GDP and it captures just the value that is added to goods and services from within the region – it removes the value of imported goods); **Household Incomes** (this is a measure of the amount of Value Added that is captured by households who either have an ownership in the business or are paid salaries and wages) and **Employment** (this is a measure of employment equivalent to a full time worker, working for 1 year).

- **Direct impacts** on Gross output, Value Added, Household Incomes and employment. These are the effects of Belmont Quarry as a business itself.
- **Indirect impacts**: These are the effects associated with Belmont Quarry buying goods and services from other businesses in Wellington and elsewhere in order to generate the level of aggregate output.
- **Induced impacts**: workers from Belmont Quarry and its suppliers spend money on retail goods and services, pay mortgages, make savings and spend money abroad. The induced effect captures these rounds of impact on the economy.

It is important to view the effect of the quarry in total rather than simply focus on the direct effects of its activity.

5.2 Economic Impacts

The land exchange itself generates a number of economic effects that are tied to the opportunity for future production from the Belmont Quarry as opposed to sourcing aggregate from less efficient locations (potentially from outside the region). However, most immediately, without the land exchange, the existing quarry has capacity to continue operations for a further 2 years. Therefore, the existing business operation and existing role it plays in the Wellington economy is at risk of closure.

While granting consent for the land exchange is not sufficient to generate the effects associated with the quarry's continued operation, without the consent these effects and the benefits that come from them will not occur.

In summary, the effects of not approving the land exchange are;

- Closure of the existing business: $17m - $20m per annum in trade and between 25 and 35 direct jobs and a total workforce of 53 full time workers (across a range of jobs and including contractors).

- This has a direct effect and impact on the Wellington economy of between $8m and $10m per annum in direct contribution to GDP. Once the flow on effects that the quarry's operation are included, this increases to between $15m and $20m per annum[13] – similar in contribution to GDP terms as the businesses total turnover.
- Investment by Winstone's in developing plant and machinery and to upgrade the site is estimated to be $30m over 3-5 years following approximately $5m to obtain all approvals for the proposed expansion.
- This has a total one off economic impact in terms of contribution to GDP of $43m in the Wellington economy.
- The Quarry has future production volumes of between 700,000 tonnes and 850,000 tonnes annually over thirty years, supporting and facilitating growth within the Wellington economy. Housing, infrastructure, commercial buildings, industrial developments as well as new roading and maintenance will rely on this resource.
- The value of this aggregate is between $22m and $25m annually.
- Wellington is currently operating in an aggregate deficit position, meaning that it most likely imports aggregate to meet at least a portion of needs from the next closest region (Manawatu/Whanganui). Aggregate is very expensive to transport in proportion to its value as a commodity. This means it quickly becomes uneconomic to move it over large distances. Increased cost of aggregate, puts significant price pressure on Wellingtons construction sector and increases the costs of housing, roading and other key infrastructure.
- Avoiding these costs represents a significant economic benefit, if the land exchange is granted.

5.3 Economic Benefits

In general, economic benefits are a subset of the economic impacts as estimated via the assessment process. This is because economic impacts capture the overall effects (positive and negative) of the land exchange. Economic impact has a broad scope as it includes all measurable changes in economic activity. It is a measure of change. Economic benefits capture only the positive aspects of that change. They have a narrower focus than impacts and cover such aspects as; increases in household incomes (this reflects the money workers take home as wages and salaries in exchange for their labour, plus a portion of operating surplus business owners make as investor returns on capital), increases in tax revenue for central government, improvements in long term infrastructure and improvements in services or lower prices for goods.

In the context of the land exchange and the economic benefits that flow, I have estimated the following;

- Increases in Household Incomes – Direct changes in Household incomes are $3m annually. Once the flow on effects of the quarry are included, overall Wellington Household incomes increase by $7.1m annually

[13] Depending on whether only the indirect effects are included, or the indirect and induced effects are counted.

- Contributions to tax revenues for central government – equated to approximately $3m annually. This is (by necessity) an estimate. It is based on applying the average company tax take to the components of value added that the presence of the quarry stimulates within the Wellington economy. Value added (synonymous with GDP) has had household incomes removed and the residual is treated as Wellington businesses Operating surplus. While the statutory company tax rate is 28%, a more realistic estimate has been applied. I have taken total corporate income tax paid (as reported in the National Accounts) of $18.7 billion[14] divided by Total corporate operating surplus of $108 billion[15] This gives an average company take rate of 17.3%.
- Lower cost aggregate – This assumes that the aggregate replacement travels further to meet client needs than if sourced from Belmont. This is, by necessity, an estimate as the clients for Belmont Quarry change. The nearest alternative is Horokiwi Quarry and assuming they have capacity to cater for all of Belmonts current production (estimated at 730,000 tonnes for the 2026 year), and the distance between the quarries is 11.5km, then half the customers (on average) have to source aggregate that travels an additional 5.75km, and for the balance the aggregate travels an additional 11.5km. This is expected to add transportation costs of at least $2.4m annually. This represents the minimum amount Belmont Quarry reduces aggregate costs (overall) within Wellington.
- Employment – currently Belmont Quarry and associated businesses has around 53 FTEs and a further 25 – 30 contractors (approximately). The flow on effects of the quarry as a business within Wellington sees total employment sustained of 180 FTE's each year. While employment is considered a cost in a formal Cost Benefit assessment, which aligns with an accounting view of how a business operates (where wages and salaries are treated as a cost of production), there are significant social and wider wellbeing benefits associated with sustained employment that mean it should be considered on the benefit side of the ledger.

Over a 35 year time horizon (assuming that is the length of consent), the benefits associated with the continued operation of Belmont Quarry amount to;

- Household Incomes $248.6m
- Tax Revenues $105m
- Aggregate cost saving $84.3m
- **Total Benefits of Belmont Quarry as a business** **$438m**

This works out to more than $12.5m every year. In NPV terms (at 2% discount rate as per Treasury guidance) the total benefits of Belmont Quarry as a business are **$313m**.

Future investment plans

In addition to the benefits of Belmont Quarry continuing its current operation into the future, are the benefits associated with Belmont Quarry's investment plans. These will not go ahead without the land exchange, so represent an opportunity cost to not granting the exchange. I have estimated the benefits by

[14] IRD Annual Report, 2024.

[15] Statistics New Zealand, Annual Enterprise Survey 2024 Financial Year (provisional), published 27 June 2025.

first assessing the economic impact of a $30m investment in both plant and machinery and site reconfiguration along with an estimated $5m investment in the consenting process. The $30m is expected to be spent over a 3 to 5 year period, (2026- 2031) so the estimates below are totals and could be divided by the number of years over which the spending occurs to provide an annual total. I have assumed that the split in costing is as follows

- Plant and Machinery $15m
- Site Reconfiguration $15m
- Consenting Process $5m

Benefits associated with the economic impact of these activities area as follows;

- Household Incomes Direct change in Household incomes as a result of the investment is estimated to be $9.5m. Once the flow on effects are included as those businesses involved in the expansion increase purchases from their suppliers, this grows to $20.4m over the 3-5 years (or between $4.1m and $6.8m annually).
- Tax Revenues Business taxes amount to $3.3m to central government
- Employment Direct employment is estimated to be 231 FTEs to carry out the work. Once flow on effects are included this rises to 557 FTE's or the employment equivalent to 557 full time workers, working for a year.

In summary, these investment benefits will only occur if the land exchange is granted and the overburden disposal area (OBDA) consents are secured. Monetizable benefits amount to almost $24m if the site reconfiguration and investment in plant and machinery[16] occurs. Note that these effects are a total over the 3-5 years of reconfiguring the site, whereas the benefits associated with Belmont as a business are annual impacts and will occur over the life of the consent (35 years).

5.4 Economic Costs

There are likely to be a few economic costs associated with the land exchange. As I understand it there is the potential for some fragmentation of the park and potentially some loss of amenity for users of the land that would now become part of the Belmont Quarry overburden disposal area (should the land exchange proceed). These effects will be (at least) partially offset by the improvements in utility and amenity offered by the land that is exchanged and now forms part of the park.

As I understand it, the conservation values associated with the land to be exchanged and the land that would now be utilised by the quarry are similar[17]. Therefore, any reduction in these values is expected to be very small.

There may be financial implications associated with the exchange. While the land exchange is to be used as reserve, there may be a difference in the value of the land being exchanged. This may have an impact

[16] This assumes that the machinery is built within the Wellington economy. If machinery is imported then the benefits associated with the $15m are distributed differently as Winstone's are likely to purchase machinery via a machinery wholesale business, rather than from a local manufacturer. In net terms the effects are slightly lower total Gross Output (1.3%) but slightly higher Household Incomes (9%).

[17] A comparative values assessment is contained within the Land Exchange Report that accompanies this application.

on the amount paid in rates to Wellington City by the quarry. However, the difference is very small[18], so has not been included. In addition, there are some costs associated with the rehabilitation of the land being exchanged to become reserve. The costs are made up of the following;

- Weed control – blackberry, pampas, exotic vines and others
- Pest control – Brushtail possum, goats and rats
- Revegetation – 1.2ha of revegetation plus wetland replanting of 200 Swamp Maire.

In economic cost benefit assessments, it is important that as many of the identifiable costs are monetised and incorporated. In the case of costs that are not able to be monetised, it is important to ensure they are recorded on the cost side of the ledger. It is also important to understand the likely scale or magnitude of these costs to ensure they are given the correct weight.

In this instance, it is highly likely that the economic costs described above are insignificant when compared with the ongoing economic benefits of the land exchange. This is because they are mostly impacts at the margin and are often offset by benefits (at least partially).

Economic benefits significantly outweigh any economic costs associated with the land exchange.

5.5 Net Economic Benefits

With insignificant economic costs, the net economic benefit of allowing the land exchange to occur is estimated to be $313m in NPV terms over 35 years, or the consent lifetime of the Belmont quarry. Those benefits arise through the land exchange facilitating the continuation of the existing Belmont Quarry as a business and enabling a pathway to allow a newly consented OBDA on that land. In addition, expansion plans that are foregone without the land exchange add a further $20.4m in household income to Wellington.

These estimates of economic benefit assume that Horokiwi, (and other quarries within Wellington such as Willowbank or Kiwi Point) could respond to cover the volume lost from Belmont. That is, additional rock could be sourced from within the most closely located quarries to Belmont to cover the shortfall. This is unlikely to be the case. Currently Wellington Region is a net importer of aggregate. Therefore, demand growth and current production levels at the existing quarries mean that in the absence of Belmont, Wellington will need to increase the amount of rock it imports significantly. Aggregate is low value and high volume and weight, meaning that at approximately 30km travel distance that cost of the aggregate will have doubled. This would lead to very significant cost increases for Wellington construction sector, should Belmont Quarry close. My estimates of benefit outlined above are therefore conservative as they rely on Wellington sourced rock to meet the shortfall, and the true values will be higher.

Given the significant costs associated with developing a new quarry within Wellington to cover the loss of Belmont production (750,000 tonnes annually), or to transport the aggregate from further afield (Kapiti Coast or the Whanganui Region), the most economically efficient approach is to grant consent for the proposed land exchange to allow the continued operation of Belmont Quarry.

[18] Difference in valuation between the land exchange blocks is $112,000.

6 Conclusions

The proposed land exchange between Winstone Aggregates and the Department of Conservation is essential to securing the long-term viability of Belmont Quarry. Without approval, the quarry is expected to close within two years, resulting in the loss of a business that contributes between $17 million and $20 million in aggregate value annually, supports 25–35 direct jobs, 37 workers over associated businesses and up to 30 contractors. Belmont Quarry delivers $8–$10 million p.a. in GDP directly (rising to $16–$20 million p.a. once wider flow-on effects are considered). Closure would also remove a critical supply of locally sourced aggregate, put greater pressure on the remaining more central Wellington quarries; Kiwipoint, Horokiwi and Willowbank, exhausting consented supply of those quarries sooner and forcing reliance on more distant quarries outside the region and significantly increasing transport costs.

By contrast, approval of the land exchange provides the opportunity for continued and expanded operations at Belmont. The quarry is capable of supplying between 700,000 and 900,000 tonnes of aggregate per year for the next three decades. This volume underpins Wellington's capacity to deliver housing, roading, commercial and industrial developments, and essential infrastructure maintenance. Avoided transport costs alone are conservatively estimated at $2.4 million annually. In total, the benefits of Belmont Quarry as an ongoing business are valued at more than $12.5 million per year, or $438 million over 35 years, equating to $313 million in present value terms.

The land exchange also enables Winstone's planned programme of investment in plant, machinery, and site reconfiguration, with a capital value of $30 million and a further $5 million in consenting activities. These investments are expected to generate $20.4 million in household incomes, $3.3 million in additional tax revenue, and the equivalent of 557 FTEs in equivalent employment over the investment period. These benefits represent an opportunity cost that would be lost if the land exchange is not granted.

Potential costs of the land exchange are insignificant by comparison. They may include changes to the reserve configuration, minor amenity impacts for some users, differences in land value, and rehabilitation costs (including at the Dry Creek Cleanfill site). However, the conservation values of the lands being exchanged are broadly similar, meaning any loss in this regard is expected to be very small.

The net economic benefit of granting the land exchange is therefore strongly positive. It facilitates the continuation of Belmont Quarry as a cornerstone of the Wellington economy, secures a long-term local supply of aggregate, supports major infrastructure and housing development at lower cost, and avoids the significant expense of importing aggregate from further afield. Given the high barriers to establishing new quarries in Wellington and the scale of demand growth, Belmont Quarry's role cannot easily be substituted.

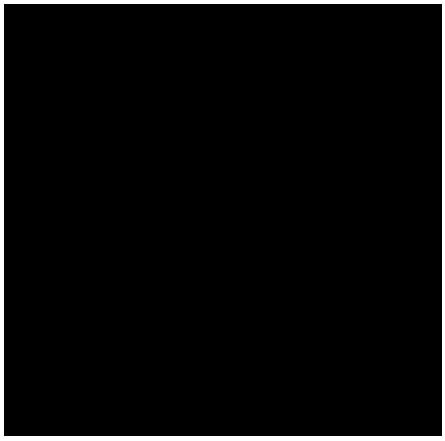
These findings are directly relevant to the statutory considerations under the Fast-track Approvals Act 2024. Under s22(2), the Belmont Quarry project clearly delivers "*significant regional or national benefits*" by enabling the continued functioning of regionally significant infrastructure, supporting housing supply and a well-functioning urban environment, delivering substantial economic benefits, and supporting the development of natural resources. In addition, under Schedule 6, cl 29(1)(a)(i) the panel must give greatest weight to the purpose of the Act, which is to facilitate the delivery of projects with significant benefits.

The economic evidence presented here demonstrates that granting the land exchange is consistent with that purpose. Further, while cl 29(2) requires that the exchange enhance conservation values, this assessment indicates that any reduction in conservation values is negligible, and the overall economic benefits are substantial.

On both economic and statutory grounds, the most efficient and beneficial outcome is to grant consent for the proposed land exchange, thereby securing Belmont Quarry's continued contribution to the Wellington region.

Appendix 1: [redacted]

[redacted]



Director

BA (Geography)

BCom (Economics)

[redacted]

Professional Experience

[redacted] is a founding Director of Market Economics and has over 25 years' experience consulting to a wide range of sectors in both the New Zealand and Australian markets. His experience covers assessment of market structure, size and change for development clients, economic impact assessment for commercial and government clients, as well as strategic policy, social infrastructure and amenity studies carried out for local councils. [redacted] leads 20-30 projects annually and has given expert witness evidence in local government hearings, the Environment Court and provided affidavits as an expert for the High Court.

[redacted] headed the team investigating the Canterbury Earthquake Rebuilds, labour force, materials and temporary housing requirements for CERA, Christchurch City and Canterbury Development Corporation. In recent years he has led studies into; infrastructure projects, Air Quality Impact modelling, as well as sector studies (Marine Industry, Aggregate sector and Construction). [redacted] has specialised in understanding as assessing Council funding mechanisms, such as Development Contributions, rates funding and other approaches. He has presented evidence in hearings and affidavits in the High Court on these matters for developers and local authorities. These studies draw together all aspects of economic inputs. Including population and household growth, economic growth and change to present central and local government with comprehensive assessments on the impact of change on communities and sectors.

[redacted] authored the Guidebook for Growth Councils that needed to carry out non-residential land capacity and demand assessments to meet their obligations under the National Policy Statement on Urban Development Capacity (NPS-UDC). He was Auckland Councils chief economic witness with respect to Business Land in the Unitary Plan Hearings and has led a number of projects around the country investigating business land requirements under the NPS for high growth Councils (Auckland, Future Proof, Queenstown). Recently, [redacted] has led and authored a large number of economic impact and benefit assessments under both the COVID-19 Fast Track Act and more recently, the Fast Track Approvals Act 2024. These have been both for private sector clients looking to take advantage of fast track consenting, and for Councils and the EPA assessing applications before them.

Areas of Expertise

Spatial and Economic Analysis and Modelling | Input-Output Modelling | Urban and Regional Economics | Skills and Labour Force Modelling | Economic Growth Modelling | Geographic Information Systems (GIS) | Supply and Demand Analysis | Sectoral and Specialist Market Analysis | Demand Analysis and Forecasting | Economic Impact Assessment | Policy Analysis and Advice | Infrastructure Funding and Investment | Local Government Funding | Resource Management | Strategic Advice | Peer Review