



Belmont Quarry Development – Part B

Substantive Application
Appendix B.13 – Economic Assessment
Winstone Aggregates

16 August 2026

Belmont Quarry – Winstone Aggregates Assessment of Economic Benefits of granting Resource Consent for OBDA

12th August 2026

m.e
consulting



Belmont Quarry – Assessment of Economic Benefits of Granting Resource Consent for OBDA

Prepared for
Winstone Aggregates Ltd.

Document reference: WAG 003.25 Belmont Quarry Fast Track/Belmont Quarry Substantive Economic Assessment Final v7.docx

Date of this version: 12th August 2026

Report author(s): Greg Akehurst
Tom Harris

www.me.co.nz

Disclaimer: Although every effort has been made to ensure accuracy and reliability of the information contained in this report, neither Market Economics Limited nor any of its employees shall be held liable for the information, opinions and forecasts expressed in this report.



Contents

EXECUTIVE SUMMARY	1
1 INTRODUCTION	8
1.1 WELLINGTON’S SIGNIFICANCE TO NEW ZEALAND	8
1.2 BELMONT QUARRY IN CONTEXT	9
1.3 AGGREGATE RESOURCES IN WELLINGTON	10
1.4 REGIONAL DEMAND PRESSURES	10
1.5 FAST-TRACK APPROVALS ACT 2024	11
1.6 PURPOSE OF THIS REPORT	12
1.7 INFORMATION SOURCES	13
1.8 REPORT STRUCTURE	13
2 ASSESSMENT APPROACH	14
3 AGGREGATE MARKET AND OUTLOOK	16
3.1 AGGREGATE PRODUCTION IN WELLINGTON	16
3.2 FUTURE AGGREGATE DEMAND	18
4 BELMONT QUARRY APPLICATION	20
4.1 CURRENT AND FUTURE PRODUCTION	20
5 ECONOMIC IMPACTS AND BENEFITS	22
5.1 MULTI REGIONAL IO APPROACH	22
5.2 ECONOMIC IMPACTS	23
5.3 ECONOMIC BENEFITS	25
5.4 ECONOMIC COSTS	29
5.5 NET ECONOMIC BENEFITS	29
6 CONCLUSIONS	31

Figures

FIGURE 1.1: QUARRIES WITHIN 30KM OF THE WELLINGTON CBD	10
FIGURE 3.1: WELLINGTON MEDIUM POPULATION PROJECTIONS 2023 - 2048	19
FIGURE 3.2: WELLINGTON AGGREGATE DEMAND PROJECTIONS (MEDIUM) 2024 – 2043 (TONNES)	19



FIGURE 5.1: PRESENT VALUE OF AVOIDED TRANSPORT COSTS BY GRANTING CONSENT OF BELMONT OBDA (\$M)	27
FIGURE 5.2: PRESENT VALUE OF ECONOMIC BENEFITS OVER 35 YEARS OF GRANTING BELMONT QUARRY RESOURCE CONSENT FOR OBDA (\$M), BY CLOSEDOWN SCENARIO AND DISCOUNT RATE	28



Executive Summary

The New Zealand economy is reliant on the availability of natural mineral resources such as aggregate. The extraction and use of aggregate enables urban development and construction, supporting the economy and providing homes, infrastructure and amenities for people. Aggregate is used in a wide range of applications within the Wellington economy, and it is used throughout the urban environment to meet the needs of residential, business, infrastructure and road construction requirements. Given the importance of aggregate for Wellington's economy, Wellington's built future is effectively reliant upon maintaining sustainable sources of aggregate. Winstone Aggregates are seeking resource consent to deposit overburden on a parcel of land exchanged between Belmont Quarry and the Department of Conservation to facilitate the continued extraction of aggregate from a regionally significant aggregate resource, 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 granting the resource consent will achieve those benefits.

Background

Belmont is a large quarry within the Wellington context, over the past 7 years has, on average supplied approximately 41% of aggregate consumed within the Urban Wellington economy therefore is a regionally significant aggregate resource. The quarry has been in operation for approximately 100 years, meaning 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, housing and other infrastructure. The quarry operation over the past year produced around [REDACTED] of aggregate, but on average over the past 7 years has delivered over [REDACTED] 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, Tiaki Wai's ongoing repairs and upgrades and potentially wharf development to cater for new Cook Strait Ferries and other Fast-track projects (including a number of housing developments such as Silverstream Forest Development at up to 2,400 dwellings and Plimmerton Farm in Porirua at 2,400 dwellings, State Highway 1 upgrades within Wellington Central and upgrades at Wellington International Airport).

In normal years, production at Belmont Quarry averages between [REDACTED] 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 OBDA in place) has the potential to remain operational for between [REDACTED] because 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. Each new single house requiring approximately 250 tonnes of aggregate (more for attached dwellings), and roading requiring 20,000 tonnes of aggregate per km of 6 lane motorway, or 4,000 tonnes per 1 lane km of standard roading¹. The Aggregate and Quarry Association of New Zealand estimates that aggregate demand in New Zealand is approximately 8.5 tonnes per person per year.² This is a conservative estimate that doesn't account for under-reporting; however, we have relied on this estimate for the purposes of this study. Based on Wellington's urban population (Porirua, Upper and Lower Hutt and Wellington City), annual demand for aggregate is approximately 3.7 million tonnes (2023). This is expected to grow to 3.8 million tonnes in 2028 and to almost 4.1 million tonnes by 2048 under a medium population projection.³ 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 Urban 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.

Report Purpose

The purpose of this report is to provide an economic assessment and identification of benefits associated with granting a resource consent to allow overburden to be accommodated in a new Overburden Disposal Area (OBDA), in support of a substantive hearing, under the Fast-track Approvals Act 2024. The new OBDA involves swapping approximately 23.86 ha of Belmont Regional Park Land for 34.1 ha of Fletcher Construction and Infrastructure land (Winstone's parent company). Without a new OBDA, Belmont Quarry will have nowhere to dispose of its overburden and extraction will be restricted to already exposed areas, resulting in closure of the Quarry within [REDACTED]. Consenting the new OBDA will secure the quarry's future and provide efficient access to the remaining aggregate resource as it is designed to accommodate approximately 2.7 million cubic metres of overburden.

If granted, the consent for placement of overburden on the new OBDA on the exchange land will extend the active life of the quarry by an estimated 40 years.

Summary of Economic Impacts

Granting the Resource Consent to accommodate the overburden within the confines of the site generates a number of economic benefits that are tied to avoiding costs associated with having to transport aggregate significant distances from alternative quarries outside Wellington Region, as well as facilitating future

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

² *ibid.*

³ Market Economics Aggregate Demand Model, 2025



production from the Belmont Quarry as opposed to sourcing aggregate from less efficient locations (potentially from outside the region). Granting consent for the overburden accommodation is not sufficient to generate the effects associated with the quarry's continued operation. However, without the consent these effects and the benefits that come from them will not occur.

In summary, the effects of not approving the resource consent are:

- Closure of the existing business within [REDACTED] in trade and approximately 25 direct jobs, up to 30 additional contractors working in the quarry and in associated closely related businesses on site (Asphalt and concrete plant workers).
- Direct impact on the Wellington economy of between [REDACTED] in direct contribution to GDP from the closure alone. Once flow on effects are included, this increases to between [REDACTED]
- Investment in plant and machinery and to upgrade the site is estimated to be [REDACTED] to obtain approvals for the proposed expansion. This has a total economic impact in terms of contribution to GDP of between [REDACTED] in the Wellington economy.
- The Quarry has future production volumes currently projected to lie between [REDACTED] and [REDACTED] annually over thirty-five years. Demand in any given year will determine actual production, however Wellington's resilience, growth and infrastructure maintenance will rely on this resource.
- The value of this aggregate is between [REDACTED] and [REDACTED] annually, with a total value of [REDACTED] in nominal terms.
- 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 Wellington's construction sector and increases the costs of housing, roading and other key infrastructure. Without the new OBDA, Belmont Quarry closes within [REDACTED], increasing Wellington's aggregate deficit significantly, and thereby increasing aggregate costs in the region. These costs are avoided if Belmont Quarry is enabled to continue overburden disposal into the future.
- Transporting Belmont aggregate into the Wellington economy from Manawatū will have a total cost on the economy⁵ of between \$1.36bn and \$1.47bn in nominal terms over 35 years, or between \$328m and \$991m in present value terms (PV)⁶.

Avoiding these costs represents a significant economic benefit nationally and to the region, if the resource consent is granted, allowing overburden to be disposed of on the land exchange area.

⁴ Depending on whether only the indirect effects are included, or the indirect and induced effects are counted.

⁵ Includes transportation costs, social costs of accidents and the environmental costs associated with emissions.

⁶ Based on a discount rate of between 2% and 8% and assuming a 5 year or 10 year closedown period.

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 granting of the approvals sought and the economic benefits that flow from the continued efficient operation of the Belmont quarry, I have estimated the following;

- Increases in Household Incomes – up to [REDACTED] annually. Over the 35 year consent horizon this equates to between \$210m and \$227m into Wellington households.
- Contributions to tax revenues for central government – up to approximately [REDACTED] annually (based on an average tax rate of 17.3% of operating surplus).
- Lower cost aggregate – This assumes that the aggregate replacement travels further from within Wellington Region to meet client needs than if sourced from Belmont.
- Employment – currently Belmont Quarry and associated businesses has around 25 FTEs and a further 25 – 30 contractors (approximately), for a total of approximately 53 FTE's. The flow on effects of the quarry as a business within Wellington sees total employment sustained of 180 FTEs each year.

Over a 35-year time horizon (assuming that is the length of the regional consents required), the benefits (in nominal terms) associated with the continued operation of Belmont Quarry amount to;

- Household Incomes \$209m to \$227m
- Tax Revenues \$89m to \$96m
- Aggregate cost saving \$71m to \$77m
- **Total Benefits of Belmont Quarry as a business \$370m to \$401m**

This works out to between \$10.6m and \$11.5m every year. In PV terms the total benefits of Belmont Quarry as a business range between \$94.5m and \$277.2m, depending on the discount applied and the shutdown schedule of the counterfactual.

Discount Rate	Scenario 1: [REDACTED]	Scenario 2: [REDACTED]
<i>Nominal Terms</i>	\$ 400.8	\$ 369.5
2%	\$ 277.2	\$ 249.4
5%	\$ 171.5	\$ 148.0
8%	\$ 114.4	\$ 94.5

Avoided Transport Costs

Wellington Region is in aggregate deficit. Aggregate is already transported in to meet Wellington's needs existing quarries cannot keep up with the supply needed. If Belmont were to close and the foregone aggregate was also to be brought in from outside the region, it will generate significant additional costs to the Wellington economy. Based on sourcing aggregate from 4 representative quarries in the Manawātū Region (the nearest feasible sources), transportation costs over 35 years amount to between \$1.24bn and \$1.33bn in nominal terms. Added to this are social costs of crashes and environmental costs of emissions.



Scenario 1: [REDACTED]				
Discount Rate	Avoided Transport Costs (\$m)	Avoided Social Costs (\$m)	Avoided Environmental Costs	Total Avoided Costs
<i>Nominal Terms</i>	\$ 1,333.2	\$ 31.4	\$ 100.9	\$ 1,465.5
2%	\$ 900.2	\$ 21.6	\$ 69.5	\$ 991.3
5%	\$ 541.8	\$ 13.4	\$ 43.1	\$ 598.2
8%	\$ 354.7	\$ 9.0	\$ 29.0	\$ 392.7
Scenario 2: [REDACTED]				
Discount Rate	Avoided Transport Costs (\$m)	Avoided Social Costs (\$m)	Avoided Environmental Costs	Total Avoided Costs
<i>Nominal Terms</i>	\$ 1,241.2	\$ 29.2	\$ 94.0	\$ 1,364.4
2%	\$ 818.5	\$ 19.6	\$ 63.2	\$ 901.3
5%	\$ 472.8	\$ 11.7	\$ 37.6	\$ 522.1
8%	\$ 296.1	\$ 7.5	\$ 24.2	\$ 327.8

In total, the avoided transport related costs amount to between \$328m and \$991m in present value terms – again depending on both the counterfactual closedown scenario and discount rates applied.

Future investment plans

Future investment plans also generate economic benefits. Winstone plans to spend approximately \$30m in both plant and machinery and site reconfiguration along with an estimated [REDACTED] investment in the consenting process over a [REDACTED]. I have assumed that the split in costing is as follows

- Plant and Machinery [REDACTED]
- Site Reconfiguration [REDACTED]
- Consenting Process [REDACTED]

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

- Household Incomes Direct change in Household incomes of [REDACTED]. Once the flow on effects are included this grows to \$20.4m in total.
- Tax Revenues [REDACTED] to central government
- Employment Direct employment is 231 FTEs. Once flow on effects are included this rises to 557 FTEs.

In summary, these investment benefits will only occur if resource consent is granted and the overburden disposal area (OBDA) is operational. If consent is not granted, the investment does not occur – and will not occur elsewhere in Wellington by Winstone. Monetisable benefits amount to almost [REDACTED] if the site reconfiguration and investment in plant and machinery⁷ occurs.

⁷ 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 are likely to purchase machinery via a machinery wholesale business, rather than



Economic Costs

Economic costs associated with the granting of consent are likely to be minor. There are a few costs associated with the land exchange itself – but these will be small and limited to;

- Some fragmentation of the park.
- Some loss of amenity for users of the land that would no longer be 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 proposed to form part of the conservation estate.
- The conservation values associated with the land to be exchanged and the land that would now be utilised by the quarry are similar.⁸ Winstone's advice is that the net position for the conservation values is improved by the land exchange.
- Minor financial implications associated with any difference in land values and some rehabilitation costs for land exchanged and restored to reserve.

In summary, it is highly likely that the economic costs described above are insignificant when compared with the ongoing economic benefits of the continued operation of the Belmont Quarry.

Net Economic Benefits

- The net economic benefit of granting the approvals as sought, that arise from the ongoing operation of the quarry, is estimated to sit between [REDACTED] and [REDACTED] in PV terms over 35 years, or the regional consenting lifetime of the Belmont quarry.
- In addition, expansion plans that are foregone add a further [REDACTED] in household income to Wellington.
- In addition, avoided transport related costs sit between [REDACTED] and [REDACTED] in PV terms
- Aggregate is low value and high mass, meaning that at approximately 30km travel distance a truck of aggregate will have doubled in cost to the construction sector.
- Finally, there are significant costs to either develop a new quarry within Wellington to cover any loss of Belmont production (of approximately [REDACTED] annually) which cannot be met by the existing Wellington quarries, or to transport the aggregate from further afield (Manawatū Region). Therefore, the most economically efficient approach is to grant consent for the proposed land exchange to allow the continued operation of Belmont Quarry.

from a local manufacturer. In net terms the effects are slightly lower total Gross Output (1.3%) but slightly higher Household Incomes (9%).

⁸ A comparative values assessment is contained within the Land Exchange Report that accompanies this application.



Conclusions

Based on my assessment of the impacts costs and benefits that arise from granting resource consent to facilitate the OBDA accepting overburden from Belmont Quarry, **I find that the economic benefits are significant at the regional and national level and are ongoing.**



1 Introduction

Winstone Aggregates (Winstone), a division of Fletcher Concrete and Infrastructure Limited, is seeking approval under the Fast-track Approvals Act 2024 for resource consent that will allow disposal of overburden on a newly established Overburden Disposal Area (OBDA) on land exchanged with the Crown adjacent to the Belmont Quarry. Currently, the storage at the existing Cottle OBDA would allow for a [REDACTED] of the quarry and no existing consent at Belmont Quarry to facilitate long-term extraction.

Winstone has applied to exchange approximately 23.86 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 land will facilitate the continued operation and expansion of Belmont Quarry, providing space to accommodate overburden removed to expose usable aggregate, providing the appropriate consents are granted to allow the establishment of an OBDA on the exchanged land. These consents will maximise the aggregate resource in terms of its availability to the Wellington market and allow Belmont quarry to continue operation and the investment required to extract this resource, thereby helping to keep infrastructure and housing costs low for the Wellington economy.

Market Economics provided a Report dated 3rd December 2025 which concludes that there are significant regional and national benefits of the land exchange application.⁹ This report addresses the economic effects of the substantive OBDA consent application. The two reports should be read together.

The author confirms that in preparing this report they 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 the author's qualifications is set out in the brief form CV in Appendix 1 to the Market Economics report dated 3 December 2025.

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, water infrastructure 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 Kāpiti Coast. Over the decade from 2012 to 2022, the region grew by around 11%, with growth concentrated in areas such as Kāpiti, which has experienced strong residential development due to lifestyle appeal and improved connectivity through projects like the Transmission Gully Motorway and Kāpiti Expressway.

⁹ M.E. Consulting, Belmont Quarry – Winstone Aggregates Assessment of economic effects of the proposed land exchange for Fast Track Approval. (3 December 2025) PAGE 26.



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 \$56 billion in GDP (2025), making up approximately 13% of national output. Wellington's economy is highly productive, with GDP per employee the highest nationally (around 10% above the national average), due to its concentration in high-value sectors including public administration, professional services, ICT, and scientific research. Between 2015 and 2025, the region's economy grew at an average rate of 2.5% per annum in real terms, slightly below the national growth rate. From 2000 to 2025, the Wellington Region contributed 12% of New Zealand's total GDP growth.

This economic activity drives demand for infrastructure, particularly:

- Urban redevelopment and intensification (e.g., Porirua, Johnsonville, and Kāpiti growth nodes),
- Roothing 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 Manawatū area, 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, on average over the past 7 years, the quarry has produced around [REDACTED] of aggregate, annually. This equated to approximately 40% of Wellington Region production (2023). The quarry has operated continuously for approximately 100 years, supporting a large proportion of Wellington's buildings and infrastructure – including Transmission Gully.

However, over the past year, Belmont produced roughly [REDACTED] of aggregate, (the seven-year average is approximately [REDACTED]). Production is demand-driven, influenced by major projects such as the Transmission Gully motorway (now completed), 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, potential ferry terminal developments and other Fast-track projects, including a number of large housing developments (both with a maximum of 2,400 dwellings requiring around 600,000 tonnes of aggregate each).

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 [REDACTED] without a newly consented

OBDA to accept disposal of overburden because it has exhausted all on-site options for disposal of overburden to access the resource below. In addition, Belmont Quarry has explored all realistic offsite options and for a range of reasons (distance, cost, traffic and safety), none are suitable. This means if the proposed OBDA is declined, the quarry will cease to operate.

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 year¹⁰, translating to 3.7 million tonnes annually in urban Wellington, rising to 3.8 million tonnes by 2028 and nearly 4.1 million

¹⁰<https://contractormag.co.nz/contractor/quarrying-industry-brief/>. Note that this estimate is low as it ignores the undercount from quarries not reporting production. This estimate generates conservative future demand profiles and has been adopted in this instance.



tonnes by 2048¹¹. 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 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.¹² Much of the shortfall reflects underinvestment during the 1980s and 1990s, and subsequent investment 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 Region aggregate market is already in deficit. As outlined below, the region imported a significant amount of aggregate in 2024¹³. The region has been operating in a deficit position for a number of years (assuming Wellington consumes aggregate in line with the national average). Growth and infrastructure investment means the shortfall 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

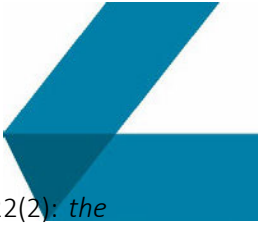
The Fast-track Approvals Act 2024 was enacted to “facilitate the delivery of infrastructure and development projects with significant regional or national benefits” (section 3).

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

¹¹ Under the Statistics New Zealand's medium population projection. High population growth sees demand reaching 4.5m tonnes by 2048

¹² 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>

¹³ Based on national average consumption of 8.5 tonnes per person, the region is short some 1.78m tonnes in 2024.



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:

(v) will support primary industries, including aquaculture:

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

Clause 29 sets out the matters the panel must consider when assessing the resource consent. The substantive application also includes an application for Wildlife Act permits and Archaeological approvals for bulk earthworks.

Section 81(4) instructs the panel to “...consider the extent of the project’s regional or national benefits”, when assessing these approvals 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 activity enabled by granting the approvals sought.

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

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 resource consent, and other approvals sought, are necessary for Winstone Aggregates to utilise the overburden disposal area (OBDA) planned to sit on land to be exchanged with the Department of Conservation, but it is not sufficient in itself to generate the full range of economic benefits that will arise.

Belmont Quarry needs to redevelop its operation and invest in plant and machinery to extract the aggregate resource that removal of the overburden enables.

1.6 Purpose of this Report

This report has been prepared by Market Economics to provide an economic impact and benefit assessment to support Winstone’s substantive application for resource consent, Wildlife Act permit and Archaeological Approval as part of the substantive application to allow disposal of overburden in the OBDA. As noted above, a separate report was submitted to support the land exchange application. It forms one part of the overall substantive assessment to meet the requirements of the Fast-track Approvals Act 2024.



This report identifies and evaluates the economic benefits, costs, and net outcomes that arise through granting consent, considering both the direct impacts on quarry operations and the wider Wellington regional economy. It provides evidence 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.
- Market Economics Limited's report "*Assessment of economic effects of proposed Land Exchange for Fast-track approval*" (3rd December 2025).
- 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
 - Statistics NZ
- 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 of granting consent 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 arising from the granting of approvals required to construct and operate an overburden disposal area adjacent to the existing Belmont Quarry, was undertaken using a structured approach consistent with best practice impact evaluation. It draws heavily from work prepared in support of the Land Exchange application and includes an assessment of avoided transport costs if aggregate has to be sourced from outside the region.

The first step is to define the counterfactual. Without the approvals, Belmont Quarry would reach the end of its life within a short timeframe as the existing overburden disposal area can take little additional material, resulting in quarry shutting down over a [REDACTED], with diminishing annual aggregate production volumes. This potential closure of the quarry operation, 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 counterfactual is therefore to source aggregate from outside of Wellington Region in order to meet Wellington Region needs. It is not the case that surrounding quarries are able to meet the shortfall if Belmont were to cease operation, as Wellington is already in aggregate deficit. In other words, at the margin, the region imports aggregate from surrounding regions to meet needs. Without Belmont, an additional 730,000 tonnes (or more) of aggregate annually would need to be imported. This has significant additional cost implications for the regional economy as well as additional environmental and social costs associated with the additional distance and number of truck movements required.

The next step in the assessment was to identify the direct effects of closure, including the loss of ongoing trade and employment associated with the Quarry, as well as the contribution currently made to regional GDP. The analysis also considered the investment effects associated with the expansion scenario enabled by consenting as these would be lost if the quarry closed. These include the 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 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, resilience from the effects of natural disaster, 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 granting consent. **In effect, economic benefits from granting consent for the OBDA are the reverse of the disbenefits associated with Belmont's closure.**

It is important to note that due to the unique characteristics of quarries (large footprint, resource location bound, needing to be proximate to growth areas and very high upfront investment costs), the aggregate



industry has high barriers to entry. This means that the loss of Belmont Quarry could not easily be replaced by a new operation. The Commerce Commission¹⁴ 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; as many of these areas have been sterilised by urban development.

Finally, potential economic costs of granting the approvals 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.

¹⁴Commerce Commission decision: Fletcher-Building-Holdings-NZ-Ltd-Higgins-Group-Holdings-Ltd-and-Horokiwi-Quarries-Ltd clearance-application-16-February-2016



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) require 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 as well as in industrial processes. 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 2024¹⁵ 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 has adjusted the NZP&M survey results to better reflect actual production volumes. This is based on our own national database of quarry production,

¹⁵ [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 2.9m tonnes in 2024. Manawatū-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 the Manawatū-Whanganui Region. This is because the production rate of aggregate in Manawatū-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 Manawatū-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 Regional Aggregate Production (million tonnes) 2015-2024

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Wellington	1.8	2.1	1.4	2.0	3.8	2.0	2.6	1.6	2.3	2.9
Manawatu/Wanganui	1.7	1.2	2.0	2.4	2.3	2.1	0.0	0.2	2.0	2.2
Total New Zealand	39.7	33.4	40.5	44.5	42.2	36.5	31.3	36.7	44.2	41.1

Over the last 10 years, 2015-2024, the adjusted average annual aggregate production in Wellington Region was 2.3m tonnes, while in Manawatū-Whanganui Region it was 1.66m tonnes. The future supply of aggregate in Wellington Region is unlikely to keep pace with growth in demand as population growth is expected to increase demand by 97,750 tonnes annually by 2028 and by over 420,000 tonnes by 2048 (compared to 2023 demand)¹⁶.

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 production¹⁷.

There are currently 4 largish quarries that produce most of the aggregate for Wellington. They are:

- **Belmont Quarry** – Winstone expected to produce over [REDACTED] 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 year consent to continue quarrying operations on their 44ha site.
- **Kiwi Point** – provides approximately 300,000 tonnes annually.

¹⁶ Market Economics Aggregate Demand Model, 2026

¹⁷ Information is sourced from MBIE, Consent information and from industry knowledge provided by Winstones.

- 
- **Willowbank** – Fulton Hogan and Willowbank Trustee Ltd, gained a 35-year consent to operate this Porirua City quarry in January 2023. They are currently consented to produce around 600,000 tonnes annually, although I understand production is less than this currently.

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).

Wellington'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. Manawatū-Whanganui is the logical source for this being the adjacent region, therefore the closest potential source for aggregate.

3.2 Future Aggregate Demand

Significant new infrastructure investments along with housing growth¹⁸ 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 markets (Porirua, Upper Hutt, Lower Hutt and Wellington City itself)

Market Economics has 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.¹⁹

Statistics New Zealand's 2023 based medium series population projections has Wellington region population growing from 538,000 in 2023 to over 603,000 by 2048. The largest share of growth is within Wellington City (accounting for almost 30% of total regional growth to 2048), followed by growth in Hutt City (a further 25%). In total Urban Wellington accounts for 80% of the region's population, but accounts for a slightly smaller share of total growth (76%) (Figure 3.1).

¹⁸ Each new dwelling requires an average of 250 tonnes of aggregate.

¹⁹ Assuming a medium population projection eventuates.

The High Series has growth rates roughly double the Medium Series with regional growth of 24% to 2048 compared with 12% in the Medium Series. For Wellington City, the high series is 2.27 times the medium.

Figure 3.1: Wellington Medium Population Projections 2023 - 2048

Area	2023	2028	2033	2038	2043	2048
Wellington Region	538,000	553,200	567,800	580,800	592,700	603,200
Porirua City	61,300	63,300	65,100	66,600	68,000	69,100
Upper Hutt City	47,100	48,600	49,900	51,000	52,300	53,500
Hutt City	111,500	116,300	119,500	122,400	125,100	127,600
Wellington City	209,800	213,000	218,100	222,400	226,000	228,900

Source: Stats NZ.

3.2.1 Aggregate Demand Estimates

Demand for aggregate in “Urban” Wellington is expected to increase from 3.7m tonnes in 2023 to 4.1m tonnes by 2048 – annual production must increase by approximately 16,800 tonnes each year over 25 years (Figure 3.2). Total regional demand grows from 4.57m tonnes in 2023 to approximately 5.13m tonnes in 2048 (medium projection).

By 2048, the total Urban Wellington demand of 4.1m²⁰ is almost 1.8 million tonnes more than is currently being produced (or consented) by the 4 large Wellington “Urban” quarries (2.3m tonnes). This shortfall is the equivalent of 2 additional Belmont sized quarries. 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: Wellington Aggregate Demand Projections (medium) 2024 – 2043 (tonnes)

Area	2023	2028	2033	2038	2043	2048
Wellington Region	4,573,000	4,702,200	4,826,300	4,936,800	5,037,950	5,127,200
Porirua City	521,050	538,050	553,350	566,100	578,000	587,350
Upper Hutt City	400,350	413,100	424,150	433,500	444,550	454,750
Hutt City	947,750	988,550	1,015,750	1,040,400	1,063,350	1,084,600
Wellington City	1,783,300	1,810,500	1,853,850	1,890,400	1,921,000	1,945,650

Source: M.E Aggregate Demand Model

²⁰ Note that these figure differs from the figures used in the Land Exchange report as it is based on updated population projections released by Statistics New Zealand (2023 base rather than 2018 base).



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 resource consents, wildlife permit and archaeological approvals, to be exercised on land which it has applied to exchange with the Department of Conservation and Wellington Regional Council to enable a new OBDA thereby facilitating an extension of the production life of their quarry.

Currently the Belmont Quarry produces around [REDACTED] of aggregate annually (2025) making up approximately 32% of the 4 large urban Wellington aggregate producing quarries. This is down on the recent average of over [REDACTED] discussed above. However, the quarry has between [REDACTED] of extractable resource remaining if the proposed OBDA is not consented, given Winstone has exhausted opportunities to dispose overburden on the consented Cottle OBDA (no more space remains other than for fines disposal), and there are no other options within the Quarry to dispose of overburden that still allow access to the considerable remaining aggregate resource. As discussed above, 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.²¹ Given the sheer scale of overburden involved in accessing future resource (approximately 2,700,000 cubic metres which equates to approximately 4.3 million tonnes), the costs of trucking it off-site²² would quickly outweigh any profits associated with the aggregate recovered. In effect, without an adjacent overburden disposal area, the continuation of quarrying is not financially viable.

Winstone Aggregates needs to be able to dispose overburden on the land exchanged, which will allow for extension of access to the existing aggregate resource on site. This in turn, will allow the quarry to maintain its current production level of approximately [REDACTED] annually and (gradually) increase production over the course of 40 years. Note, that all analysis has been carried out over 35 years (the length of the regional consents associated with the new OBDA), even though the Quarry has potential to produce aggregate beyond this time period.

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 Kāpiti 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 Strategy²³, 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 Kāpiti 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, Petone to

²¹ Estimated at an additional \$22.4m for every 10km transported.

²² It would take 144,000 trips in a 30 tonne truck to move this amount of overburden.

²³ [Wellington Regional Leadership Committee — Future Development Strategy](#)

Grenada Link, Wellington Airport Seawall 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 Wellington Urban market 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 which is expected to increase from around 0.9m tonnes to 1.1m in 2048 with Belmont Quarry and to around 2m tonnes without it. Under a high growth future, the deficit could grow to 2.4m tonnes by 2048 without Belmont (Table 4.1).

Assuming that the project receives consent for the OBDA and any other necessary approvals including land exchange approval, Winstone Aggregates will be able to maintain production above the [REDACTED] 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 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 granting the resource consent and Belmont Quarry investing accordingly.

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

Scenario	2023	2028	2033	2038	2043	2048
Belmont Production						
Urban Wellington Market Position With Belmont Quarry						
Medium Demand	-	0.9 -	0.9 -	1.0 -	1.1 -	1.1
Urban Wellington Market Position Without Belmont Quarry - MED						
Medium Demand	-	1.6 -	1.7 -	1.8 -	1.8 -	1.9
Urban Wellington Market Position Without Belmont Quarry - HIGH						
HIGH DEMAND	-	1.7 -	1.9 -	2.0 -	2.2 -	2.4



5 Economic Impacts and Benefits

The economic impacts of granting resource consent that allows overburden to be disposed of within the OBDA, on site centre on the continued operation of Belmont Quarry as a business within the Wellington economy. This avoids or reduces the need for aggregate to be transported large distances into Wellington from outside the region, thereby avoiding any additional transportation, environmental and social costs associated with truck movements.

5.1 Multi Regional IO Approach

The general approach is described in Section 2 above. In terms of generating estimates of economic impacts and the economic benefits and costs that flow from the consent, 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.
- In reality, for quarries, the consenting lead time is long (10+ years) and the upfront capital costs are extremely high (\$300m+) meaning that new quarries are significantly less economically efficient than facilitating continuation of existing quarries.

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

Granting the approvals themselves 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 OBDA utilisation



consent, the existing quarry has capacity to continue operations for a further [REDACTED]. Therefore, the existing business operation and existing role it plays in the Wellington economy is at risk of closure.

While granting approval 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 granting resource consent are;

- Closure of the existing business: [REDACTED] - [REDACTED] 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 [REDACTED] in direct contribution to GDP. Once the flow on effects that the quarry's operation is included, this increases to between [REDACTED] and [REDACTED]²⁴ – similar in contribution to GDP terms, as the businesses total turnover.
- Investment by Winstone in developing plant and machinery and to upgrade the site is estimated to be [REDACTED] over [REDACTED] following approximately [REDACTED] to obtain all approvals for the proposed expansion.
- This has a total economic impact in terms of contribution to GDP of [REDACTED] to [REDACTED] in the Wellington economy.
- The Quarry has future production volumes of between [REDACTED] tonnes and [REDACTED] tonnes annually over thirty-five 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 [REDACTED] and [REDACTED] annually at current prices.
- 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.
- Transporting Belmont aggregate into the Wellington economy from Manawātū will have a total cost on the economy²⁵ of between \$1.36bn and \$1.47bn in nominal terms over 35 years, or between \$328m and \$991m in present value terms (PV)²⁶.
- Avoiding these costs represents a significant economic benefit, if the resource consents and other approvals are granted.

²⁴ Depending on whether only the indirect effects are included, or the indirect and induced effects are counted.

²⁵ Includes transportation costs, social costs of accidents and the environmental costs associated with emissions.

²⁶ Based on a discount rate of between 2% and 8% and assuming a [REDACTED] closedown period.



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 granting the consent. Economic impact has a broad scope as it includes all measurable changes in economic activity. It is a measure of change. Economic benefits capture the net 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 granting the approvals sought and the economic benefits that flow, I have estimated the following;

- **Increases in Household Incomes** – Direct changes in Household incomes are [REDACTED] annually. Once the flow on effects of the quarry are included, overall Wellington Household incomes increase by [REDACTED] annually.
- **Contributions to tax revenues for central government** – equated to approximately [REDACTED] 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 billion²⁷ divided by Total corporate operating surplus of \$108 billion²⁸ This gives an average company tax rate of [REDACTED]
- **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 reality is that Wellington is currently in deficit for aggregate. This means that replacement aggregate will have to travel significant distances to replace rock that would have been sourced from Belmont.
- **Employment** – currently Belmont Quarry and associated businesses employs approximately 25 FTEs and up to an additional 30 contractors (approximately) for a total of 53 FTEs supported on site. 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.

²⁷ IRD Annual Report, 2024.

²⁸ Statistics New Zealand, Annual Enterprise Survey 2024 Financial Year (provisional), published 27 June 2025.



Avoided Transport Costs and other costs

If Belmont were to close and the foregone aggregate was to be brought in from outside the region, it will generate significant additional costs to the Wellington economy. I have estimated these by splitting the volume of Belmont production across 4 Manawatu Region Quarries close to Wellington Region. I have then estimated the distance the rock needs to travel to the junction of SH1 and SH2 at the start of the Ngauranga Gorge. This point represents the additional distance the aggregate needs to travel (on average) before being distributed to specific sites within Wellington.

Transport costs are based on \$0.38/km tonne. That is, moving 1 tonne of rock, 1 km costs \$0.38. Given the alternative is to close the quarry over a period of between [REDACTED], I have modelled 2 transport cost scenarios.

- Scenario 1 has the quarry closing over a [REDACTED] period from 2027 to 2031. During this time aggregate production decreases in even amount until fully closed. Aggregate will need to be imported into the region to cover the shortfall over those years, plus all future years.
- Scenario 2 is the same process, however the quarry closes over a [REDACTED] period. Again, aggregate is imported to cover the shortfall during the closedown period and then all future years to match would could have been produced by Belmont.

In total over 35 years (out to 2062 from 2027, assuming the potential closedown begins then), additional transport costs range between \$1.24bn and \$1.33bn in nominal terms (for [REDACTED] closedown and [REDACTED] closedown respectively). Applying discount rates (2% - 8%) results in a present value saving to the Wellington economy of between \$296m and \$819m over 35 years (for a [REDACTED]) or between \$355m and \$900m over 35 years (for a [REDACTED]).

Associated with the reduction in transport are avoided social and environmental costs. These are calculated based on published crash statistics and the costs of fatal and injury crashes (social costs) and emission factors for 30 tonnes trucks (i.e. emission of PM2.5, CO, CO₂ NOX) and associated costs (published by NZTA and the Ministry of Transport).

In nominal terms over the 35-year consent horizon, the avoided social costs equate to between [REDACTED]m - [REDACTED] or between [REDACTED] and [REDACTED] in PV terms (for [REDACTED] closedown and [REDACTED] closedown respectively).

The avoided environmental costs are expected to lie between [REDACTED] and [REDACTED] nominal terms ([REDACTED] and [REDACTED] closedown respectively) or between [REDACTED] and [REDACTED] in PV terms – depending on the discount rate applied for the [REDACTED] and [REDACTED] closedown scenario's respectively (Figure 5.1).

Figure 5.1: Present Value of Avoided Transport Costs by granting Consent of Belmont OBDA (\$m)

Scenario 1: █████ Closedown				
Discount Rate	Avoided Transport Costs (\$m)	Avoided Social Costs (\$m)	Avoided Environmental Costs	Total Avoided Costs
Nominal Terms	\$ 1,333.2	\$ 31.4	\$ 100.9	\$ 1,465.5
2%	\$ 900.2	\$ 21.6	\$ 69.5	\$ 991.3
5%	\$ 541.8	\$ 13.4	\$ 43.1	\$ 598.2
8%	\$ 354.7	\$ 9.0	\$ 29.0	\$ 392.7
Scenario 2: █████ Closedown				
Discount Rate	Avoided Transport Costs (\$m)	Avoided Social Costs (\$m)	Avoided Environmental Costs	Total Avoided Costs
Nominal Terms	\$ 1,241.2	\$ 29.2	\$ 94.0	\$ 1,364.4
2%	\$ 818.5	\$ 19.6	\$ 63.2	\$ 901.3
5%	\$ 472.8	\$ 11.7	\$ 37.6	\$ 522.1
8%	\$ 296.1	\$ 7.5	\$ 24.2	\$ 327.8

Operational Benefits

Over a 35-year time horizon, relative to the alternative which is the closedown over a █████ period, the nominal benefits associated with the continued operation of Belmont Quarry amount to:

	█████	█████
Household Incomes	\$227.3m	\$209.5m
Tax Revenues	\$96.4m	\$88.9m
Aggregate cost saving	\$77.1m	\$71.1m
Total Benefits of Belmont Quarry as a business	\$401m	\$370m

This works out to between █████ In PV terms, the total benefits of Belmont Quarry range between \$94.5m and \$277.2m over 35 years (depending on the scenario and discount rate applied) (Figure 5.2).

Figure 5.2: Present Value of Economic Benefits over 35 years of Granting Belmont Quarry Resource Consent for OBDA (\$m), by Closedown Scenario and Discount Rate

Discount Rate	Scenario 1: [REDACTED] closedown	Scenario 2: [REDACTED] closedown
<i>Nominal Terms</i>	\$ 400.8	\$ 369.5
2%	\$ 277.2	\$ 249.4
5%	\$ 171.5	\$ 148.0
8%	\$ 114.4	\$ 94.5

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 resource consent, so represent an opportunity cost to not granting the consent. I have estimated the benefits by first assessing the economic impact of a [REDACTED] investment in both plant and machinery and site reconfiguration along with an estimated [REDACTED] investment in the consenting process. The [REDACTED]m is expected to be spent over a [REDACTED] period, [REDACTED] so the estimates below are totals and could be divided by the number of [REDACTED] over which the spending occurs to provide an annual total. I have assumed that the split in costing is as follows

- Plant and Machinery [REDACTED]
- Site Reconfiguration [REDACTED]
- Consenting Process [REDACTED]

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 [REDACTED] (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 consent is granted and the overburden disposal area (OBDA) is operational. Monetizable benefits amount to almost [REDACTED] if the site reconfiguration and investment in plant and machinery²⁹ occurs. Note that these effects are a total over the [REDACTED] 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).

²⁹ 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%).



5.4 Economic Costs

There are likely to be a few economic costs associated with the resource consent. 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 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 is proposed to form part of the conservation estate.

In addition, I understand that the conservation values associated with the land to be exchanged and the land that would now be utilised by the quarry are similar³⁰. Winstone's advice is that the net position for conservation values improves as a result of the land exchange.

There may be financial implications associated with the land exchange, but are not related to the granting of resource consent. While the land exchange is to be used as reserve, there may be a difference in the value of the land being exchanged. In addition, there may be some costs associated with the rehabilitation of the land being exchanged to become reserve.

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 granting resource consent for the new OBDA to be used. This is because they are mostly impacts at the margin and are often offset by other associated benefits (at least partially).

Economic benefits significantly outweigh any economic costs associated with granting resource consent for the OBDA to be operational.

5.5 Net Economic Benefits

With insignificant economic costs, the net economic benefit of granting consent is estimated to be a combination of both the avoided transportation related costs and the benefits associated with the continued operation of the Quarry as a business. Transport-related benefits site between [REDACTED] and [REDACTED] over the 35 years in present value terms with quarry operational benefits sitting between [REDACTED] and [REDACTED] in PV terms over the consent lifetime of the Belmont quarry. Those benefits arise through the consent facilitating the continuation of the existing Belmont Quarry as a business. In addition, expansion plans that are foregone without the appropriate resource consents add a further [REDACTED] in household income to Wellington.

These estimates of operational 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. Demand growth and current production levels at the existing

³⁰ A comparative values assessment is contained within the Land Exchange Report that accompanies this application.



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. From an assessment perspective, it means that the benefits are not directly additive as the operational benefits include a component of 'Aggregate Cost Savings'. These are only applicable if the rock is able to be sourced from within Wellington. If not, then the rock is sourced according to the transport modelled estimates from Manawatu, and the transportation costs apply.

Given the significant costs associated with developing a new quarry within Wellington to cover the loss of Belmont production ([REDACTED] annually), or to transport the aggregate from further afield (ie from the Manawatū-Whanganui Region), the most economically efficient approach is to grant consent for the OBDA to allow the continued operation of Belmont Quarry.



6 Conclusions

Granting consent to Winstone Aggregates to allow Belmont Quarry to establish a OBDA on land to be exchanged with Department of Conservation is essential to securing the long-term viability of the Quarry. Without consent, the quarry is expected to close [REDACTED] resulting in the loss of a business that contributes between [REDACTED] and [REDACTED] in aggregate value annually, supports approximately 25 direct jobs, plus up to 30 contractors, for a total of 53 FTEs covering 87 roles.. Belmont Quarry delivers [REDACTED] in annual GDP directly (rising to [REDACTED] once wider flow-on effects are considered). The majority of benefits associated with granting consent for the OBDA arise from the avoided transportation costs of moving aggregate in from Manawatu to meet the Wellington shortfall.

Closure would also remove a critical supply of locally sourced aggregate, put greater pressure on the remaining 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, granting consent provides the opportunity for continued and expanded operations at Belmont. The quarry is capable of supplying up to [REDACTED] 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 and the environmental and social costs of truck movements, associated with importing aggregate alone are estimated at between [REDACTED] in nominal terms over 35 years, or between [REDACTED] ([REDACTED] and [REDACTED]) in present value terms .

The benefits of Belmont Quarry as an ongoing business are valued at between [REDACTED] and [REDACTED] per year, or [REDACTED] and [REDACTED] over 35 years in nominal terms, equating to between [REDACTED] and [REDACTED] in present value terms (depending on whether the [REDACTED] close down scenario is used). It is also important to acknowledge the value of the resource that allowing the OBDA realises. At approximately \$30 per tonne, and a production schedule that is estimated at delivering over 27m tonnes of rock, the nominal value of the aggregate is over [REDACTED], or between [REDACTED] % and [REDACTED] in PV terms ([REDACTED]).

Granting consent also enables Winstone's planned programme of investment in plant, machinery, and site reconfiguration, with a capital value of [REDACTED] and a further [REDACTED] in consenting activities. These investments are expected to generate a total increase of [REDACTED] in household incomes, [REDACTED] in additional tax revenue, and 557 FTEs in equivalent employment over the investment period. The benefits generated by this investment represent an opportunity cost if consent is not granted.

Potential costs of the resource consent 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 Clean fill site). However, the conservation values of the lands being exchanged are broadly similar, meaning any change in this regard is expected to be relatively insignificant.



The net economic benefit of granting consent 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 for the region, 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 s81(4), 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. The extent of these benefits has been identified in the body of this report. In summary they are;

Operational Benefits;

Household Incomes		
Tax Revenues		
Aggregate cost saving		
Total Benefits of Belmont Quarry as a business		

- In PV Terms a total between

Avoided Transport Costs

Transport Costs		
Social Costs		
Environmental Costs		
Total Avoided Transportation Costs		

- In PV Terms a total between

Future Investment Plans

- Household Incomes
- Tax Revenues
- Employment 557 FTE’s.



In making decisions on the approvals, 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 approvals will deliver very significant benefits to the Wellington regional and national economies.