INSIGHT ECONOMICS



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Economic Assessment of Proposed Parkburn Development for Fast-track Substantive Application

Prepared for:
Fulton Hogan Land Development Limited

Authorship

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Contents

1. Statement of Qualifications & Experience 1
2. Executive Summary 2
3. Introduction 4
   3.1. Context 4
   3.2. Criteria for Assessing Substantive Applications 4
   3.3. Scope & Purpose of Report 5
   3.4. Structure of this Document 5
4. About the Subject Site 6
   4.1. Site Location & Description 6
   4.2. Planning Context 6
5. Development Options 7
   5.1. Option 1: Parkburn Development Project 7
   5.2. Option 2: Counterfactual 8
   5.3. Key Option Differences 9
6. Approach to Assessment 10
   6.1. Summary of Overall Approach 10
   6.2. Approach to Quantitative Analysis 10
   6.3. Analysis Horizon & Time Value of Money 12
7. Key Inputs & Modelling Assumptions 13
   7.1. Introduction 13
   7.2. Regional Attribution 13
   7.3. Realisation of Economic Impacts 13
   7.4. Development Staging & Timing 13
   7.5. Anticipated Development Yields 14
   7.6. Building GFA & Construction Costs 14
   7.7. Other Development Costs 15
   7.8. Total Estimated Proposal Cost 15
   7.9. Ongoing Commercial Activity Assumptions 15
   7.10. Foregone Quarry Activity Assumptions 16
8. One-Time Impacts on GDP, Jobs & Wages 17
   8.1. Estimated One-Time Impacts 17
   8.2. Top 10 Industries by FTEs Employed 18
9. Future Onsite Economic Activity 19
   9.1. Future Activity Under Proposal 19
   9.2. Future Activity Under Counterfactual 19
10. Net Quantified Impacts of the Proposal 21
   10.1. Net GDP Effects 21
   10.2. Net Employment Effects 21
11. Housing Market Impacts 23
   11.1. The Role & Importance of Housing 23
   11.2. Overall Contribution to Housing Supply 23

11.3. Helping Foster Land Market Competition 23
11.4. Impacts on Prices & Affordability 24
11.5. Catering to a Variety of Needs & Preferences 24
11.6. Economic Efficiency of Master-planned Development 24
12. Other Long-term Impacts 26
12.1. Downstream Impacts of Foregone Quarry Production 26
12.2. Socioeconomic Impacts of Potential Primary School 26
12.3. Alignment with Government Growth Agenda 27
12.4. Investment Signal Effects 27
13. Project Acceleration 29
13.1. Timing of Economic Benefits 29
14. Summary & Conclusion 30
14.1. FTAA Criteria Checklist 30
15. Appendix A: About Multiplier Analysis 32
15.1. Introduction 32
15.2. Example 32
15.3. Types of Effects Estimated 32
15.4. Importance for Assessing Construction Projects 33
15.5. Multiplier Analysis Limitations & Mitigation Strategy 33
16. Appendix B: Housing Market Context 35
16.1. Study Area 35
16.2. Population Growth 35
16.3. Demographic Summary 36
16.4. Building Consent Trends 37
16.5. Affordability Trends 37

1. Statement of Qualifications & Experience

Fraser Colegrave

I am the Founder and Managing Director of Insight Economics, one of New Zealand's leading economic consultancies on resource management, property development, and local infrastructure. Prior to that, I was a founding director of another economics consultancy – Covec Limited – for 12 years.

I hold a first-class honours degree in economics from the University of Auckland, where I received numerous prizes and scholarships for academic excellence. Over the past 25 years, I have successfully completed more than 600 consulting projects across a wide range of sectors, including dozens of large-scale commercial, industrial, and residential developments, and have appeared as an expert witness at more than 150 hearings before various judiciaries all the way up to the High Court.

Danielle Chaumeil

I am a Consultant at Insight Economics. I have been employed at Insight Economics since 2020. I hold a BCom (Actuarial Studies) / BAppFin from Macquarie University and a BDes (Architecture) from the University of Sydney.

I have 20 years of professional experience in insurance, consulting, and architecture, including roles as an Actuary in both Australia and France. My experience includes economic and retail impact assessments, market supply and demand studies, resource consents, and plan changes.

Nicholas Keith

I am a Consultant at Insight Economics. I have been employed at Insight Economics since 2023. I hold a BSc (Statistics) from the University of Auckland and a first-class honours MSc (Analytics) from Massey University.

I have three years of professional experience in economic consulting, with a background in statistical and econometric analysis. Since joining Insight Economics I have contributed to significant projects across retail, residential, tourism, industrial, and local infrastructure sectors, including Fast-track applications for some of New Zealand's largest property developers.

We are collectively responsible for preparing this report on behalf of Insight Economics. We confirm that, in our capacities as authors of this report, we have read and agree to abide by the Environment Court of New Zealand's Code of Conduct for Expert Witnesses contained in the Practice Note 2023.

For more information about Insight Economics, including our extensive experience with helping to secure planning approval for major projects (including numerous Fast-track applications), please visit our website: www.insighteconomics.co.nz

2. Executive Summary

Context

Fulton Hogan Land Development Limited seeks substantive approval under the Fast-track Approvals Act 2024 (**FTAA**) for the Parkburn development, located near Cromwell in Central Otago. The subject site comprises approximately 118 hectares and is currently used for aggregate quarrying.

The proposal provides for a comprehensively master-planned, mixed-use development comprising approximately 1,000 dwellings, a neighbourhood centre, supporting infrastructure, and the rehabilitation of the existing quarry. This assessment evaluates the economic effects of the proposal relative to a counterfactual in which quarrying activity continues on the site.

Quantified Economic Effects

The quantified economic effects of the proposal are assessed using multiplier analysis over a 30-year period, with results expressed in net present value (**NPV**) terms. The results represent regional economic impacts (Otago) and reflect both direct activity and supply chain (indirect) effects. To ensure a conservative assessment, the modelling excludes induced (consumption-driven) effects, and assumes that 80% of the economic benefits of the proposal are realised, reflecting the impacts of potential capacity or resourcing constraints.

Table 1: Summary of Quantified Costs and Benefits

Activity	FTE-Years	NPV Wages ($m)	NPV GDP ($m)
One-Time Construction Activity	2,165	$133	$266
Future Onsite Activity	1,255	$18	$31
Foregone Quarry Production	-1,025	-$25	-$47
Proposal Net Impacts	**2,395**	**$126**	**$250**

In summary, the proposal generates a net GDP benefit of approximately $250 million (NPV), comprising total benefits of approximately $298 million and costs of approximately $47 million. This is driven primarily by construction activity, which contributes approximately $266 million in GDP, alongside a further $31 million associated with ongoing onsite commercial activity. These benefits are partially offset by foregone quarry production, estimated at approximately $47 million.

The proposal also generates substantial employment impacts across both the construction and operational phases. Development of the site is estimated to support approximately 2,165 FTE-years of employment during the construction period, equivalent to an average of around 217 full-time roles per annum over an indicative ten-year build period. Once complete, the proposal supports ongoing employment associated with the neighbourhood centre, contributing approximately 1,255 FTE-years over the assessment period.

After accounting for the loss of employment associated with quarry operations, the proposal generates a net increase of approximately 2,395 FTE-years of employment, alongside $126 million in net wages (NPV).

Qualitative Economic Effects

The proposal would also deliver important economic benefits over and above the ones quantified in this report, including:

- A substantial contribution to housing supply in a high-growth area, enabling approximately 1,000 new dwellings;
- Improved housing affordability outcomes over time, primarily through increased supply and more responsive land market dynamics;
- Improved housing choice through the delivery of a range of section sizes and configurations that cater to different household types, life stages, and preferences; and
- More efficient and coordinated urban development through a master-planned approach, supporting infrastructure delivery and sequencing.

The proposal also aligns with relevant national policy direction, including the NPS-UD, and contributes to the Government's broader "Going for Growth" agenda. Moreover, the FTAA pathway enables these benefits to be realised earlier than likely otherwise.

Conclusion

Overall, the proposal delivers substantial economic benefits that clearly outweigh its costs. The quantified impacts are significant, particularly in relation to construction activity, while the broader qualitative benefits reinforce the proposal's strong contribution to housing supply, efficient market functioning, and urban development objectives.

The identified adverse economic effects, primarily relating to foregone quarry production, are modest in scale and are expected to be largely transitional in nature. On balance, the proposal is strongly supported on economic grounds.

3. Introduction

3.1. Context

Fulton Hogan Land Development Limited (the **applicant**) seeks consent to develop 118 hectares of land adjacent to Pisa Moorings in Cromwell. The Parkburn Development Project provides for the establishment of a mixed-use urban development, including quarry rehabilitation, residential development, supporting commercial and community activities, open space, and associated infrastructure.

Following the approval of a referral application, the applicant is now making its substantive application for all necessary approvals for the proposal under the Fast-track Approvals Act 2024 (**FTAA**). This assessment is an updated version to that which was lodged as part of the original Parkburn Substantive Application lodged 4 August 2026 that takes into account the revised scheme plan.

3.2. Criteria for Assessing Substantive Applications

The FTAA establishes a permanent approvals regime designed to expedite projects that deliver significant regional or national benefits. When considering substantive applications, the Expert Panel is guided by the provisions in sections 81 to 85 of the FTAA, together with the matters set out in Schedule 5. Key provisions relevant from an economic perspective are provided in Table 2 below.

Table 2: Economic matters relevant to substantive assessment under the FTAA

Provision	Relevance to this assessment
Purpose of the Act (s3; s81(2)(b))	The central purpose of the FTAA is "to facilitate infrastructure and development projects with significant regional or national benefits." The Panel must have particular regard to whether projects achieve that purpose.
Balancing Benefits and Adverse Effects (s85(3)-(4))	The Panel may decline an approval if it considers the adverse impacts are out of proportion to regional or national benefits.
Nature and Scale of Benefits (s81(4))	The Panel must consider the extent of the project's regional or national benefits.
Consistency with National Direction (s81(2)(aab))	The Panel must also consider the extent to which a project aligns with a relevant Government policy statement, including those under the Resource Management Act 1991 (**RMA**), such as the National Policy Statement on Urban Development (**NPS-UD**).
Schedule 5, Clause 7	Requires an assessment of economic effects as part of the Assessment of Environmental Effects (**AEE**).
Schedule 5, Clause 17	Directs that greatest weight be given to the purpose of the FTAA when considering consent applications.

Taken together, these provisions confirm that substantive applications are to be assessed primarily on the extent to which they deliver significant regional or national benefits, and whether those benefits outweigh any adverse effects.

3.3. Scope & Purpose of Report

This report assesses the likely economic effects of the proposal against the criteria in Table 2. It focuses on the proposal's capacity to boost housing supply, generate employment, support well-functioning urban environments, and contribute positively to regional economic performance, including impacts on GDP, household incomes, and wider economic outcomes. The assessment is intended to assist the Panel in determining whether the proposal provides sufficient benefit to justify FTAA approval.

3.4. Structure of this Document

The remainder of this document is structured as follows:

- **Section 4** describes the subject site and its surrounding environment.
- **Section 5** sets out the two options assessed: the proposal and the counterfactual.
- **Section 6** describes the analytical framework and methodology used in the assessment.
- **Section 7** summarises the key inputs and assumptions underpinning the analysis.
- **Section 8** estimates the one-time impacts of construction activity on GDP, jobs, and wages.
- **Section 9** assesses ongoing onsite economic activity under the proposal and counterfactual.
- **Section 10** presents the net quantified economic impacts of the proposal.
- **Section 11** considers the proposal's housing market effects.
- **Section 12** discusses wider long-term economic effects.
- **Section 13** considers the role of the FTAA in accelerating project delivery.
- **Section 14** presents the overall conclusion, including an assessment against the FTAA criteria.

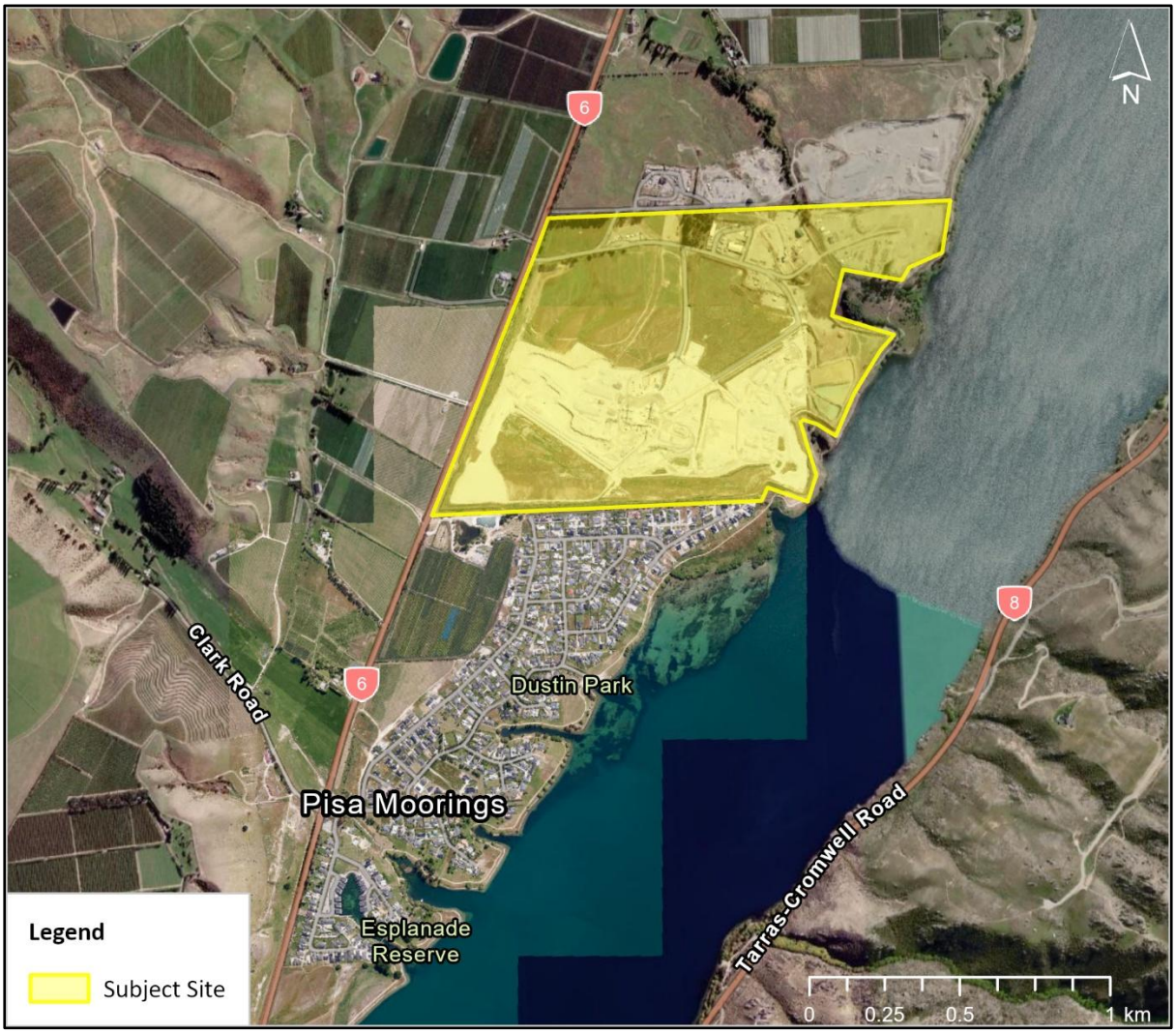
4. About the Subject Site

This section describes the subject site and its surrounding environment.

4.1. Site Location & Description

The subject site is located at 922 Luggate-Cromwell Road (State Highway 6), approximately eight kilometres north of the Cromwell township and adjoining Lake Dunstan / Te Wairere. The site spans an area of approximately 118 hectares and includes part of the existing Parkburn Quarry. Figure 1 shows a satellite view of the site in its immediate receiving environment.

Figure 1: Subject Site



4.2. Planning Context

In October 2024, Central Otago District Council approved Private Plan Change 21 (**PC21**), which rezoned approximately 120 hectares at Parkburn for urban purposes. Development under PC21 is subject to a Structure Plan and capped at 559 residential allotments. Accordingly, while the site remains in active quarry use, the operative planning framework anticipates its eventual transition to urban development. The implications of PC21 for this assessment are discussed in Section 5.2.

5. Development Options

This section describes two options for the site's future use.

5.1. Option 1: Parkburn Development Project

The Parkburn Development Project (the **project**) provides for the establishment of a mixed-use urban development, including quarry rehabilitation, residential development, supporting commercial and community activities, open space, and associated infrastructure. Works are also proposed within the State Highway 6 road reserve.

In summary, the project comprises the following components:

- Bulk earthworks to backfill and rehabilitate part of the existing Parkburn Quarry.
- Subdivision and development to enable approximately 1,000 residential allotments, supporting the construction of approximately 1,000 residential units across a range of housing densities.
- Subdivision and development to establish a neighbourhood centre, including retail, commercial, medical, and early childhood education activities, together with land for a primary school.
- Landscaping and development of an open space network, including recreation and esplanade reserves and restoration along the margins of Parkburn Stream and Lake Dunstan / Te Wairere.
- Formation of two coves extending into Lake Dunstan / Te Wairere.
- Construction of associated infrastructure, including three waters infrastructure, internal transport networks, and external access works connecting the site to State Highway 6.

An illustrative masterplan is provided in Figure 2 below.

Figure 2: Illustrative Masterplan



The proposal is intended to be delivered across 15 stages, in accordance with the Subdivision Scheme Plan accompanying the substantive application.

5.2. Option 2: Counterfactual

The counterfactual represents the most likely use of the subject site in the absence of the proposal and provides the benchmark against which the proposal's net economic effects are assessed. In this case, and as confirmed by the applicant, we consider that the site would likely continue to be used as an aggregate quarry for the remainder of its productive life.

In identifying the counterfactual, we also considered whether a development scenario enabled under the operative District Plan (i.e., under PC21) should be adopted instead. While PC21 confirms that the site has been identified for urban development in some form, we have not adopted a plan-enabled development scenario as the principal counterfactual for two main reasons.

First, the counterfactual is intended to represent the most likely use of the site absent the proposal. Based on information provided by the applicant, there is no current intention to pursue development under PC21 in the absence of Fast-track approval, and the site's quarrying operations are expected to continue in the interim. Continued quarrying therefore remains the most likely near-term use of the site.

Second, PC21 establishes a broad enabling framework rather than a single, clearly defined development scenario. Modelling a plan-enabled counterfactual would require constructing a

hypothetical development, including assumptions about yield, staging, infrastructure delivery, and timing, that does not correspond to a committed project. Any such scenario would be inherently speculative and would not provide a more reliable benchmark than the site's established and ongoing quarry use.

We note that this approach is consistent with recent Fast-track practice. In the Homestead Bay decision, the Expert Panel obtained independent legal advice on the appropriate counterfactual and accepted that the FTAA contains no express statutory requirement to adopt or apply any particular counterfactual, nor to adopt one at all.[1] Rather, because benefits and adverse impacts are always understood relative to some "without project" scenario, the Panel considered it appropriate to be explicit about the scenarios in mind, "while recognising that they are evaluative tools rather than legal pre-conditions."[2] The legal advice also confirmed that both a "current zoning" counterfactual and a plan-enabled counterfactual have strengths and limitations, and that it is open to a panel to conclude that a proposal delivers regionally significant benefits irrespective of which counterfactual is adopted.[3] Consistent with that guidance, we have been explicit in adopting continued quarrying (the site's current and most likely use absent the proposal) as the principal counterfactual, and we address the implications of the plan-enabled alternative below.

Finally, we observe that even if a plan-enabled scenario were constructed, the proposal would still be likely to deliver substantial additional benefits relative to it. PC21 caps residential development at 559 allotments (roughly half the number of dwellings enabled by the proposal) and the Structure Plan provides for significantly larger water features, which would add materially to development costs and timeframes. The proposal is therefore likely to deliver considerably more housing, sooner, and in a more integrated form than could reasonably be expected under the operative framework.

5.3. Key Option Differences

The project represents a fundamental change in the use of the site, from ongoing quarry operations to a master-planned, residential-led development. This shift changes both the nature and distribution of economic effects, moving from a single-purpose extractive activity with relatively concentrated benefits, to a diversified urban environment generating a broader range of construction, household, and service-related economic activity. It also reflects a transition from a finite, resource-based use to a long-term urban land use that supports population growth, housing supply, and the wider functioning of the local economy. While PC21 already anticipates an urban future for the site, the proposal enables this transition at greater scale and pace than the operative framework provides for.

These differences provide the basis for the economic assessment that follows, which evaluates the nature, scale and distribution of effects associated with the proposal relative to the ongoing quarry use.

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[1] *Record of Decision of the Expert Consenting Panel under s 87 of the Fast-track Approvals Act 2024, Homestead Bay [FTA-2506-1071]*, 18 February 2026, at [381] and [392]. The Panel's independent legal advice was provided by Brookfields Lawyers (20 November 2025).

[2] Ibid, at [393].

[3] Ibid, at [390].

6. Approach to Assessment

This section sets out the analytical framework and methodology used to assess the economic effects of the proposal.

6.1. Summary of Overall Approach

The economic effects of the proposal are assessed by comparing the proposed development to a counterfactual scenario in which the site continues to operate as a quarry. The assessment identifies the full range of economic costs and benefits associated with the proposal relative to this counterfactual. These effects are then evaluated using a combination of quantified and qualitative methods, reflecting the nature of the effects being assessed. See Table 3 below.

Table 3: Summary of Economic Effects by Assessment Approach

Assessment Approach	Economic Effects
Quantitative	Construction activity (one-time impacts)
	Ongoing onsite commercial activity
	Foregone quarry production
	Net economic impacts (GDP, employment, wages)
Qualitative	Housing supply contribution
	Housing affordability
	Housing choice and diversity
	Land market competition
	Economic efficiency of master-planned development
	Downstream impacts of foregone quarry production
	Socioeconomic effects of primary school
	Investment signal effects
	Alignment with Government growth agenda
	Project acceleration (FTAA pathway)

6.2. Approach to Quantitative Analysis

Our assessment uses multiplier analysis to estimate the impacts of the proposal on GDP, employment, and household incomes, relative to the counterfactual. Multiplier analysis utilises the supply chains that comprise an economy, enabling changes in one sector to be traced through to estimate economy-wide impacts, including flow-on (i.e., supply chain) effects. It is particularly well-suited to assessing construction projects like the proposal, because much of the work is usually subcontracted out, rather than being done by the main contractor, which multiplier analysis is designed to address.[4]

The analysis adopts a regional framing, with impacts assessed at the Otago level. In the New Zealand context, however, there are no reliable input-output tables available at this scale, as regions are typically too small and economically interlinked to support robust standalone modelling. Accordingly,

[4] For context, according to the latest multipliers, for every dollar of GDP generated by the building construction sector, an extra $2.76 of GDP is generated in the industries supporting it. Similarly, for every FTE directly employed in building construction, an extra 2.82 FTEs are employed in the sectors that comprise its supply chain.

national multipliers are applied, with a proportion of the resulting impacts attributed to the Otago region.

Within this framework, the approach is applied to both:

- **One-time effects**, associated with development of the site; and
- **Ongoing effects**, associated with future onsite commercial activity, as well as the loss of ongoing quarry production.

The economic impacts derived via multiplier analysis comprise three parts, namely:

- **Direct effects** – which capture the economic impacts of entities directly engaged to complete the project (e.g., the main building contractor); plus
- **Indirect effects** – which arise when the main contractor sources goods and services from their suppliers (i.e., subcontractors), who in turn may need to source goods and services from their own suppliers, and so on; and
- **Induced effects** – which occur when a share of the additional wages and salaries generated by the project (either directly or indirectly) are spent in the local/regional economy and therefore give rise to additional rounds of economic impacts.

While multiplier analysis is widely used in economic impact assessment, it has recognised limitations. In particular, it assumes that businesses use inputs in fixed proportions, does not account for capacity constraints within the economy, and does not capture price effects that may occur in practice. These limitations are acknowledged in this assessment and addressed through a suite of measures, including:

- **Ignoring induced effects**, which are considered the least reliable component of multiplier analysis and are therefore excluded to avoid overstating economic impacts;
- **Scaling direct and indirect effects** to reflect the likelihood that not all estimated impacts will be fully realised due to capacity or resourcing constraints;
- **Using the most up-to-date multipliers**, derived from recent data to ensure the results reflect current economic conditions rather than outdated input-output relationships;
- **Maximising the value of foregone production**, by conservatively assuming that quarry activity ceases immediately across the site under the proposal; and
- **Applying conservative construction cost rates**, based on building consent data that is understood to understate true costs, thereby reducing estimated development-related impacts.

This ensures that the resulting impact estimates do not overstate project benefits and instead provide a sound and reliable basis for decision-making. Refer **Appendix A** for further detail.

6.3. Analysis Horizon & Time Value of Money

Quantified economic effects are estimated over a 30-year horizon, consistent with long-term planning periods. Where appropriate, these are expressed in monetised terms, with all costs and benefits converted to net present values (**NPV**) to account for the time value of money. A discount rate of 8 percent is applied, consistent with the rate commonly used for public sector cost-benefit analysis and infrastructure investment appraisal.

7. Key Inputs & Modelling Assumptions

This section presents the key inputs and assumptions underpinning our quantitative assessment.

7.1. Introduction

Inputs have been drawn from project-specific data where possible and complemented with the latest available industry data to fill any gaps. All cost figures are expressed in current (2026) dollars unless otherwise stated.

7.2. Regional Attribution

Based on the location and nature of the proposal, it is assumed that 75% of total estimated national impacts of the proposal accrue to the Otago region. By contrast, all economic impacts of the counterfactual are assumed to accrue to the Otago region.

7.3. Realisation of Economic Impacts

Consistent with the approach described in Section 6, our modelling assumes that 80% of the economic benefits of the proposal are realised, reflecting the impacts of potential capacity or resourcing constraints. To ensure a conservative comparison, counterfactual activity is assumed to be fully realised over the modelling period.

7.4. Development Staging & Timing

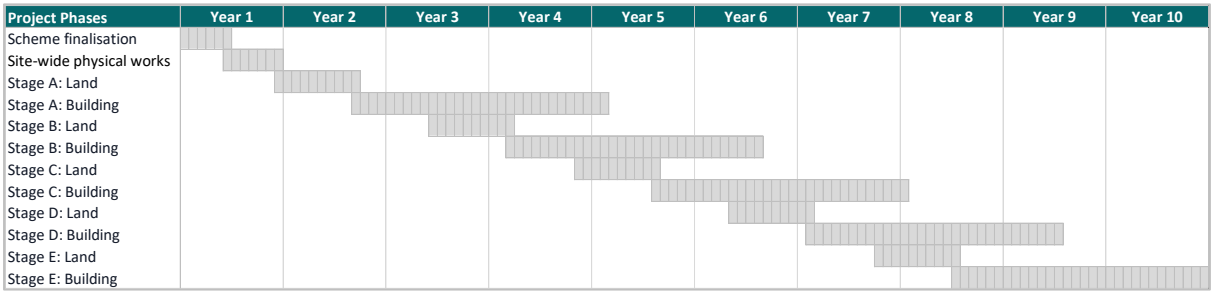
Our modelling assumes that the proposal is delivered over a period of approximately ten years. Development commences with a period of site-wide scheme finalisation and enabling works, which includes the delivery of bulk earthworks and trunk infrastructure. This is followed by commencement of the first stage of subdivision.

For modelling purposes, development is consolidated into five grouped stages (A to E).[5] While subdivision of the land for the neighbourhood centre is anticipated in Stage B, we conservatively assume it is not built out until Stage D, with ongoing commercial activity commencing during the ninth year of development.

Within each of the five grouped stages, land development is assumed to take about ten months, reflecting around four months of earthworks followed by six months of civil works. Building activity is then assumed to occur over approximately 30 months. Each subsequent stage starts before the previous one finishes, enabling a degree of overlap between stages that ensures a seamless stream of supply over time. Figure 3 illustrates this indicative timeline.

[5] Stage A corresponds to development stages 1A, 1B, 2 and 3 in the Subdivision Scheme Plan. Stages B to E group the remaining development stages sequentially in sets of three (i.e. Stages 4–6, 7–9, 10–12, and 13–15).

Figure 3: Indicative Project Timeline



7.5. Anticipated Development Yields

Our modelling adopts a notional yield of 978 standard residential lots, corresponding to the revised Subdivision Scheme Plan (Revision B, dated 23 October 2026). To adopt a conservative approach, the nine additional residential "superlots" identified within the scheme plan are excluded from the analysis. Table 4 presents our assumed dwelling yield by stage and typology.

Table 4: Assumed Dwelling Yield by Stage and Typology

Dwellings by Type	Stage A	Stage B	Stage C	Stage D	Stage E	Total
Small Standalone	19	0	63	14	2	**98**
Medium Standalone	115	149	121	101	115	**601**
Large Standalone	75	76	31	41	56	**279**
Totals	**209**	**225**	**215**	**156**	**173**	**978**

Further, we assume that 5,000 m² of non-residential floorspace is provided in the neighbourhood centre, comprising a grocery store (800 m²), cafes, restaurants and bars (1,400 m²) and visitor accommodation (2,800 m²). This reflects the activities enabled by the proposed plan provisions, noting that the activities that ultimately seek to establish onsite will be determined by market forces.

While 2.6 hectares of land is also identified for a potential primary school, this is not included in the modelling. This reflects a conservative assumption that additional school capacity would be provided elsewhere to meet underlying population growth in the absence of the proposal.

7.6. Building GFA & Construction Costs

Building costs are estimated on a per-dwelling basis, with average dwelling size assumptions differentiated by lot size and build rates drawn from regional benchmarks.[6] Table 5 summarises estimated GFA and construction costs by building type.

[6] Build costs were based on average values over the two years to February 2026 in the Otago region, as reported in building consent data.

Table 5: Estimated Construction GFA & Costs by Building Typology

Building Type	Total GFA (m^2)	Cost/m2	Build Cost ($m)
Small Standalone Dwelling	12,250	$3,950	$48
Medium Standalone Dwelling	90,150	$3,950	$356
Large Standalone Dwelling	55,800	$3,950	$220
Retail / Food and Beverage	2,200	$3,200	$7
Visitor Accommodation	2,800	$4,700	$13
Totals	**163,200**	**$3,955**	**$645**

Overall, residential and commercial building construction expenditure across all stages is estimated at approximately $645 million.

7.7. Other Development Costs

The development will require significant upfront investment in site-wide enabling works before residential construction can commence. This includes, in particular, the remediation and recontouring of the existing quarry site to make it suitable for development, which is expected to involve substantial earthworks and associated stabilisation and servicing works.

In addition, each development stage will require further detailed design, local civil works, and other stage-related expenditures. This suite of broader costs has been estimated using project-specific information wherever possible, with any gaps informed by industry benchmarks drawn from our experience across a range of comparable developments in New Zealand.

7.8. Total Estimated Proposal Cost

Table 6 brings together the estimated total development cost of the proposal based on the information summarised above, which amounts to approximately $816 million. This expenditure forms the basis for the one-time economic impact assessment presented in Section 8.

Table 6: Summary of Estimated Project Investment

Cost Category	Estimated Cost ($m)	Share of Cost
Scheme finalisation	6	0.8%
Site-wide enabling works	87	10.7%
Staged land development costs	39	4.7%
Staged building-related costs	39	4.7%
Construction costs	645	79.0%
Total Estimated Cost	**816**	**100.0%**

7.9. Ongoing Commercial Activity Assumptions

To estimate the ongoing economic activity generated by the proposed neighbourhood centre, we apply the following average employment densities to the estimated GFA set out in Section 7.5.[7]

[7] Sourced from the 2023 QLDC Business Capacity Assessment prepared by Market Economics, p. 154.

Table 7: Assumed/Adopted Employment Densities

Activity	GFA per Worker (m^2)
Retail	40
Accommodation	100

7.10. Foregone Quarry Activity Assumptions

Based on information provided by the applicant on current operations, we assume that ongoing quarry operations would sustain employment for 12 FTEs with annual wages and salaries of approximately $1 million. Annual GDP has been estimated by applying a GDP-to-wages ratio of 2.5:1.[8]

To ensure a conservative assessment, the modelling assumes that this quarry production continues onsite for the full 30-year assessment period under the counterfactual. In practice, however, we understand that the remaining operational life of the quarry is likely to be materially shorter than this. Further, we understand that Fulton Hogan is actively progressing a replacement quarry elsewhere in the district, such that closure of the existing quarry would not necessarily result in a long-term reduction in aggregate production within the district.

Having defined our key inputs and assumptions, the following sections present the one-time and ongoing impacts of the proposal.

[8] Our latest multipliers suggest that the average relationship between wages and GDP across the broader mining sector is approximately 4:1. However, this reflects a range of mining activities, including high-value petroleum extraction, which is not considered representative of aggregate quarrying operations. Accordingly, a lower indicative ratio of 2.5:1 has been adopted.

8. One-Time Impacts on GDP, Jobs & Wages

This section estimates the one-time economic impacts of the development enabled by the proposal.

8.1. Estimated One-Time Impacts

The table below presents the estimated one-off regional economic impacts of the proposal's development, broken down by development stage, for each of the three key impact metrics: employment, wages and salaries, and GDP.

Table 8: Estimated One-Time Regional Economic Impacts by Stage

Employment (FTE-yrs)	Direct	Indirect	Total
Upfront/Site-wide	100	130	230
Stage A	120	290	410
Stage B	130	315	445
Stage C	110	270	380
Stage D	105	255	360
Stage E	100	240	340
Project Totals	**665**	**1,500**	**2,165**
Wages & Salaries (NPV $m)	Direct	Indirect	Total
Upfront/Site-wide	$11	$12	$22
Stage A	$9	$20	$29
Stage B	$8	$20	$28
Stage C	$6	$15	$21
Stage D	$5	$12	$18
Stage E	$4	$11	$15
Project Totals	**$44**	**$90**	**$133**
GDP ($m)	Direct	Indirect	Total
Upfront/Site-wide	$19	$24	$42
Stage A	$18	$40	$58
Stage B	$17	$39	$56
Stage C	$13	$30	$43
Stage D	$11	$25	$36
Stage E	$9	$21	$30
Project Totals	**$88**	**$179**	**$266**

The proposal's development is estimated to support approximately 2,165 FTE-years of employment. This is equal to an average of approximately 217 full-time positions sustained for each year of the programme. At the same time, the proposal is estimated to contribute approximately $133 million in wages and salaries over the ten-year development period, and generate around $266 million in GDP.

Indirect effects account for more than two-thirds of the total impact across all three metrics, reflecting the significant upstream demand that residential construction generates for building materials, manufactured components, professional services, and transport and logistics.

8.2. Top 10 Industries by FTEs Employed

To better understand the likely impacts of the proposal's future development, Table 9 reveals the 10 industries likely to experience the greatest employment boosts. Those top 10 industries account for more than 80 percent of all full-time employment generated by the proposal, with the balance spread across numerous other sectors.

Table 9: Top 10 Industries by FTE-years Generated during Development

Industries	FTE-years	Shares
Building Construction	544	25%
Construction Services	451	21%
Professional, Scientific and Technical Services	222	10%
Heavy and Civil Engineering Construction	139	6%
Wholesale Trade	97	4%
Fabricated Metal Product Manufacturing	92	4%
Wood Product Manufacturing	80	4%
Administrative and Support Services	72	3%
Non-Metallic Mineral Product Manufacturing	42	2%
Petroleum and Coal Product Manufacturing	34	2%
Top 10 Subtotal	**1,774**	**82%**
All Other Industries	390	18%
Total All Industries	**2,165**	**100%**

9. Future Onsite Economic Activity

This section estimates the ongoing economic activity under both the proposal and the counterfactual, using the inputs and assumptions outlined in Section 7.

9.1. Future Activity Under Proposal

Table 10 presents the estimated annual regional economic impacts of the proposed neighbourhood centre once fully operational for each of the three key metrics: employment, wages and salaries, and GDP.

Table 10: Estimated Annual Onsite Economic Activity Under the Proposal

Impact	FTEs	Wages ($m)	GDP ($m)
Direct	47	$2.4	$3.6
Indirect	11	$1.0	$2.3
Direct + Indirect	**58**	**$3.4**	**$6.0**

At full operation, the proposed commercial area is estimated to sustain total **annual** employment of approximately 58 FTEs (including flow-on effects), generate around $6 million in GDP, and support wages and salaries of approximately $3.4 million. The corresponding NPV (over 30 years) of ongoing onsite economic activity under the proposal is summarised in Table 11 below.

Table 11: Activity Sustained by the Proposal – 30-Year NPV Summary

Metric	FTE-Years	NPV Wages ($m)	NPV GDP ($m)
Direct	1,015	$13	$19
Indirect	240	$5	$12
Total	**1,255**	**$18**	**$31**

In NPV terms, the neighbourhood centre is estimated to support over 1,200 FTE-years of employment over 30 years, contribute around $31 million in GDP, and generate approximately $18 million in wages and salaries.

9.2. Future Activity Under Counterfactual

Table 12 presents the total estimated annual economic activity that the site could hypothetically sustain under the counterfactual, in which the site continues to be used as an aggregate quarry.

Table 12: Estimated Annual Production of Counterfactual Activity

Impact	FTEs	Wages	GDP
Direct	12	$1.0	$2.5
Indirect	22	$1.2	$1.6
Direct + Indirect	**34**	**$2.2**	**$4.1**

In short, absent the proposal, ongoing onsite quarry activity could theoretically sustain total **annual** employment of approximately 34 full-time equivalent employees, generate around $4.1 million in GDP, and support wages and salaries of approximately $2.2 million.

The corresponding NPV estimates are summarised in Table 13 below.

Table 13: Counterfactual Production – 30-Year NPV Summary

Metric	FTE-Years	NPV Wages ($m)	NPV GDP ($m)
Direct	360	$11	$29
Indirect	665	$14	$19
Total	**1,025**	**$25**	**$47**

In net present value terms, the counterfactual is estimated to support approximately 1,025 FTE-years of employment over 30 years, $47 million in GDP and $25 million in wages.

10. Net Quantified Impacts of the Proposal

This section compares the quantified impacts of the proposal to the counterfactual to derive its net impacts of the proposal on GDP, jobs and wages.

10.1. Net GDP Effects

The table below summarises the estimated impacts of the proposal on GDP, expressed in NPV terms.

Table 14: Summary of Quantified GDP Impacts (NPV, $m)

Activity	NPV GDP ($m)
One-Time Construction Activity	$266
Future Onsite Activity	$31
Foregone Quarry Production	-$47
Proposal Net Impacts	**$250**

Overall, the proposal generates a net positive GDP impact of approximately $250 million (NPV). Benefits of around $266 million are driven by construction activity, with additional contributions from ongoing onsite commercial activity. Quantified costs are moderate at approximately $47 million, reflecting the value of foregone quarry production.

10.2. Net Employment Effects

In addition to the GDP effects outlined above, the proposal generates a substantial net increase in employment relative to the counterfactual. Construction of the development is estimated to support approximately 2,165 FTE-years of employment over the development period, equivalent to an average of around 217 full-time roles per annum. These effects are broad-based, extending beyond the construction sector to include professional services, manufacturing, transport, and other supporting industries.

Once fully developed, the proposal is expected to support ongoing employment associated with the neighbourhood centre, contributing approximately 1,255 FTE-years over the assessment period. These gains are partially offset by the loss of employment associated with ongoing quarry operations, which are estimated to account for approximately 1,025 FTE-years over the same period, as illustrated in Table 15.

Table 15: Summary of Employment Impacts

Activity	FTE-Years	NPV Wages ($m)
One-Time Construction Activity	2,165	$133
Future Onsite Activity	1,255	$18
Foregone Quarry Production	-1,025	-$25
Proposal Net Impacts	**2,395**	**$126**

Overall, the proposal is therefore estimated to generate a net increase of approximately 2,395 FTE-years of employment, alongside a net increase in wages and salaries of approximately $126 million (NPV). This reflects a transition from a relatively small number of ongoing extractive industry jobs to a larger and more diverse employment base, including both short-term construction employment and longer-term service-based roles.

While the quantified assessment captures the direct economic impacts of the proposal, a number of additional effects, particularly those relating to housing outcomes and market functioning, are more appropriately assessed on a qualitative basis. These are considered in the following sections.

11. Housing Market Impacts

This section assesses the housing market effects of the proposal.

11.1. The Role & Importance of Housing

Housing is a fundamental determinant of human wellbeing. It provides shelter and physical safety, but its impact extends much further. Where people live shapes their access to employment, education, health services, and social networks. Stable, adequate housing supports better physical and mental health outcomes, stronger educational attainment for children, and greater economic participation for adults. Conversely, housing stress, whether through unaffordability, insecurity of tenure, or overcrowding, is consistently associated with poorer outcomes across all such dimensions.

These considerations are relevant to how the economic evidence in this section should be interpreted. The analysis that follows, of supply contributions, affordability effects, and market competition, captures the proposal's housing market impacts in terms that are easily describable. But those metrics are ultimately proxies for something more fundamental: whether more people will have access to a wider range of safe, secure, and fit-for-purpose homes due to the proposal. In our view, they will, and the significance of that outcome is not fully captured by any economic model.

11.2. Overall Contribution to Housing Supply

As outlined in **Appendix B**, Cromwell has experienced sustained population growth and is projected to continue growing strongly over the coming decades. The proposal acknowledges and directly responds to the need for additional dwellings to meet the corresponding increase in housing demand over time, by enabling the development of approximately 1,000 new homes. In our view, this represents a highly significant and timely contribution to local housing supply.

Importantly, the applicant has been one of New Zealand's largest greenfield developers over the past 20 years and has the experience, resources, and capability to successfully deliver a project of this scale. This increases the likelihood that the capacity enabled by the project will translate into actual dwelling supply in a timely and coordinated manner.

Many of the benefits discussed elsewhere in this section, including land market competition, impacts on prices and affordability, and housing choice, stem directly from this supply contribution and are therefore inherently interrelated.

11.3. Helping Foster Land Market Competition

In addition to directly boosting dwelling capacity, the proposal will also help to foster competition in the local land market. This is important because, as recognised through Objective 2 of the NPS-UD, competition is the cornerstone of economic efficiency. When the land market becomes more competitive, land developers have a greater incentive to bring their product to the market in a more timely and cost-effective manner, thus further helping to keep local housing as affordable as possible.

Absent competition, landowners may experience "market power", which enables them to charge more for land and be slower in releasing it to the market. Both outcomes conspire against affordability

and reduce the overall efficiency of the housing market. By contrast, the release of a large, master-planned development increases contestability by introducing an additional source of supply to the market. This places competitive pressure on other landowners to either advance development, adjust pricing, or bring alternative sites forward. Over time, this dynamic improves the speed and certainty with which land is converted into housing, supporting more responsive supply outcomes.

11.4. Impacts on Prices & Affordability

Housing affordability in Cromwell and the wider Central Otago District has deteriorated significantly over the past decade, reflecting sustained increases in dwelling prices and rents relative to incomes. Median dwelling prices have risen rapidly, while key affordability indicators, such as price-to-income ratios and deposit requirements, remain well above accepted benchmarks.

In this context, the proposal's primary contribution to affordability arises through its scale, timing, and certainty of supply. By enabling a substantial number of new dwellings to be delivered over time, the proposal will make a meaningful contribution to meeting underlying housing demand. While the delivery of new housing at Parkburn is unlikely, in isolation, to reduce prices in absolute terms, it is expected to play a role in moderating the rate of future price growth relative to the status quo, in which supply remains more constrained. This reflects the well-established relationship between housing supply and price dynamics, particularly in high-growth areas.

Overall, the proposal contributes to improved housing outcomes by helping to moderate price pressures and supporting a more sustainable relationship between housing supply and demand over the long term. Further detail on local housing market trends is provided in **Appendix B**.

11.5. Catering to a Variety of Needs & Preferences

The proposal provides for a range of standard residential lot sizes and configurations, which in turn enables a variety of dwellings to be developed on the site over time. In addition, nine residential superlots enable some higher-density development to occur over time in response to demand. This variety supports choice across household structures, life stages, and budget preferences and thereby helps the proposal give effect to Policy 1(a)(i) of the NPS-UD, which requires planning decisions to contribute to well-functioning urban environments that provide a variety of homes to meet the needs of a diverse population.

11.6. Economic Efficiency of Master-planned Development

Master-planned communities like the proposal provide a strategic and coordinated approach to urban growth, delivering efficiency gains compared to more fragmented forms of development. For example, these developments:

- **Achieve economies of scale:** Large-scale development can lower per-unit costs through more efficient planning, procurement, and delivery of infrastructure and housing.

- **Optimise infrastructure investment:** Coordinated delivery of roads, utilities, and public services helps reduce duplication and ensures infrastructure is appropriately sized and timed to support growth.

- **Generate employment:** Provide a sustained pipeline of work for local contractors and tradespeople over the development period.

Further, compared to more fragmented patterns of growth, master-planned communities:

- **Encourage timely development:** The scale and structure of development can support a more predictable and continuous supply pipeline.

- **Enable efficient sequencing of infrastructure investment**, reducing the risk of under- or over-provision relative to demand.

At the same time, the proposal delivers publicly vested infrastructure that generates benefits beyond those directly associated with enabling new dwellings. Importantly, such infrastructure is typically more feasible to deliver efficiently at scale through a coordinated development approach, compared to smaller, piecemeal subdivision or infill projects.

12. Other Long-term Impacts

This section considers a range of wider long-term economic costs and benefits of the proposal.

12.1. Downstream Impacts of Foregone Quarry Production

In addition to the direct loss of onsite employment and associated economic activity, the cessation of quarry operations at Parkburn may give rise to wider economic effects, primarily reflecting the role of aggregates in supporting construction and infrastructure activity across the district.

Aggregates are a critical input into most forms of construction, and a reliable, cost-effective local supply plays an important enabling role in supporting development. The loss of production at Parkburn would require demand to be met from alternative sources. Where sufficient substitute supply exists, this is likely to result in a redistribution of production across other quarries, rather than a reduction in overall availability. However, even in this context, some incremental costs may arise, including higher transport costs, increased wear on transport infrastructure, and higher fuel use and emissions. To the extent that aggregates have limited substitution options, these costs may flow through to construction activity in the form of higher input prices. A reduction in the number of active quarries may also have some influence on competitive dynamics over time.

As outlined earlier, aggregate supply within the district is expected to continue to be supported by alternative sources over the longer term, including a new Fulton Hogan quarry within the district. In this context, the effects described above are not expected to give rise to sustained downstream constraints on construction activity.

Overall, the wider economic impacts of foregone quarry production are expected to be modest and largely transitional in nature, reflecting a shift in the location of production rather than a material constraint on aggregate supply.

12.2. Socioeconomic Impacts of Potential Primary School

The proposal makes provision for a potential primary school within the site. From an economic perspective, the construction and operation of the school are not treated as net additional effects in this assessment, as it is assumed that the Ministry of Education would provide equivalent capacity elsewhere in response to underlying population growth. However, while this has not been included in the quantified modelling, it has implications for the wider economic and social functioning of the area.

The additional population enabled by the proposal will generate increased demand for schooling. In the absence of on-site provision, this demand would place additional pressure on the existing school network, potentially requiring capacity to be expanded elsewhere. The provision of land for a new primary school effectively internalises this demand, enabling it to be accommodated within the development.

More broadly, the establishment of a new school is likely to provide benefits beyond the immediate development. In particular, it may create additional schooling capacity and choice for surrounding communities, including nearby areas such as Pisa Moorings. This can support the functioning of the

wider settlement pattern by improving access to education and reducing travel distances for some households.

12.3. Alignment with Government Growth Agenda

The Going for Growth agenda, launched by the New Zealand Government in early 2025, outlines a long-term strategy for lifting national productivity and living standards. It is built around five interrelated pillars: developing talent; building competitive business settings; promoting trade and investment; driving innovation, science and technology; and investing in infrastructure for growth.

The proposal aligns well with several of these priorities:

- **Developing Talent**: Construction of approximately 1,000 dwellings, associated infrastructure, and a neighbourhood centre will generate substantial employment over the construction period, creating opportunities for apprentices, tradespeople, and professionals. This will help sustain and develop the skills base of the local labour force.

- **Building Competitive Business Settings**: By bringing a large supply of new dwellings to market, the proposal will foster greater competition in the land and housing markets, supporting more efficient land use and improved housing choice within the Central Otago District.

- **Promoting Trade and Investment**: The scale of the development represents a major private sector investment of approximately $816 million, which signals confidence in the local economy and strengthens its attractiveness as a destination for further domestic and international investment.

- **Driving Innovation, Science and Technology**: The master-planned design of the development incorporates integrated transport networks, ecological enhancement, and sustainable infrastructure solutions. These reflect best-practice urban design and infrastructure planning, providing a model for future growth in the region and beyond.

- **Investing in Infrastructure for Growth**: The proposal includes significant investment in essential infrastructure such as stormwater management, wastewater treatment capacity, and supporting roads, cycling, and pedestrian networks. These upgrades will not only service the development itself but also strengthen the resilience and efficiency of the wider urban system.

In these ways, the proposal is strongly aligned with the Government's Going for Growth agenda, advancing national objectives for productivity, competitiveness, and sustainable urban expansion.

12.4. Investment Signal Effects

Finally, the development will provide a strong signal of confidence in the region's medium- to long-term economic outlook. Large, capital-intensive developments typically require detailed due diligence, long investment horizons, and confidence in future population growth, labour availability, and infrastructure provision. As a result, their delivery can act as a market signal to other investors that underlying economic fundamentals are sufficiently robust to support further activity.

Such signalling effects are particularly relevant in sectors characterised by high upfront costs and long payback periods, where investment decisions are sensitive to perceptions of risk and uncertainty. The establishment of a significant new development can help reduce perceived market risk by demonstrating that funding, consenting, and delivery barriers can be successfully navigated in the region. Over time, this can help bring forward or unlock complementary investment, including associated residential, commercial, or service-based development, as well as supporting infrastructure.

13. Project Acceleration

This section describes how the FTAA process would accelerate delivery of the proposal.

13.1. Timing of Economic Benefits

The proposal will progress considerably faster through the FTAA than would otherwise be the case. The FTAA establishes a streamlined approvals pathway with tighter statutory timeframes, coordinated decision-making, and, importantly, no merits-based appeals on decisions made by Fast-track Panels.

In contrast, delivering the proposal outside of the FTAA would likely involve a multi-stage and potentially appeal-prone process. Although the site is zoned for urban development under PC21, the proposal exceeds the scale and form of development enabled by that framework and would therefore require a further plan change and/or additional consenting process, resulting in substantial delays.

The FTAA (as strengthened by the Fast-track Approvals Amendment Act 2025) is specifically designed to accelerate nationally and regionally significant projects, reduce consenting uncertainty, and bring forward the timing of economic activity. For the proposal, this means enabling the project to commence much sooner than under a conventional consenting pathway, thereby bringing forward the one-off construction-related stimulus and any wider economic benefits outlined in this report.

14. Summary & Conclusion

This assessment has considered the full range of economic effects associated with the proposal, relative to a counterfactual in which the site continues to operate as a quarry.

From a quantitative perspective, the proposal generates a substantial net positive economic impact, including approximately $250 million in GDP (NPV) and a net increase of around 2,395 FTE-years of employment. These effects are driven primarily by construction activity, supported by ongoing commercial activity within the neighbourhood centre.

While the proposal results in the loss of existing quarry production, these effects are relatively modest in scale and are expected to be largely offset through redistribution of activity within the wider aggregates market.

Importantly, the quantified results do not fully capture the proposal's broader economic contribution. In particular, the development provides a significant and timely increase in housing supply, supports more competitive and efficient land market outcomes, and contributes to the development of a well-functioning urban environment.

The proposal also aligns strongly with relevant national policy direction and the Government's broader growth agenda, including through its contribution to infrastructure investment, employment, and regional development.

Taking these factors together, we consider that the proposal delivers significant regional economic benefits that clearly outweigh the identified costs and we support it on economic grounds.

14.1. FTAA Criteria Checklist

The following table identifies where the report addresses each of the criteria in sections 81-85 of the FTAA and the matters set out in Schedule 5, along with an indication of the degree of alignment.

Table 16: Assessment Against FTAA Criteria

Criterion	Signpost	Assessment Summary	Degree of Alignment
Contributes to the purpose of the Act – facilitates projects with significant regional or national benefits (s81; Sch 5 cl 17)	Sections 8–12	The proposal delivers significant regional economic benefits through a substantial construction programme, generating approximately $266 million in GDP and over 2,100 FTE-years of employment, alongside ongoing economic activity and a major contribution to housing supply. Additional benefits include improved housing affordability outcomes over time, increased land market competition, and support for coordinated, master-planned urban development. These outcomes align directly with the purpose of the FTAA.	**Very Strong**
Benefits outweigh adverse effects (s85 (3)-(4); Sch 5 cl 17)	Sections 10–12	The proposal delivers substantial and well-demonstrated economic benefits, with a quantified net GDP impact of approximately $250 million (NPV) and a net increase of around 2,395 FTE-years of employment. Identified adverse economic effects, primarily relating to foregone quarry production, are moderate in scale, largely transitional, and expected to be mitigated through alternative aggregate supply. On balance, benefits clearly outweigh costs.	**Very Strong**
Nature and scale of benefits, including economic, employment, environmental, cultural, and social (s81(4); Sch 5 cl 17)	Sections 8–12	The proposal generates significant economic and employment benefits at the regional level, alongside important social benefits through a substantial increase in housing supply, improved housing choice, and more efficient land market outcomes. It also supports the delivery and sequencing of infrastructure through a coordinated, master-planned approach. Environmental and cultural effects are addressed separately within the AEE and specialist reports.	**Very Strong**
Consistency with national direction and planning documents, including under the RMA (Sch 5 cl 17)	Sections 11–12	The proposal is strongly aligned with the NPS-UD, particularly in relation to housing supply, diversity, affordability, competitive land markets, and well-functioning urban environments. It also aligns with the Government's Going for Growth agenda and broader strategic objectives for regional development. Detailed statutory planning matters are addressed separately within the planning assessment.	**Strong**
Greatest weight given to purpose of FTAA (Sch 5 cl 17)	Sections 8–13	The proposal directly advances the purpose of the FTAA by facilitating a development that delivers clear and significant regional economic benefits, and by accelerating the timing of those benefits through a streamlined approvals process. The scale of benefits, combined with the certainty of delivery associated with a master-planned development, warrants substantial weight being given to the purpose of the Act.	**Very Strong**

15. Appendix A: About Multiplier Analysis

15.1. Introduction

Our assessment uses a widely known technique called multiplier analysis to estimate the GDP, jobs, and wages/salaries associated with one-time and ongoing economic activity enabled by the proposal, plus the GDP, jobs, and wages/salaries lost via foregone quarry production. The underlying economic multipliers come from detailed matrices called input-output (**IO**) tables, which show the interrelated supply chains comprising an economy. Specifically, IO tables show both:

- the set of inputs that each industry needs to produce one unit of its output, plus
- the industries and end-users to which each sector sells its output.

By leveraging these supply-chain relationships, IO tables enable the effects of a change in one sector to be traced throughout the economy to estimate its overall impacts, including flow-on effects.

15.2. Example

Consider the following example. Suppose a local construction company wins a new building contract. In addition to boosting its own workforce to complete the job, the company will also need to engage various subcontractors and to source building products from its own suppliers. However, some of those suppliers, in turn, may then need to source various inputs from their suppliers, and so on. Multiplier analyses trace all these supply-chain interdependencies so that the wider economic effects of the new building work can be properly estimated, including all flow-on effects.

15.3. Types of Effects Estimated

The economic impacts derived via multiplier analysis comprise three parts, namely:

- **Direct effects** – which capture the economic impacts of entities directly engaged to complete the project (e.g., the main building contractor); plus
- **Indirect effects** – which arise when the main contractor sources goods and services from their suppliers (i.e., subcontractors), who in turn may need to source goods and services from their own suppliers, and so on; and
- **Induced effects** – which occur when a share of the additional wages and salaries generated by the project (either directly or indirectly) are spent in the local/regional economy and therefore give rise to additional rounds of economic impacts.

As alluded to above, these effects are typically measured in terms of:

- **Contributions to value-added (or GDP).** GDP measures the difference between a firm's outputs and the value of its inputs. It captures the value that a business adds to its own inputs to produce its outputs. From an accounting perspective, GDP equals a firm's earnings before interest, tax, depreciation, and amortisation (**EBITDA**), plus the wages and salaries paid.

- **The number of FTEs employed** – this is measured in terms of full-time employees, which include both part-time and full-time workers.

- **Total wages and salaries paid to workers**, which are sometimes called 'household incomes.'

15.4. Importance for Assessing Construction Projects

Multiplier analysis is particularly useful for assessing the economic impacts of construction projects, because such a large proportion of the work is typically subcontracted to third parties, rather than all being done by the main contractor itself. Multiplier analysis therefore enables all the supply chain activity initiated by the main contractor to be properly captured to provide a comprehensive picture of overall economic impacts associated with its activities.

For context, according to the latest multipliers, for every dollar of GDP generated by the building construction sector, an extra $2.76 of GDP is generated in the industries supporting it.[9] Similarly, for every FTE directly employed in building construction, an extra 2.82 FTEs are employed in the sectors that comprise its supply chain. Accordingly, multiplier analysis is critical to capturing the overall effects of economic activity enabled (or forgone) by large-scale development proposals.

15.5. Multiplier Analysis Limitations & Mitigation Strategy

Despite the intuitive appeal and widespread use of multiplier analysis, it does face some well-known limitations. They include that it:

- **Assumes that businesses use inputs in fixed proportions,** i.e., without substituting towards more efficient options if/when they become available.

- **Ignores capacity constraints.** It assumes that labour, materials, and other inputs are always available when needed, which may be unrealistic in a tight economy.

- **Does not capture price effects.** Multiplier models are fixed-price frameworks, which ignore cost inflation, wage pressures, and so on.

Consequently, multiplier analysis is useful for showing how spending ripples through an economy's supply chains to produce both direct and flow-on economic impacts, but it is not – on its face – a precise forecast of real-world net benefits. To help address these limitations and ensure that our analysis is as robust as possible, we adopted the following mitigation strategies and measures. They seek to moderate the raw outputs of the multiplier analysis to provide more robust and defensible estimates of overall economic impacts.

Strategy 1: Ignoring Induced effects: Induced effects are – in our view – the least reliable of the three types of economic impact estimated by multiplier analysis, because much of that spending would have likely occurred regardless of the proposal. Moreover, including induced effects can cause multiplier

[9] As measured by the indirect effect, i.e., excluding induced effects.

analyses to produce implausible results, e.g., every $1 spent generates more than $1 of GDP. This is impossible, especially over the longer run, so we exclude induced effects entirely in our assessments.

Strategy 2: Scaling direct & indirect effects: We also scale down the estimated direct and indirect impacts of the proposal (on GDP, jobs, and wages) to reflect the impacts of potential capacity or resourcing constraints on their realisation.

Strategy 3: Using the most up-to-date multipliers: We regularly revise the industry-level multipliers used in our assessments to ensure they always reflect the latest official data, rather than relying on the 'official' IO tables from Stats NZ, which are for the year ended March 2020. Our multipliers, conversely, were derived from data covering the year ended September 2025.

Strategy 4: Maximising the value of foregone production: While not a direct response to the limitations of multiplier analysis *per se*, we further assume that foregone quarry production ceases immediately sitewide under the proposal. In practice, however, this may be phased out in a staged manner as the site is developed. This assumption helps maximise the estimated opportunity cost of the proposal and therefore adds another layer of conservatism.

Strategy 5: Applying conservative construction cost rates: Finally, while again not a direct response to multiplier limitations, we also estimate construction cost rates for the proposal using regional building consent data. These are widely understood to systematically understate the true cost (for tax efficiency reasons). This, in turn, reduces the estimated economic benefits of the proposal's one-off development.

Collectively, these mitigation measures make our analysis inherently conservative, which we consider appropriate to avoid the inadvertent overstatement of proposal benefits.

16. Appendix B: Housing Market Context

This section provides context on the local housing market.

16.1. Study Area

The study area adopted for this section corresponds to the Cromwell Ward, which comprises the following three Statistical Area 2 (**SA2**) units:

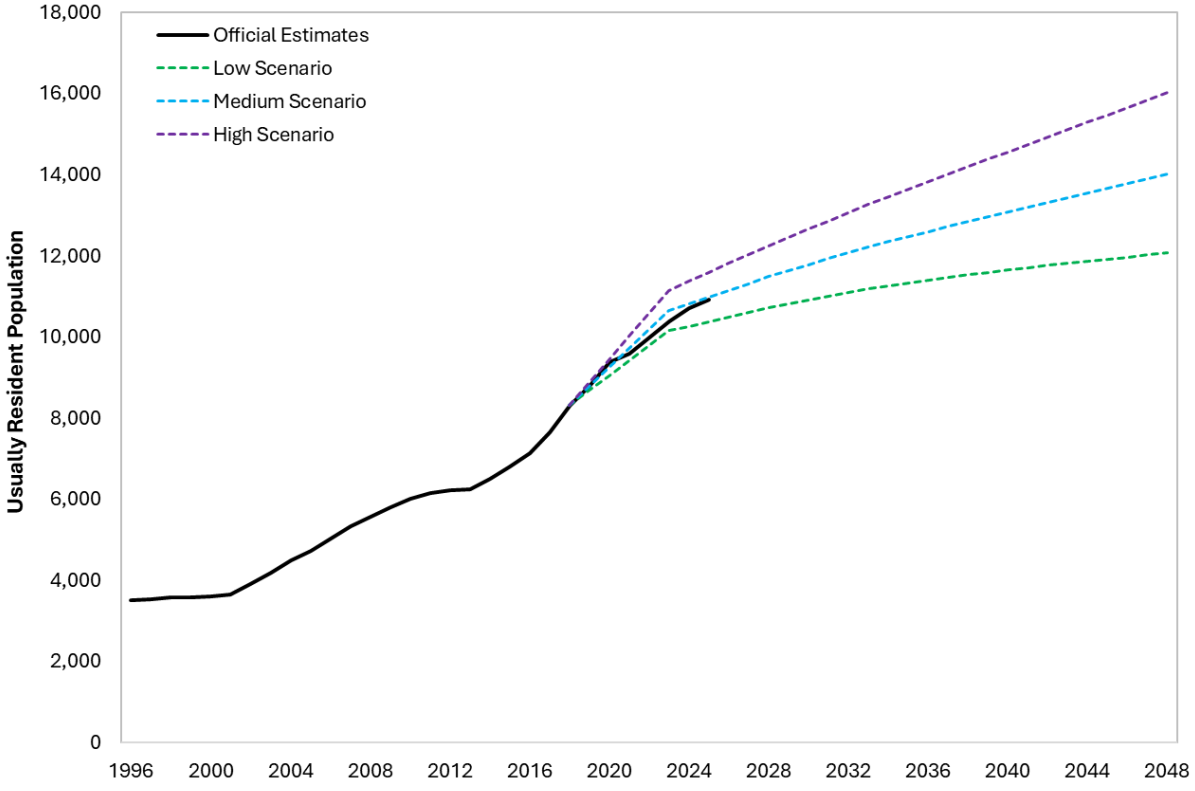
- Cromwell East;
- Cromwell West; and
- Lindis-Nevis Valleys.

The ward covers the Cromwell township plus surrounding rural land.

16.2. Population Growth

Cromwell's population has grown strongly over an extended period, more than trebling from 3,510 in 1996 to 10,910 in mid-2025. Figure 4 and Table 17 below provide the details, including the official estimates from 1996 to 2025, and the three official projection scenarios from 2018 to 2048.

Figure 4: Cromwell Ward Population Estimates to 30 June 2025 vs Official Projections (Source: Stats NZ)



Under the medium growth scenario, Cromwell's population is expected to grow by 69 percent over the 30 years to 2048, and by 93 percent under the high scenario. These forecast growth rates far exceed the rest of the district, where the population is expected to grow by 33 percent under the medium scenario. This highlights Cromwell's key role in meeting future growth needs for the district.

Table 17: Cromwell Ward Official Population Projections by Growth Scenario

Year	Low	Medium	High
2018	8,310	8,310	8,310
2023	10,150	10,640	11,150
2028	10,720	11,480	12,250
2033	11,180	12,220	13,260
2038	11,530	12,850	14,200
2043	11,820	13,440	15,110
2048	12,070	14,010	16,020
30-yr Change	**3,760**	**5,700**	**7,710**
30-yr % Change	45%	69%	93%
CAGR	1.3%	1.8%	2.2%

16.3. Demographic Summary

According to Census 2023, Cromwell's population and demography can be summarised as follows:

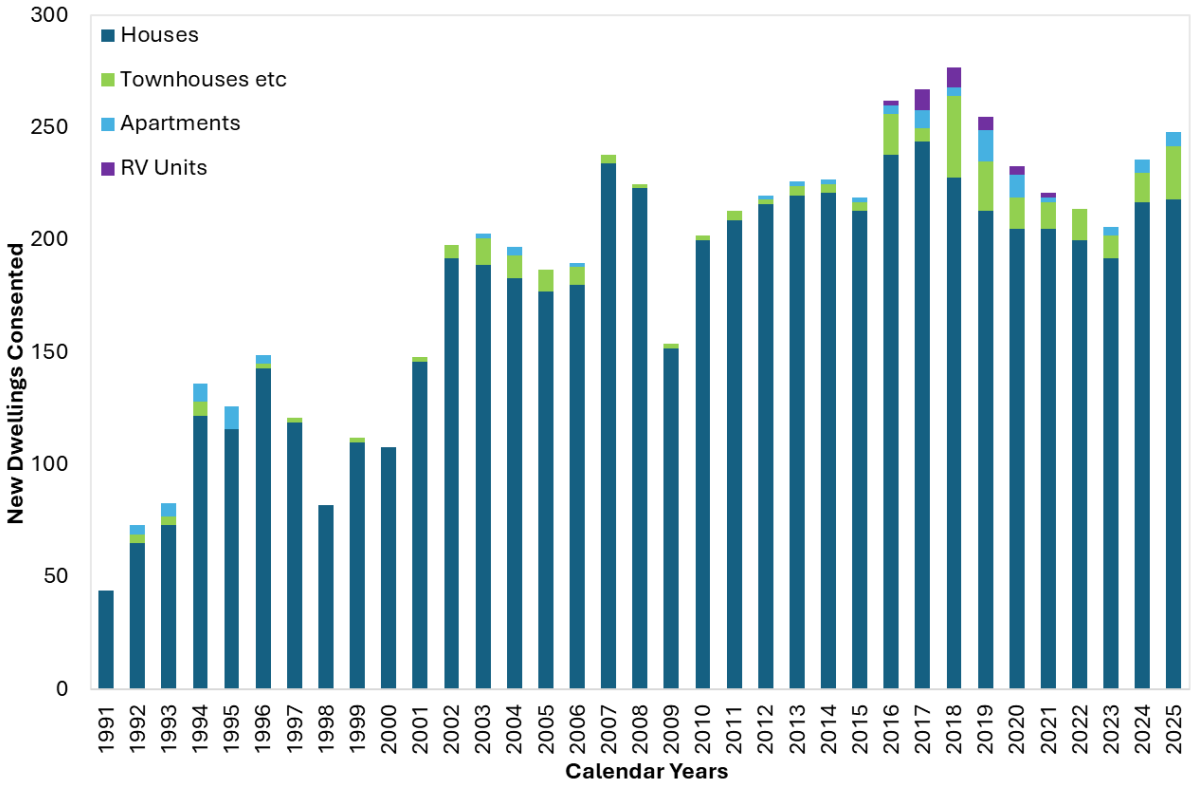
- Cromwell's population is younger than the rest of the Central Otago District (**COD**), with a median age of 41.7 years versus 49.7 years elsewhere.
- Despite that, Cromwell has a higher share of people aged 65-plus than the regional or national averages (21% vs 18% and 17%, respectively).
- Cromwell residents are increasingly likely to be born overseas, with that share rising from 13 percent in 2013 to 21 percent in 2023. Elsewhere in the district, only 15 percent were born overseas in 2023.
- Locals have different work characteristics to the rest of the COD, with only 12 percent employed in agriculture/forestry/fishing compared to 20 percent elsewhere.
- This is offset by Cromwell residents being more likely to work in either construction or manufacturing than the rest of the district (28% vs 18%, respectively).
- Cromwell residents have higher personal incomes than the rest of the COD ($47.5k vs $38.6k). They are also well above the regional and national averages (of $40.7k & $42.9k, respectively).
- This higher earning power is (naturally) also reflected in household incomes, with Cromwell's average in 2023 being nearly one-third higher than the rest of the district ($103k vs 78k).
- Cromwell residents are less likely to live alone than the rest of the COD (19% vs 26%), which produces a higher average household size of 2.5 people vs 2.3 elsewhere in the COD.
- Living costs have risen quickly over the last 10 years, with the median weekly rental value increasing from $250 in 2013 to $460 in 2023 (an annual average growth rate of 6.3%).

- Consequently, weekly rental values in Cromwell are now more than 50 percent higher than the rest of the district ($460 vs $300).

16.4. Building Consent Trends

We also used building consent data to analyse trends in the number, types, and sizes of new dwellings consented in the Cromwell Ward since 1991. To begin, Figure 5 plots the number of new dwellings consented by calendar year and dwelling type. It reveals that consent volumes have tended to move in cycles (like the national and regional property markets). However, the number of new dwellings consented has remained high since 2016. Between 2016 and 2025, 245 new dwellings have been consented annually on average, more than a third higher than the average consented annually during the 20 years prior (i.e., from 1995-2015).

Figure 5: Number of New Dwellings Consented in the Cromwell Ward by Year & Type



The data indicates that, despite a decline in the average floorspace of new dwellings and a shift towards smaller typologies such as apartments and townhouses, standalone homes remain the most popular typology by far, accounting for more than 90 percent of all new dwellings consented in the ward since 1991.

16.5. Affordability Trends

Despite a recent downturn, Cromwell's dwelling prices have now returned to near all-time highs. This is illustrated in Figure 6 below, which charts the quarterly median prices of ward dwellings using data published under the National Policy Statement on Urban Development (**NPS-UD**).[10]

[10] Available here: https://huddashboards.shinyapps.io/urban-development/

Figure 6: Cromwell Ward Median Dwelling Sales Price (12-month Rolling Average)

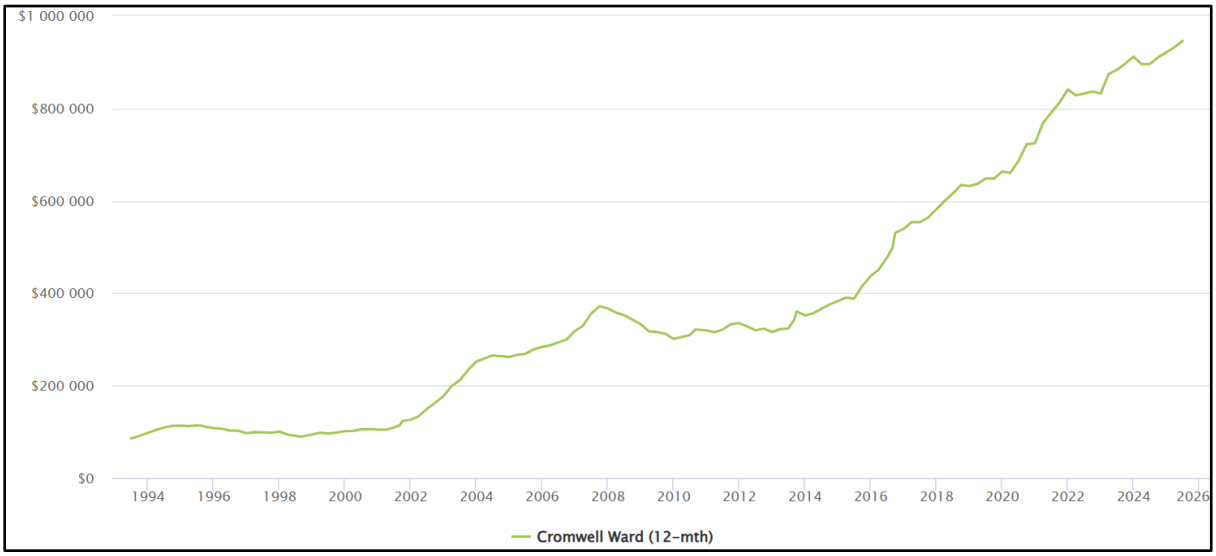
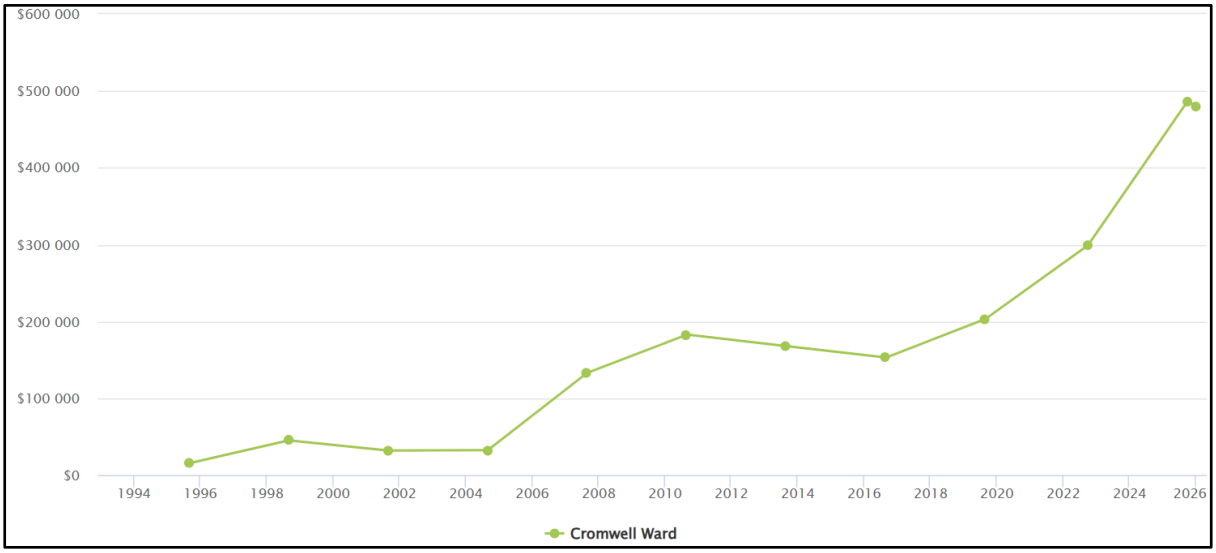


Figure 6 shows that the median dwelling sales price has risen significantly over the past decade. In fact, they have risen from $388,000 in mid-2015 to $946,000 by mid-2025, an increase of nearly $560,000 in just 10 years. This equals a compound annual growth rate (**CAGR**) of more than 9.3 percent, which is clearly unsustainable.

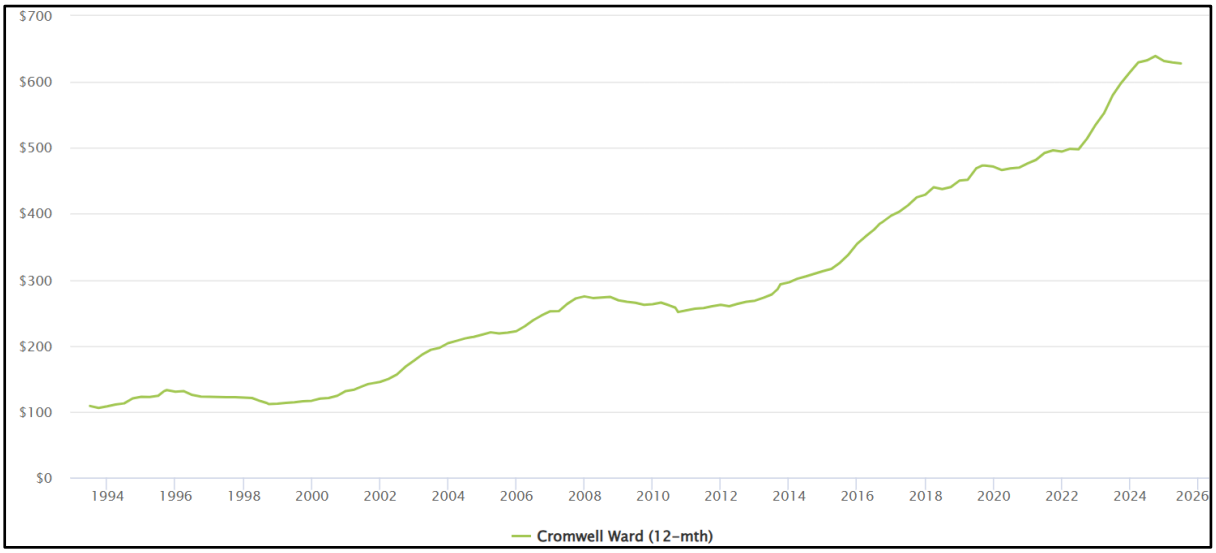
The ongoing increases in dwelling prices reflect strong underlying land value inflation, with values more than tripling in less than a decade, from approximately $153,000 in August 2016 to $486,500 in September 2025 (a CAGR of 13.6%). Figure 7 plots the trend over time since the mid-1990s.

Figure 7: Cromwell Ward Average Dwelling Land Value



Weekly rents have also grown steadily, increasing from approximately $330 in mid-2015 to about $630 by mid-2025, a CAGR of around 6.7 percent.

Figure 8: Cromwell Ward Average Weekly Rental Values (12-month Rolling Average)



Cotality's latest NZ Housing Affordability Report[11] provides insight into housing affordability at the district level. It shows that affordability in Central Otago District has been steadily worsening in the past decade, as growth in property prices continues to outstrip income growth. The median house price in the district is now 9.2 times the median household income. By comparison, the benchmark for affordability is a ratio of only three. Despite dropping mortgage rates and rising incomes, it now takes 54% of gross earnings to service a mortgage. In addition, it takes a staggering 12.2 years to save the deposit for a new home in Central Otago District.

[11] Available here: https://www.cotality.com/nz/resources/downloads/housing-affordability-report