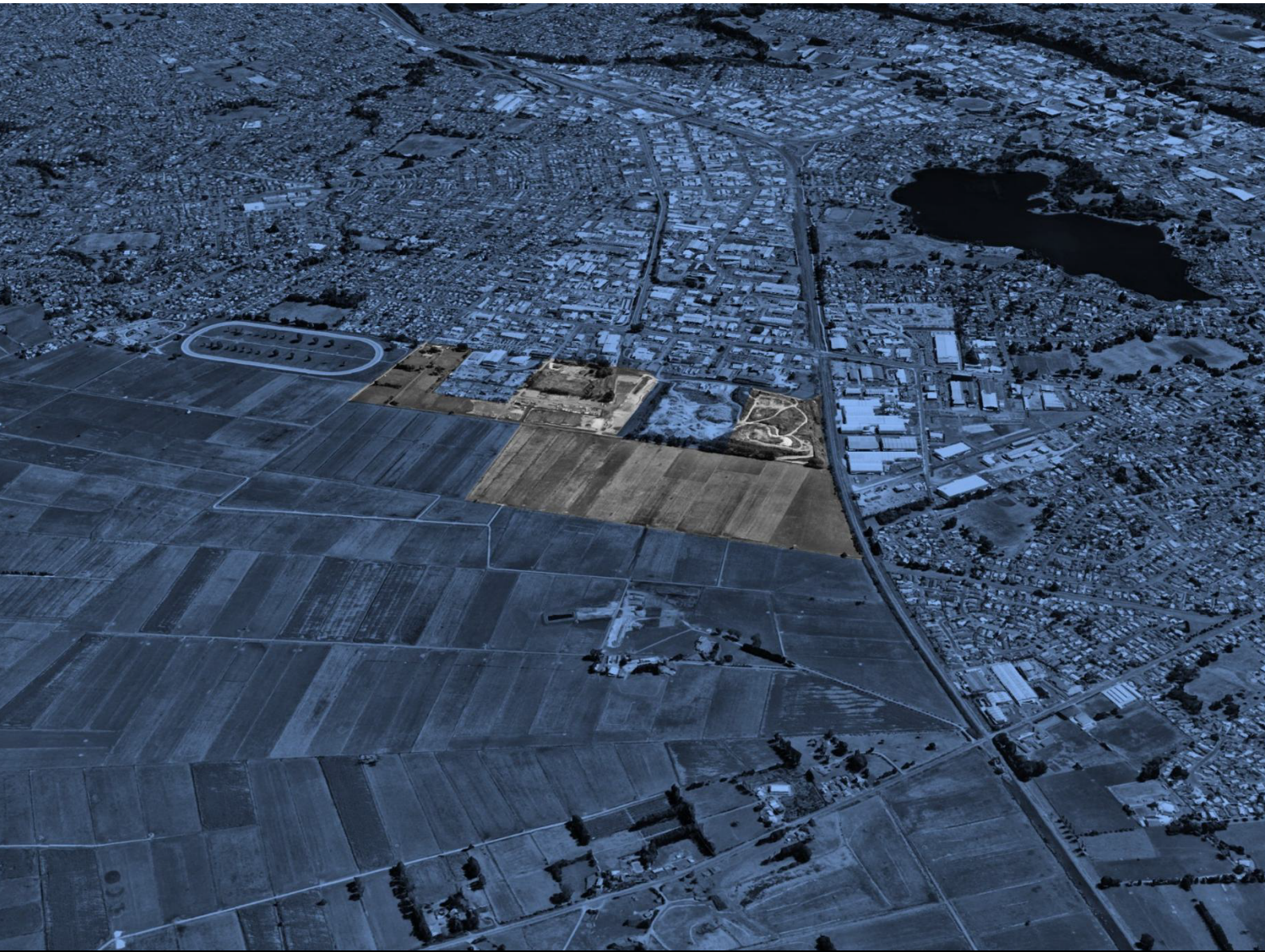




Final Report: 28 August 2026

Economic Assessment of Southern Links 1 - Industrial Development for Fast-track Substantive Application

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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

Executive Summary

Context

The Applicant seeks substantive approvals under the Fast-track Approvals Act 2024 (FTAA) for the Southern Links 1 project (SL1 or the Project), a combined development of approximately 106 hectares comprising residential and industrial components, located within the wider Southern Links Growth Cell in the Waipā District. This assessment relates to the industrial component of SL1, referred to as the Industrial Area and the Industrial Development in this report.

The proposal is a comprehensively master-planned and staged industrial development of the Industrial Area, comprising 22 serviced industrial lots of varying sizes, together with supporting roading, infrastructure, and stormwater management. The Industrial Area is located between Higgins Road and the North Island Main Trunk Railway line, and comprises approximately 60 hectares held in joint ownership, of which approximately 42 hectares is net developable area. The site currently accommodates a mix of pastoral dairy farming, rural lifestyle properties, waste management services, and a small area of existing vacant industrial land. This report assesses the economic effects of the proposal to inform consideration of its significance and merits under the FTAA.

Monetised Effects (TEV Framework)

Monetised effects are assessed using a Total Economic Value (TEV) framework over a 50-year horizon, with all values expressed in net present value (NPV) terms at an 8 percent discount rate. The results are summarised in the table below.

Table 1: Summary of Quantified TEV Costs and Benefits (NPV, \$m)

Direct Use Values	Costs	Benefits	Net Benefits
NPV of Construction GDP		\$205	\$205
NPV of Future Onsite GDP		\$2,176	\$2,176
NPV of Consumer Surplus		\$35	\$35
NPV of Foregone Rural GDP	-\$5		-\$5
Direct Use Sub-Totals	-\$5	\$2,417	\$2,412
Indirect Use Values	Costs	Benefits	Net Benefits
Loss of Ecosystem Services	-\$2		-\$2
Non-use Values	Costs	Benefits	Net Benefits
Loss of option/bequest value	-\$2		-\$2
Total Economic Values	Costs	Benefits	Net Benefits
TEV Summary	-\$9	\$2,417	\$2,408

Under the baseline scenario, the proposal delivers a net economic benefit of approximately **\$2.41 billion (NPV)**, comprising total benefits of approximately **\$2.42 billion** and costs of approximately **\$9 million**.

Benefits are dominated by future onsite GDP of approximately **\$2.2 billion**, reflecting the substantial ongoing employment and economic activity that industrial occupiers will sustain once the development is fully built out and occupied. Construction-phase GDP is estimated to contribute a further **\$205 million**, and consumer surplus gains from increased industrial land supply add approximately **\$35 million**.

Employment Effects

Over an indicative 12-year period, construction enabled by the proposal is estimated to support approximately 1,830 FTE-years of employment (equivalent to around 152 full-time workers per annum) and contribute around \$100 million in wages and salaries.

The proposal's most significant economic contribution lies in the ongoing employment and economic activity it will sustain once fully operational. At full build-out, industrial activity is estimated to support nearly 1,540 FTEs in ongoing employment and sustain around \$144 million in wages and salaries per annum.

Industrial Market Benefits

Beyond the quantified effects, the proposal delivers a range of significant industrial market benefits that are central to its regional significance:

- It enables a substantial increase in greater Hamilton's industrial land supply at a time when the city faces a projected long-term shortfall of industrial capacity and the development pipeline has moderated.
- It strengthens competition in the local industrial land market by introducing a large, comprehensively planned development that increases contestability and incentivises timely and efficient development by other landowners.
- It supports well-functioning urban environments by delivering employment land in proximity to planned residential communities within the growth cell, enabling coordinated infrastructure provision, and maximising the economic return on the Southern Links transport corridor.
- It generates agglomeration benefits by extending Hamilton's existing industrial base, supporting shared access to suppliers, improved labour market pooling, and reduced transaction costs between firms.

Wider Economic Benefits

The proposal also delivers a range of broader economic benefits:

- The ongoing industrial activity on the site will sustain a diverse workforce and provide career development pathways from entry-level through to technical and managerial roles.
- The proposal supports the delivery and sequencing of regionally significant infrastructure, including the Southern Links Road of National Significance and the Southern Wastewater

Treatment Plant, by providing a defined demand base that strengthens the business cases for these investments.

The proposal is also strongly aligned with the Future Proof Strategy¹ (which identifies the Industrial Area for industrial development and projects a long-term shortfall of industrial capacity), the Hamilton Urban Growth Strategy, and the Government's Going for Growth agenda. Its delivery signals confidence in the region's medium- to long-term economic outlook. The FTAA provides a streamlined approval pathway that materially accelerates delivery of all of these benefits relative to standard RMA processes.

Conclusion

Overall, the proposal delivers significant regional economic benefits that clearly outweigh its costs. The quantified benefits are substantial, the employment impacts are significant, and the broader qualitative benefits reinforce the proposal's contribution to industrial land supply and urban development.

The identified adverse economic effects are limited in scale, localised, and manageable. On balance, the proposal is strongly supported on economic grounds.

¹ A Waikato Regional Council growth strategy specific to the Hamilton, Matamata-Piako, Waipā, and Waikato sub-region.

1. Introduction

1.1. Context

Southern Links 1 (**SL1** or the **Project**) is a listed project under the Fast-track Approvals Act 2024 (**FTAA**). It comprises a combined development area of approximately 106 hectares, incorporating both residential and industrial components. This report relates to the industrial component, referred to herein as the **Industrial Area** (the land) and the **Industrial Development** (the development proposed on it).

The Project sits within the wider Southern Links Growth Cell, a contiguous land area of approximately 440 hectares on Hamilton's south-western edge, within the Waipā District and contiguous with Hamilton City Council's (**HCC**) boundary. The growth cell includes the Hamilton Southern Links Road of National Significance (**RoNS**) designation and, once fully developed, is estimated to accommodate more than 9,000 new homes, approximately 110 hectares of industrial land, several neighbourhood centres, and a network of open spaces and roading infrastructure.

The growth cell is divided into two parts by Collins Road: the **Southern Block**, which is intended primarily for residential development, and the **Northern Block**, which is proposed to accommodate a mix of residential and industrial activities. The Industrial Area lies within the Northern Block, between Higgins Road and the North Island Main Trunk Railway line. It comprises approximately 60 hectares held in joint ownership, and is currently used for a mix of rural and related activities.

The Applicant is seeking approval for a substantive application under the FTAA for the Industrial Development (the **proposal**): a comprehensively master-planned and staged industrial development comprising 22 serviced industrial lots, together with supporting roading, infrastructure, and stormwater management. The application includes all necessary resource consents under the Resource Management Act 1991 (**RMA**), including regional and district approvals where required.

Following listing of the Project under the FTAA in October 2024, the Applicant is now advancing the substantive application phase. This report provides the economic assessment required under the FTAA to assist the Expert Panel in evaluating the proposal's merits. It is focused on the Industrial Development; the residential component of SL1 is addressed in a separate assessment.

1.2. 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; refer also to s43(1)(b)(i); s81(2)(b))	The single purpose of the FTAA is <i>“to facilitate infrastructure and development projects with significant regional or national benefits.”</i> The Panel must have particular regard to whether projects achieve that purpose.
Balancing Benefits and Adverse Effects (s85)	The Panel may decline an approval if it considers the adverse impacts are out of proportion to regional or national benefits.
Extent 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 any relevant Government policy statement, including those under the 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.

1.3. Scope & Purpose of Report

This report assesses the likely economic effects of the proposal against the criteria in Table 2. It focuses on the regional benefits of the Industrial Development, including the proposal’s capacity to 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 approval under the FTAA.

1.4. Structure of this Document

The remainder of this document is structured as follows:

- Section 2 describes the subject site and its surrounding environment.
- Section 3 sets out the two options assessed: the proposal and the counterfactual.
- Section 4 describes the analytical framework and methodology used in the assessment.
- Section 5 presents the key inputs and assumptions underpinning the analysis.
- Section 6 estimates the one-time impacts of construction activity on GDP, jobs, and wages.
- Section 7 compares ongoing onsite economic activity under the proposal and counterfactual.
- Section 8 assesses the proposal’s industrial market effects.
- Section 9 discusses wider long-term economic impacts, including strategic alignment.
- Section 10 considers the effects of accelerated delivery through the FTAA.
- Section 11 presents the overall conclusion, including an assessment against the FTAA criteria.

2. About the Subject Site

This section describes the subject site and its surrounding environment.

2.1. Site Location and Description

The Southern Links Growth Cell is an emerging growth area on the south-western fringe of Hamilton City, within the Waipā District. It spans approximately 440 hectares, is contiguous with Hamilton City Council's south-western boundary, and extends from south Frankton to the south-western edge of Peacocke. The growth cell includes the Hamilton Southern Links RoNS designation.

The Industrial Area comprises approximately 60 hectares within the Northern Block, between Higgins Road to the west and the North Island Main Trunk Railway (NIMTR) line to the east. The site is bounded by existing industrial and commercial activities to the north, while the NIMTR line and the established residential and industrial areas of Frankton lie to the east. The Southern Links designation bisects the site, which upon completion will divide it into western and eastern portions.

The landholding is in joint ownership and comprises five land parcels.² Approximately 50 hectares of the site is currently used for pastoral dairy farming, with the remainder comprising rural lifestyle properties, waste management services, and a small amount of vacant industrial land.

The location of the Industrial Area within the Southern Links Growth Cell is shown in Figure 1 below.

Figure 1: Subject Site Location and Receiving Environment



² Legally described as Lot 1 and Lot 2 DP 603134 (c. 50 ha); Lot 1 DP 584573 (7.8 ha); and Lot 1 DP 396081 and Lot 1 DP 486522 (2.1 ha).

3. Development Options

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

3.1. Option 1: Proposal

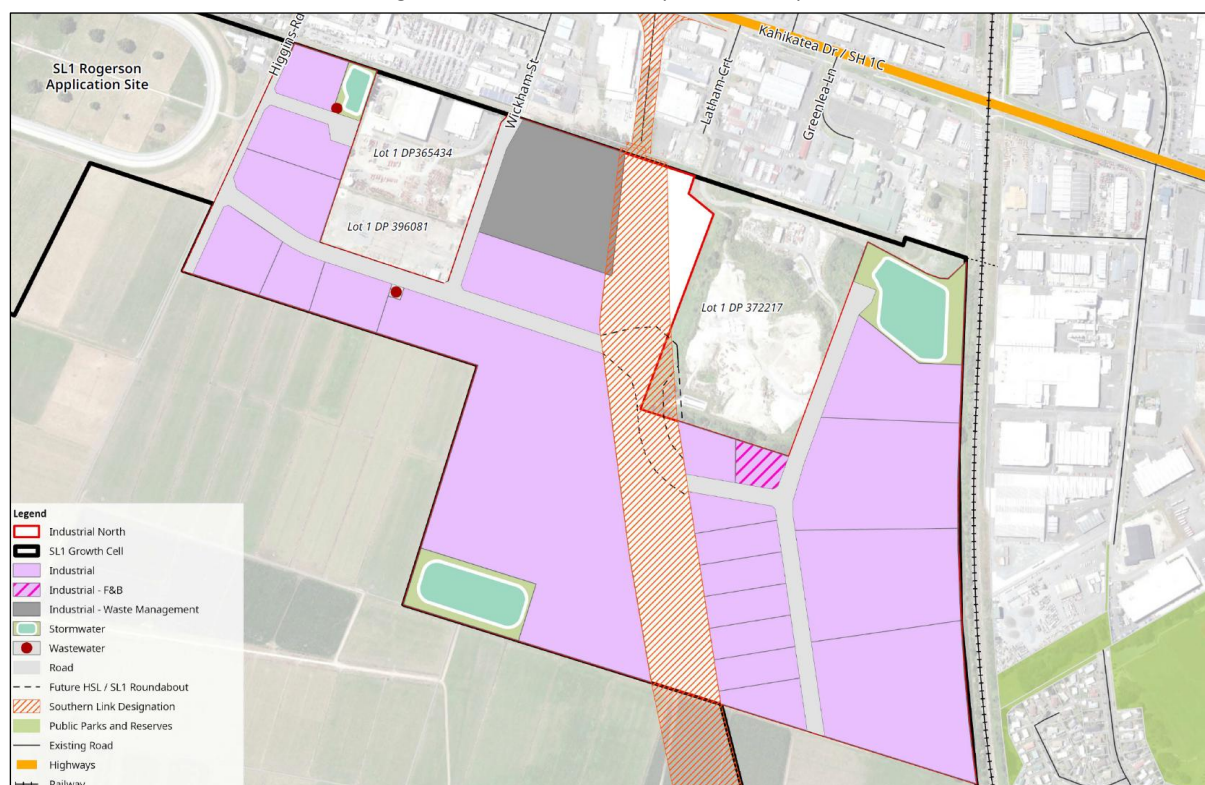
The proposal is a comprehensively master-planned and staged industrial development of the Industrial Area. It provides for the establishment of 22 serviced industrial lots of varying sizes and attributes, together with supporting roading, infrastructure, and stormwater management. The lots are sized to support a range of anticipated industrial activities, underpinned by bulk and location controls, from small trade and service businesses through to larger warehousing and distribution operations; none of the provided-for uses are heavy or noxious industry. A truck and logistics activity is proposed on Lot 7 to accommodate the landowner's existing national trucking operation, and a small food and beverage node is provided to serve the day-to-day needs of workers within the precinct.

The Industrial Development is underpinned by a series of design principles focused on creating a functional, efficient, and contiguous industrial precinct that capitalises on the locational attributes of the Southern Links Growth Cell, the Hamilton Southern Links designation, and future industrial growth. An integrated roading network connecting to both existing and planned infrastructure underpins this approach, with access provided via new roads connecting to Higgins Road and Wickham Street and provision for future connections to the wider growth cell roading network and the Southern Links corridor.

The proposal includes substantial enabling works to establish developable land, including bulk earthworks across the site and pre-loading to manage ground conditions. Stormwater is managed through an integrated system comprising wetlands, detention/attenuation devices, and treatment ponds. Access and integration with the surrounding Hamilton area is provided through a connected transport framework, including new intersections, roading, and walking and cycling networks, together with upgrades to existing transport infrastructure. The development will be serviced via a coordinated infrastructure strategy, including the extension and upgrade of public networks.

The proposed masterplan is shown in Figure 2 below.

Figure 2: Industrial North Proposed Masterplan



3.2. 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. Having regard to the detailed site assessment undertaken by Landsystems,³ and consistent with current land use patterns, we consider that the pastoral dairy farming activity occupying approximately 50 hectares of the site would continue under the counterfactual. The treatment of the remaining areas is set out below.

- HCC land:** While this parcel sits within the subject site, no change in activity is intended by HCC. It is therefore held flat across both scenarios, with no uplift attributed under the proposal and no loss attributed under the counterfactual.
- Future development land west of Wickham Street:** This land is currently in light industrial use (predominantly waste management services) and is identified in the scheme plan as future development land for industrial purposes. We have not modelled the existing activity on this land as a counterfactual loss, for the following reasons. First, the timing of its future redevelopment is uncertain, so any modelled cessation date over our 50-year analysis horizon would be arbitrary. Second, because the land is destined for the same industrial use as the wider development, the activity that would ultimately replace the existing use is not hypothetical, it is the ongoing industrial activity already captured as a benefit elsewhere in this assessment. Including the loss of the existing activity as a counterfactual cost would therefore also require recognising the corresponding proposal-side benefit once

³ Soil and Land Use Capability classification assessment, Landsystems. 16 June 2026.

redevelopment occurs, and the two would substantially offset. Treating this parcel as activity-neutral avoids double-counting and reflects the reality that the land's productive use is broadly continuous across both scenarios. To the extent any residual difference exists, the future industrial use following the Industrial Development is likely to be more intensive than the current waste-management activity, so the exclusion is more likely to understate than overstate the proposal's net benefits. We have therefore excluded these parcels from both scenarios.

- **Rural lifestyle and vacant industrial portions:** These portions are not considered to contribute to measurable economic activity and are assumed to remain in their existing state under the counterfactual, with no activity lost or gained.

On this basis, the counterfactual modelled in the remainder of this report is the continuation of pastoral dairy farming across approximately 50 hectares.

3.3. Key Differences

The two options represent materially different trajectories for the subject land, both in the intensity and nature of economic activity, plus their respective contributions to the wider community. Under the counterfactual, the site would continue to be used predominantly for pastoral dairy farming. By contrast, under the proposal, the site would transition to a master-planned industrial park, providing employment land within an identified growth cell. On that basis, the proposal would deliver a permanent increase in the region's industrial land supply and employment capacity.

These differences in land use give rise to a number of economic effects, which form the basis of the assessment that follows. They comprise a combination of monetised, employment, and qualitative effects, as summarised in Table 3 below.

Table 3: Economic Effects of the Proposal by Category

Category	Effect	Description
Monetised effects	Construction activity	One-off GDP, employment and income effects during development
	Ongoing onsite activity	Economic activity associated with industrial activity
	Consumer surplus	Benefits from increased industrial supply
	Foregone rural production	Loss of existing dairy farming activity
	Environmental / non-use values	Loss of ecosystem services and option values
Employment effects	Construction employment	FTE employment generated during build period
	Ongoing employment	Net change in employment relative to counterfactual
Qualitative effects	Industrial land supply	Increased industrial capacity in a constrained market
	Land market competition	Greater contestability and more responsive land supply
	Agglomeration effects	Benefits from clustering of industrial activity
	Infrastructure efficiency and support	Supports delivery and efficient use of infrastructure
	Strategic alignment	Consistent with key growth strategies and policy

4. Approach to Assessment

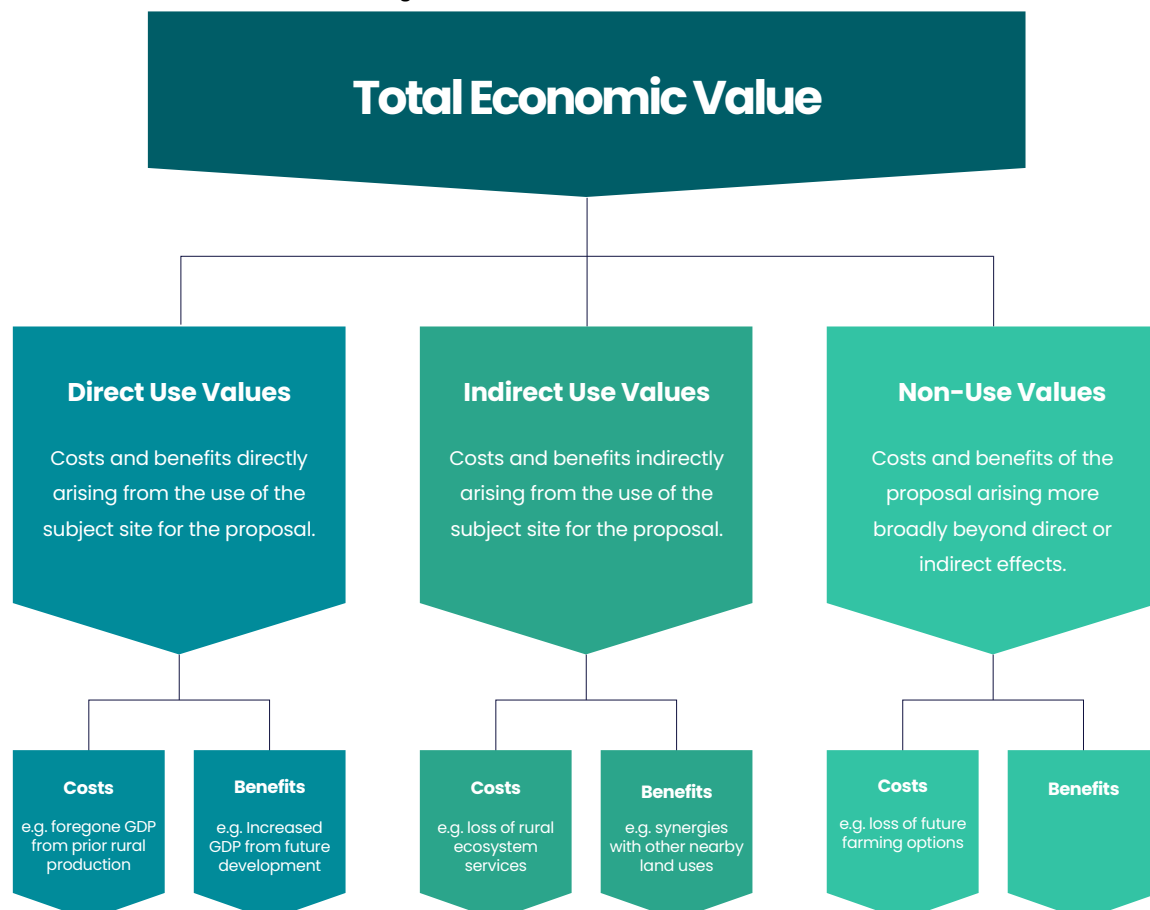
This section sets out the analytical framework and methodology used to assess the economic effects of the proposal. The approach has been developed iteratively over time to reflect our experience across numerous projects and the directions taken by expert panels on other fast-track applications. We note that the FTAA does not prescribe any particular economic methodology, and its evaluation framework is expressly a proportionality assessment (see s85(3)) rather than a mathematical balancing of monetised costs and benefits. Consistent with this, multiplier-based economic impact analysis of the kind applied here has been adopted in the majority of fast-track application economic assessments to date. The purpose of this assessment is to provide a robust, transparent and proportionate evaluation of the proposal's economic effects, with an emphasis on the gross economic benefits it would generate.

4.1. Summary of Overall Approach

Our assessment adopts the total economic value (TEV) framework to quantify the *monetised* costs and benefits of the Industrial Development relative to the counterfactual. The analysis is undertaken over a 50-year horizon, with all costs and benefits converted to net present values (NPV) at an 8% discount rate.

The TEV framework classifies monetised economic values as direct use, indirect use, or non-use values. An overview of this framework is illustrated in Figure 3, with further detail provided in **Appendix A**.

Figure 3: Overview of the TEV Framework



To ensure a conservative assessment, we assume that the proposal precludes rural production across the entire site from day one, rather than reflecting a staged development approach.

4.2. Mapping of Monetised Costs & Benefits to TEV Framework

The table below maps the monetised costs and benefits of the proposal to the TEV categories outlined above. In summary, the key monetised benefits comprise construction-phase economic activity, ongoing onsite economic activity, and consumer surplus associated with increased industrial supply. The principal monetised cost is the loss of rural production, along with associated environmental and non-use values.

Table 4: Mapping of Proposal Economic Costs and Benefits to TEV Elements

TEV Category	BENEFITS of Proposal vs Counterfactual	COSTS of Proposal vs Counterfactual
Direct Use Value	Construction-phase economic activity (GDP)	Loss of rural production (dairy)
	Consumer surplus from increased industrial supply	None considered
	Ongoing onsite economic activity (industrial)	None considered
Indirect use value	None considered	Loss of ecosystem services (e.g. regulating functions)
Non-use value	None considered	Loss of option and bequest values associated with rural land

4.3. Treatment of Employment and Qualitative Effects

While wages and salaries associated with employment are reflected within the GDP-based measures included in the monetised analysis, employment itself (measured in FTEs) is assessed separately from the TEV framework. Other economic effects that are not readily monetised are assessed qualitatively. Together, these approaches ensure that all material economic effects are captured in the analysis.

4.4. Use of Multiplier Analysis

We use a widely known technique called multiplier analysis to quantify the proposal's one-off effects on GDP, jobs, and wages (plus the effects of foregone rural production). It utilises the supply chains that comprise an economy so that a change in one sector can be traced through to estimate its overall impacts, including flow-on (i.e., supply chain) effects. Multiplier analysis 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.

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.

Despite the intuitive appeal and widespread use of multiplier analysis, it does face some limitations. Our assessment recognises these and seeks to mitigate them in several ways so that the proposal's economic benefits are not systematically overstated. See **Appendix B** for further details.

5. Key Inputs & Assumptions

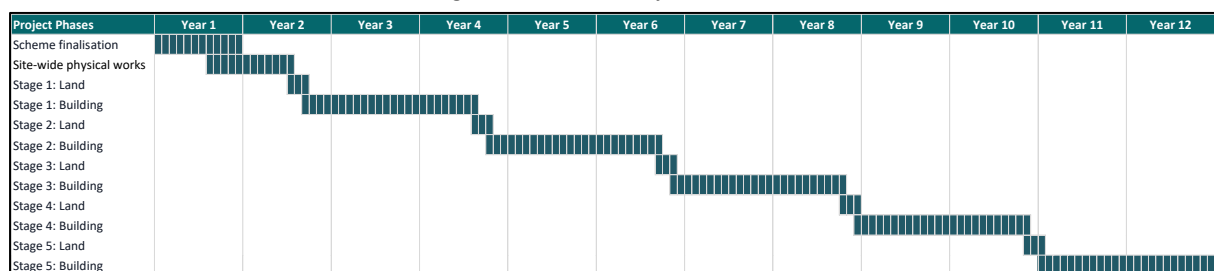
5.1. Introduction

This section sets out the key inputs and assumptions used in our economic assessment, including the anticipated staging and timing of development, net developable area (**NDA**), estimated construction costs, and the value of foregone rural production. Where possible, inputs have been drawn from project-specific data and complemented with the latest available industry data to fill any gaps. All cost figures are expressed in current (2026) dollars unless otherwise stated. All values reported in tables are calculated from unrounded model outputs and are individually rounded for presentation; as a result, components may not sum exactly to the totals shown.

5.2. Staging & Timing

For modelling purposes, development is assumed to take place over five stages, delivered over a period of approximately 12 years in total. Development commences with a period of scheme finalisation and site-wide enabling works, including bulk earthworks and trunk infrastructure. Within each of the five stages, land development is assumed to take approximately three months, with building activity then occurring over approximately 24 months. Each subsequent stage commences before the previous one finishes, enabling a degree of overlap that ensures a seamless stream of supply over time. Figure 4 illustrates this indicative timeline.

Figure 4: Indicative Project Timeline



The staging and timing adopted in this assessment reflect an illustrative delivery programme based on the current masterplan. We note that the actual sequencing of later stages may be influenced by infrastructure triggers outside the Applicant's direct control – for example, thresholds linked to the delivery of Southern Links or alternative upgrades to the surrounding network. Our analysis is not intended to model these contingencies on a conditional basis; rather, it presents the economic effects under a single representative timeline. Importantly, such triggers would affect the timing of activity rather than its overall magnitude: deferral of later stages would shift when the associated economic impacts occur, with a modest effect on net present values through discounting.

5.3. Anticipated Yield

The latest masterplan indicates a notional yield of approximately 22 serviced industrial lots. Table 5 below derives the net developable area (**NDA**) enabled by the proposal. From a total site area of approximately 60.2 hectares, an infrastructure allowance of approximately 24 percent (14.6 hectares) is deducted to account for roading, stormwater management, and other supporting infrastructure, along with the HCC waste management lot (3.7 hectares), which is held neutral across both scenarios.

This yields an NDA of approximately 41.9 hectares, comprising approximately 41.4 hectares of industrial land and a 0.46-hectare food and beverage node.

Table 5: Derivation of Net Developable Area

Measure	Value (ha)
Site area	60.20
Less infrastructure allowance (24%)	-14.60
Less HCC waste management	-3.74
Total net developable area	41.86
Industrial	41.40
Food & beverage node	0.46

Based on current development patterns within Hamilton City's industrial areas,⁴ we adopt an indicative floor area ratio (FAR)⁵ of 0.4 for the industrial land, and 0.5 for the small food and beverage node. Applying these FARs to the NDA results in approximately 168,000 m² of gross floor area (GFA) being enabled by the proposal over time, as summarised in Table 6 below.

5.4. Construction Costs

Building costs are drawn from regional benchmarks for industrial construction.⁶ A cost escalation rate of 3 percent per annum is applied in the modelling to account for construction cost inflation over the development period. Because construction is staged rather than occurring all at once, the total cost reflects the cumulative effect of this escalation as later stages are delivered at progressively higher price levels. Table 6 summarises estimated GFA and construction costs, including cost escalation.

Table 6: Estimated Construction GFA & Total Cost

Development Type	Total GFA (m ²)	2026 Build Cost (\$/m ²)	Construction Cost (\$m)
Industrial	165,605	\$2,000	\$409
Food & beverage	2,315	\$4,200	\$14
Total	167,920	n/a	\$422

Total construction expenditure across all stages is estimated at approximately \$422 million, inclusive of cost escalation.

5.5. Other Development Costs

The development will require significant upfront investment in site-wide enabling works before staged construction can commence, including bulk earthworks, trunk stormwater infrastructure, and the formation of the primary roading network.⁷ In addition, each stage will require further detailed design, local civil works, and other stage-related expenditures. This suite of broader costs was estimated using

⁴ According to Cotality's *Property Guru* database.

⁵ The floor area ratio (FAR) is calculated by dividing GFA by land area. The FAR for each property was computed, and the average of these values was taken as the representative FAR.

⁶ Build costs were based on average values over the two years to January 2026 in the Waikato region, as reported in building consent data.

⁷ The infrastructure costs incorporated in this assessment reflect a modelling estimate of the upgrades reasonably attributable to the proposal, including relevant works outside the site and any interim access arrangements. They are illustrative of the order of cost involved rather than a precise account of the final works programme.

project-specific information wherever possible, with any gaps filled via broad industry averages gleaned from our experience with similar developments across New Zealand.

5.6. Total Estimated Proposal Cost

Table 7 brings together the estimated total development cost of the proposal, which is approximately \$525 million. This expenditure forms the basis for the one-time economic impact assessment presented in Section 6.

Table 7: Summary of Estimated Project Investment

Cost Category	Estimated Cost (\$m)	Share of Cost
Scheme finalisation	\$8.7	1.7%
Site-wide enabling works	\$34.9	6.6%
Staged land development costs	\$42.2	8.0%
Staged building-related costs	\$16.9	3.2%
Construction costs	\$422.1	80.4%
Total estimated project cost	\$524.8	100.0%

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

As outlined above, the proposal enables the development of approximately 168,000 m² of new floorspace at a total cost of approximately \$525 million. Delivery is expected to occur over an indicative period of approximately twelve years. This section estimates the one-time economic impacts of this activity.

6.1. Estimated Gross Impacts

The table below presents the estimated one-off (gross or unscaled) direct and indirect 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 Gross One-Time Economic Impacts by Stage

Employment (FTE-Years)	Direct	Indirect	Total
Upfront/Site-wide	75	83	158
Stage 1	107	255	362
Stage 2	114	272	385
Stage 3	121	289	410
Stage 4	129	308	437
Stage 5	157	376	533
Project Totals	702	1,582	2,284
Wages & Salaries (NPV \$m)	Direct	Indirect	Total
Upfront/Site-wide	\$8	\$8	\$16
Stage 1	\$8	\$18	\$26
Stage 2	\$7	\$17	\$24
Stage 3	\$6	\$15	\$21
Stage 4	\$6	\$14	\$19
Stage 5	\$6	\$14	\$20
Project Totals	\$41	\$85	\$126
GDP (NPV \$m)	Direct	Indirect	Total
Upfront/Site-wide	\$17	\$16	\$34
Stage 1	\$16	\$37	\$53
Stage 2	\$15	\$33	\$48
Stage 3	\$13	\$30	\$43
Stage 4	\$12	\$27	\$39
Stage 5	\$12	\$28	\$40
Project Totals	\$86	\$171	\$257

In gross terms, the proposal's development activity is estimated to support a total of approximately 2,284 FTE-years of employment, generate around \$257 million in GDP, and contribute approximately \$126 million in wages and salaries over the twelve-year development period. This is equivalent to an average of approximately 190 full-time positions sustained for each year of the programme.

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

6.2. Scaled Impacts

As discussed in Appendix B (Section 13.5), we scale down the direct and indirect effects presented above to reflect potential resourcing or capacity constraints that could affect their realisation. Three scenarios are run: a low scenario (where we scale gross impacts down by 50%), a baseline scenario (which scales them down by 20%), and a high scenario (that applies no scalar). The estimated net impacts under each scenario are summarised below.

Table 9: Scaled One-Time Economic Impacts by Scenario

Low Scenario	Direct	Indirect	Total
Employment (FTE-Years)	351	791	1,142
Wages & Salaries (NPV \$m)	\$20	\$43	\$63
GDP (NPV \$m)	\$43	\$86	\$128
Baseline Scenario	Direct	Indirect	Total
Employment (FTE-Years)	562	1,266	1,828
Wages & Salaries (NPV \$m)	33	68	\$101
GDP (NPV \$m)	69	137	\$205
High Scenario	Direct	Indirect	Total
Employment (FTE-Years)	702	1,582	2,284
Wages & Salaries (NPV \$m)	\$41	\$85	\$126
GDP (NPV \$m)	\$86	\$171	\$257

Under the baseline scenario, the proposal is estimated to generate one-time impacts of approximately 1,828 FTE-years of employment, \$205 million in GDP, and more than \$100 million in wages and salaries. This is equivalent to approximately 152 full-time positions sustained for each year of the twelve-year development programme.

Even under the low scenario, impacts remain substantial, with approximately 1,142 FTE-years of employment, \$128 million in GDP, and \$63 million in wages. The range across scenarios reflects uncertainty about the extent of displacement, but in all cases the one-time economic contribution of the proposal is significant at a regional scale.

6.3. Summary

The proposal will generate substantial one-time economic impacts during the twelve-year development period. Under the baseline scenario, construction activity is estimated to support nearly 1,830 FTE-years of employment, contribute around \$205 million in GDP, and generate about \$100 million in wages and salaries.

7. Future Onsite Economic Activity

This section compares the ongoing economic activity that would be generated onsite under the proposal with the activity that could hypothetically be sustained under the counterfactual. The difference represents the opportunity cost of the proposal in terms of foregone productive output.

7.1. Future Activity Under Proposal

The proposal is an industrial development that, once fully built out and occupied, will generate significant ongoing economic activity on the site. To estimate this activity, we have applied employment density benchmarks for light industrial and food & beverage retail uses, drawing on observed patterns within Hamilton City's existing industrial areas, and overlaid the relevant economic multipliers to capture both direct and indirect (supply chain) effects.

Estimated Annual Production

Table 10 shows the estimated ongoing annual economic activity generated by the proposal's future activity once at full operation.

Table 10: Estimated Annual Onsite Economic Activity Under the Proposal

Impact	FTEs	Wages (\$m)	GDP (\$m)
Direct	782	\$72	\$137
Indirect	755	\$73	\$158
Direct + Indirect	1,537	\$144	\$296

At full operation, the proposal is estimated to sustain total annual employment of more than 1,535 FTEs (including flow-on effects), generate around \$296 million in GDP, and support wages and salaries of approximately \$144 million. These are significant figures, reflecting the labour-intensive and supply-chain-rich nature of industrial activity.

NPV Summary

Industrial activity on the site is modelled as commencing progressively in line with the staged delivery of lots and buildings described in Section 5.2. The first stage of building construction is expected to be completed approximately four years from the project start, with subsequent stages completing at roughly two-year intervals. Ongoing economic activity is therefore modelled as ramping up over the development period rather than commencing all at once. Consistent with the approach set out in **Appendix B**, a baseline scaling factor of 80 percent is applied to account for the possibility that not all gross activity represents net additional economic output.

On this basis, the net present value of ongoing onsite economic activity under the proposal is summarised in Table 11 below.

Table 11: Activity Sustained by the Proposal – NPV Summary

Impact	FTEs	Wages (\$m)	GDP (\$m)
Direct	36,161	\$527	\$1,010
Indirect	34,922	\$534	\$1,166
Direct + Indirect	71,082	\$1,061	\$2,176

In net present value terms, the proposal is estimated to support approximately 71,080 FTE-years of employment over the analysis period, contribute around \$2.2 billion in GDP, and generate approximately \$1.1 billion in wages and salaries. These ongoing impacts dwarf the one-time construction impacts, and represent the single most significant economic contribution of the proposal.

7.2. Future Activity Under Counterfactual

As set out in Section 3.2, the counterfactual assumes that the dairy farming portion of the site would continue to operate at approximately its current level of production. We model production across the full 50 hectares currently used for that purpose, notwithstanding the imminent development of the Southern Links transport corridor through the centre of the site, which will bisect the productive area and constrain its ongoing utility for farming.

Table 12 below shows the estimated annual per hectare rural production for the subject site under the dairy farming scenario, based on publicly available industry data for the Waikato region.

Table 12: Estimated Rural Production for Subject Site

Metric	Per Hectare
Milksolids (kg)	1,100
Milksolids (\$/kg)	\$9.7
Gross Output (\$) ⁸	\$10,670
GDP (\$)	\$4,360
FTEs	0.01
Wages and Salaries (\$)	\$980

Estimated Annual Production

Applying these metrics to the 50-hectare dairy farming area yields the total estimated annual economic activity that the site could hypothetically sustain under the counterfactual. The results are presented in Table 13 below.

Table 13: Estimated Annual Production of Counterfactual Activity

Impact	FTEs	Wages	GDP
Direct	0.6	\$50,000	\$220,000
Indirect	0.9	\$80,000	\$175,000
Direct + Indirect	1.4	\$130,000	\$395,000

Accordingly, the counterfactual could theoretically sustain total annual employment of approximately one FTE, generate around \$0.4 million in GDP, and support wages and salaries of approximately \$0.1 million.

As discussed in Appendix A, the IO-based estimates of GDP, employment, and wages capture approximately two-thirds of the total economic value for the agriculture ecosystem. To account for the additional regulating and other ecosystem service values not reflected in standard economic output metrics, an uplift of approximately 49 percent is therefore applied to the GDP estimates for

⁸ The assumed dairy output of \$10,670 per hectare is based on the latest farmgate price of \$9.70 (\$9.40 - \$10.00 range midpoint) per kg of milk solids. Lower prices will lead to lower output per hectare, and vice versa.

the dairy farming scenario. This adjustment is reflected in the *indirect use value* row in the summary table below.

50-Year NPV Summary

Modelling the counterfactual over a 50-year period, and discounting at 8 percent, yields the following net present value estimates.

Table 14: Counterfactual Production – 50-Year NPV Summary

Metric	Direct	Indirect	Total
FTE-Years	28	44	72
NPV Wages (\$m)	\$0.6	\$1.0	\$1.6
NPV GDP (\$m)	\$2.7	\$2.2	\$4.9
NPV Indirect (\$m)	\$1.0	\$0.8	\$1.9

In net present value terms, the counterfactual could theoretically support approximately 72 FTE-years of employment over 50 years, \$5 million in GDP, and \$2 million in wages. The indirect use value uplift, capturing the broader ecosystem service values, adds a further \$2 million.

7.3. Net Future Onsite Activity

The table below compares the ongoing economic activity generated under the proposal at full build out with the foregone rural production under the counterfactual, to derive the net change in future onsite economic activity.

Table 15: Net Future Onsite Economic Activity – 50-Year NPV Summary

Activity	FTEs	Wages (\$m)	GDP (\$m)
Future Onsite Activity	71,082	\$1,061	\$2,176
Foregone Rural Production	-72	-\$2	-\$5
Net Future Onsite Activity	71,011	\$1,059	\$2,171

On a net basis, the proposal results in a transformative change in the economic productivity of the site. The industrial development is estimated to generate approximately \$2.2 billion more in GDP, support around 71,000 more FTE-years of employment, and produce approximately \$1.1 billion more in wages and salaries than would be sustained under continued dairy farming over the same period. The foregone rural production, at approximately \$5 million in GDP and 72 FTE-years over 50 years, is negligible in this context.

8. Industrial Market Impacts

This section assesses the proposal's effects on the local industrial market.

8.1. Market Context and Implications for the Proposal

Hamilton occupies a central position within New Zealand's Golden Triangle, the Auckland-Hamilton-Tauranga corridor that accommodates approximately half of the country's population and a substantial share of its freight, logistics, and industrial activity.⁹ The city's industrial sector has grown steadily over the past 25 years, with employment increasing from approximately 19,600 to 31,700 between 2000 and 2025,¹⁰ a compound annual growth rate of around 1.9 percent. Growth has been strongest in construction and logistics-related activity, both of which are land-extensive uses that typically require good access to the strategic roading network and relatively large, flexible sites.

Despite this growth, Hamilton's industrial property market remains relatively constrained. Industrial vacancy across monitored precincts stood at approximately 2.4 percent at the end of 2025,¹¹ below the level typically associated with a balanced market.¹² Demand for modern, high-quality premises remains strong, and new supply approvals in the Waikato region have declined by approximately 50 percent over the past two years.¹³ While several emerging precincts, including Ruakura and the Hamilton Airport area, are expected to contribute additional supply over the medium term,¹⁴ maintaining an adequate pipeline of well-located industrial land will be important to support Hamilton's continued role as a logistics and distribution hub within the Golden Triangle.

Against this backdrop, the proposal represents a meaningful addition to Hamilton's industrial land supply within a strategically identified growth cell. Its location adjacent to the future Southern Links corridor, and in proximity to established industrial areas in Frankton, provides a strong basis for long-term occupier demand. By bringing forward new employment land at a time when the market is relatively tight and the development pipeline has moderated, the proposal supports the efficient functioning of Hamilton's industrial economy and the wider freight and logistics networks that depend on it.

8.2. Other Industrial Projects in the Wider Area

Several other industrial projects in and around Hamilton are at various stages of the FTAA pipeline, including capacity within the wider SL1 growth cell, the industrial component of the Ruakura 2 (R2) growth cell, and the Te Kowhai East industrial node, alongside the emerging Ruakura and Hamilton Airport precincts noted above. We anticipate a Panel may wish to understand how this prospective supply bears on the assessment, and offer the following observations.

First, the quantum of supply represented by these projects is speculative as at the date of this report. Listing or referral under the FTAA confers no certainty of approval, approval confers no certainty of

⁹ Goodman & Yeoman. (2025). *HCC Industrial Land Projections*.

¹⁰ Statistics NZ New Zealand business demography statistics.

¹¹ CBRE. (2026). *Hamilton industrial market overview*.

¹² Colliers. (2025). *Auckland Industrial Colliers Essentials*.

¹³ Colliers. (2025). *Waikato Regional Colliers Essentials 1H 2025*.

¹⁴ Colliers. (2025). *Waikato Regional Colliers Essentials 1H 2025*.

delivery, and build-out of large industrial precincts occurs over many years and in response to occupier demand. A consent is an option, not an obligation, and the probability of full, timely realisation is well below certainty. Limited weight should accordingly be placed on unrealised pipeline supply.

Second, this prospective supply must be read against a market that is currently tight – industrial vacancy of approximately 2.4 percent sits below the level associated with a balanced market, regional supply approvals have roughly halved over two years, and the Future Proof Strategy projects a long-term shortfall of industrial capacity. Even with the pipeline delivering as expected, the strategy identifies a need for substantial additional business land across the sub-region. The relevant question is therefore not whether other projects might also contribute supply, but whether the market can absorb supply from multiple concurrent sources. The evidence indicates it can, and benefits from doing so: Objective 2 of the NPS-UD seeks competitive land markets precisely because capacity spread across many independent sites and owners disciplines pricing and release rates in a way concentrated ownership does not. Concurrent projects are in this sense complements rather than substitutes.

Third, the costs of any over-provision of industrial land are modest, while the costs of under-provision are significant and difficult to reverse. Industrial land is a finite urban resource that, once converted to other uses, is rarely recovered; well-located employment land held in reserve carries little public cost, whereas a binding shortage constrains business establishment, expansion, and relocation, with flow-on effects for productivity and employment. Discounting credible supply on the basis that other speculative supply may eventuate would risk entrenching exactly the tight-market conditions the proposal helps to relieve.

8.3. Overall Contribution to Industrial Land Supply

The proposal acknowledges and directly responds to the need for more industrial land to meet growth in demand over time, by enabling approximately 42 hectares of net developable area and approximately 168,000 m² of new industrial floorspace. In our view, this represents a highly significant contribution to local and regional industrial land supply. It is worth noting that many of the benefits discussed elsewhere in this section stem directly from this supply contribution and are therefore inherently interrelated.

8.4. Consumer Gains from the Proposal

One of the direct economic effects of a large-scale development is the benefit it creates for purchasers in the relevant market. In economics, this is commonly described as consumer surplus: the difference between what a buyer would have been willing to pay for a good or service and what they actually pay. Measured across all transactions in a market, it provides a useful indication of the total benefit that buyers receive.

A development proposal can affect that benefit by changing market supply and, in some cases, market demand. The most direct effect is typically on supply: by introducing additional industrial floorspace, the proposal increases the quantity of space available in the market. Large-scale developments may also attract some additional demand, because they can bring to market premises, locations, or combinations of uses that were not previously available. Where the increase in supply is greater than any associated increase in demand, the proposal will tend to increase total market activity and place

downward pressure on prices relative to the counterfactual, increasing the benefit accruing to occupiers and purchasers.

Our assessment measures that effect by estimating consumer surplus both with and without the proposal and comparing the two results. The difference represents the proposal's net benefit to consumers and is treated as a direct use benefit within the broader total economic value framework. While economic theory also recognises a corresponding benefit to sellers, that aspect is addressed elsewhere in the analysis through GDP-related measures. For that reason, this part of the assessment focuses specifically on the change in benefits to occupiers arising from the proposal's effects on market prices and quantities.

According to our calculations, the proposal could increase consumer surplus in the local market for industrial floorspace by \$35 million in NPV terms. See **Appendix C** for further information.

8.5. Helping Foster Land Market Competition

In addition to directly boosting capacity, the proposal will help to foster competition in the local industrial 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, landowners and developers have a greater incentive to bring their product to market in a timely and cost-effective manner, helping to keep industrial land and premises as accessible as possible.

Absent competition, landowners may exercise market power, enabling them to charge more for land and be slower in releasing it. Both outcomes reduce the efficiency and responsiveness of the market.

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

8.6. Support for Well-functioning Urban Environments

The NPS-UD requires planning decisions to contribute to well-functioning urban environments that, among other things, have good accessibility between housing, jobs, community services, and open spaces, and that support competitive land and development markets.¹⁵ While much of the NPS-UD's focus is on residential capacity, these objectives apply equally to the provision of employment land, which is a necessary complement to housing in any well-functioning urban system. The proposal supports these objectives in several respects:

- First, the comprehensively planned nature of the Industrial Development enables the coordinated delivery of roading, servicing, and stormwater infrastructure in a way that fragmented or piecemeal industrial development cannot achieve. Large-scale, master-planned industrial precincts achieve economies of scale in infrastructure provision, reduce

¹⁵ See in particular Policy 1(c) and (d).

per-lot servicing costs, and ensure that the resulting built environment is well ordered, accessible, and efficient. This contrasts with the incremental conversion of rural-zoned land, which often produces disjointed road networks, inconsistent lot configurations, and inefficient infrastructure layouts.

- Second, the proposal delivers employment land in close spatial proximity to existing and planned residential communities. The residential component of SL1, which will enable approximately 938 dwellings, lies immediately to the south of the Industrial Area. Locating employment and housing within the same growth cell reduces commuting distances, supports a better balance of jobs and homes within the local area, and aligns with the broader planning objective of creating more self-sufficient communities that are less dependent on long-distance travel to employment centres elsewhere in the city.
- Third, the proposal contributes to the overall resilience and diversity of Hamilton's industrial land portfolio. Industrial land is a finite resource in urban areas, and once converted to other uses it is rarely recovered. By providing a new supply of well-located industrial land, the proposal helps ensure that businesses seeking to establish, expand, or relocate within the sub-region can access suitable premises. This supports business retention and attraction, both of which are preconditions for a competitive and well-functioning urban economy.
- Fourth, the proposal supports the efficient use of strategic infrastructure. The Southern Links corridor, a confirmed Road of National Significance, bisects the growth cell and will provide direct access to the state highway network. Developing industrial land adjacent to this corridor maximises the economic return on that public infrastructure investment by ensuring that the land uses best positioned to benefit from high-capacity roading are located where they can do so. This is consistent with the Future Proof Strategy's direction that future industrial land be located in areas that maximise efficient use of infrastructure.
- Finally, the publicly vested roading and infrastructure delivered through the proposal will serve not only the development itself but also provide enabling capacity for future stages of industrial and residential development within the broader growth cell. This type of enabling infrastructure is typically only feasible at scale through large, comprehensively planned developments and is unlikely to be delivered through piecemeal or incremental approaches.

9. Other Long-term Impacts

This section considers a range of wider long-term economic impacts of the proposal.

9.1. Ongoing Employment Impacts

The jobs enabled by the proposal will sustain a diverse and stable local workforce. Beyond direct employment, industrial activities generate broader economic benefits through skills development, supply chain linkages, and workforce participation. Key benefits include:

- **Career development:** Industrial roles provide training and progression pathways through trade qualifications, apprenticeships, and professional development programmes.
- **Stable, year-round employment:** The many industrial operations will provide ongoing, non-seasonal employment. While not all industrial activities will operate continuously, they will contribute to a stable local workforce and support household income security.
- **Supply-chain linkages:** Local sourcing of materials, maintenance, and services creates secondary demand across the wider regional economy.
- **Local workforce opportunities:** The diverse scope of roles enabled, entry-level warehouse and logistics positions through to technical and managerial functions, supports inclusive participation in the local labour market.

Collectively, these effects enhance the region's employment diversity and resilience, generating tangible and long-lasting social and economic benefits.

9.2. Agglomeration Effects

The proposal provides an opportunity to extend and reinforce the existing cluster of industrial activity in south-western Hamilton by enabling development contiguous with established industrial areas in Frankton and across the wider growth cell. This spatial continuity is important from an economic perspective, as industrial activities commonly benefit from co-location with other firms undertaking related or complementary functions.

Such clustering gives rise to agglomeration benefits, including shared access to specialised suppliers and services, improved labour market pooling, and reduced transport and transaction costs between firms. These benefits are particularly relevant for light industrial, logistics, and construction-related activities, which often rely on frequent movement of goods, subcontractors, and intermediate inputs.

The proposal's location adjacent to the future Southern Links corridor further enhances these effects by improving connectivity between the site and other industrial nodes within the Golden Triangle, including the Ruakura Superhub and the Port of Tauranga. Enabling industrial land in this location strengthens the productivity and resilience of Hamilton's industrial base and reinforces the strategic role of the growth cell as a key employment node within the region.

9.3. The Role of Industry in Supporting the Local Economy

While the types of activities that ultimately establish on the site will be shaped by market demand, they are likely to be broadly similar to those currently operating in Hamilton's existing light industrial zones. For context, Table 16 below illustrates the top three activities in those areas as at February 2025.¹⁶ It shows that services are the most prevalent activity, comprising 39 percent of non-vacant land area, followed by manufacturing (20%) and warehousing (18%).

Table 16: Share of Non-Vacant Zoned Land Area by Activity

Activity	Share
Services	39%
Manufacturing	20%
Warehousing	18%

These types of activities make a disproportionately large contribution to the local economy. Because of the depth and complexity of their associated supply chains, their contribution extends well beyond the direct employment and output generated onsite.

9.4. 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 the industrial park and its supporting infrastructure will generate significant employment during the development phase, creating opportunities for apprentices, tradespeople, and professionals. Once operational, the range of industrial activities on the site will sustain ongoing employment across a breadth of skill levels, helping to build and retain the local labour force.
- **Building Competitive Business Settings:** By bringing a substantial quantum of new industrial land to market within an identified growth cell, the proposal increases competition in the local industrial land market, supports more efficient pricing, and helps ensure that businesses can access well-located premises when needed.
- **Promoting Trade and Investment:** The scale of the development represents a major private sector investment that signals confidence in Hamilton's long-term economic prospects and strengthens the region's attractiveness as a destination for further domestic and international investment, particularly in logistics and distribution.
- **Driving Innovation, Science and Technology:** The provision of modern, well-serviced industrial premises supports the establishment of businesses that may incorporate advanced

¹⁶ According to Cotality's *Property Guru* database.

manufacturing, automation, and logistics technologies, contributing to productivity growth across the sub-region.

- **Investing in Infrastructure for Growth:** The proposal includes significant investment in roading, stormwater management, and supporting infrastructure. These upgrades will not only service the development itself but also support the efficient functioning of the wider growth cell and the Southern Links transport corridor.

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

9.5. Alignment with Future Proof Strategy

The proposal aligns with the Waikato Regional Council’s Future Proof Strategy, which explicitly recognises the growth cell as a strategically significant area for urban expansion.¹⁷ Table 9 of the strategy identifies the growth cell as part of Hamilton’s urban enablement area under the NPS-UD, with the Industrial Area identified for industrial development. The strategy also identifies the Southern Links corridor as critical enabling infrastructure for the growth cell’s development.

The Future Proof Strategy identifies the provision of sufficient industrial and business land as a key component of long-term growth management in the Waikato sub-region. The strategy notes that significant business growth is projected over the next 30 years, with employment expected to increase substantially and generating demand for approximately 856 hectares of additional business-zoned land across the sub-region. Hamilton City is projected to experience a long-term shortfall of industrial capacity, reinforcing the need for new industrial land in strategically identified locations.

The Future Proof Strategy directs that councils ensure an adequate supply of future business land in agreed locations to meet long-term needs in a responsive and timely manner, and that future industrial land be located in areas that maximise efficient use of infrastructure and avoid land-use conflicts. The proposal is consistent with these directions: it is located within an identified growth cell, adjacent to the Southern Links corridor, and in proximity to established industrial areas.

The inclusion of SL1 in the Future Proof Strategy, and the active advancement of development by the Applicant, signals a high level of certainty around planning and infrastructure timing. This reduces delivery risk, increases investor confidence, and supports earlier and more sustained private sector investment.

9.6. Alignment with Hamilton Urban Growth Strategy

The Hamilton Urban Growth Strategy (HUGS), published in April 2023, provides a long-term spatial vision for managing the city’s growth. It establishes principles for releasing “out of sequence” or “out of boundary” areas for development, recognising that Hamilton’s growth cannot be fully

¹⁷ Future Proof Strategy: Future Development Strategy Update 2024 – 2054. Available here: <https://www.futureproof.org.nz/our-strategic-direction/>

accommodated within the city's administrative boundary. The proposal, as an out-of-boundary development within the Waipā District, falls to be assessed against these principles.

The proposal is well aligned with these requirements across the following dimensions:

- **Providing places to work, or quality connections to places of work.** This is the most directly relevant principle for an industrial proposal. The development will deliver employment land within close proximity of existing and planned residential communities. Locating employment opportunities near housing reduces commuting distances and supports more efficient urban form.
- **Sustainable and integrated infrastructure solutions.** The proposal incorporates a comprehensive infrastructure strategy, including stormwater management, roading, and servicing designed to integrate with the wider SL1 growth cell. These systems are designed to service both the proposal and future stages of development within the Industrial Area.
- **Enhancing Hamilton's economy.** The proposal will generate substantial construction-phase employment and GDP, followed by significant ongoing employment and economic activity once industrial occupiers are established. The range of industrial activities expected on the site will strengthen Hamilton's role as the primary employment centre for the Waikato sub-region.
- **Meeting the costs of infrastructure.** All infrastructure required to service the development is expected to be funded by the developer. The proposal does not rely on public funding for its delivery.
- **Not compromising planned investment.** The proposal supports, rather than compromises, the delivery of regionally significant infrastructure. By establishing industrial development within the SL1 growth cell, the proposal helps anchor demand for the Southern Links transport corridor and the planned Southern Wastewater Treatment Plant, strengthening the underlying business cases for these investments.

On this basis, the proposal is well matched to the requirements of the HUGS for out-of-boundary developments.

9.7. 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 industrial developments typically require detailed due diligence, long investment horizons, and confidence in future employment growth, labour availability, and infrastructure provision. Their delivery acts as a market signal to other investors that underlying economic fundamentals are sufficiently robust to support further activity.

Such signalling effects are particularly relevant for industrial land development, where investment decisions are sensitive to perceptions of demand certainty and infrastructure timing. The establishment of a significant new industrial precinct within an identified growth cell can help reduce perceived market risk and bring forward complementary investment over time, including further industrial, commercial, and residential development within the broader area.

10. Project Acceleration

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

10.1. 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, obtaining consent via the standard RMA pathways would likely involve a multi-stage and potentially appeal-prone process, resulting in substantial delays. Similarly large proposals often experience extended processing timeframes due to public notification, hearings, and Environment Court appeals (and potentially further appeals to the higher courts).

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.

11. Summary and Conclusion

This section brings together the full range of economic effects assessed throughout this report and presents our overall conclusions on the regional significance of the proposal for the purposes of the FTAA.

11.1. Monetised Effects

The table below summarises the monetised costs and benefits of the proposal in NPV terms, organised by TEV category.

Table 17: Summary of Quantified TEV Costs and Benefits (NPV, \$m)

Direct Use Values	Costs	Benefits	Net Benefits
NPV of Construction GDP		\$205	\$205
NPV of Future Onsite GDP		\$2,176	\$2,176
NPV of Consumer Surplus		\$35	\$35
NPV of Foregone Rural GDP	-\$5		-\$5
Direct Use Sub-Totals	-\$5	\$2,417	\$2,412
Indirect Use Values	Costs	Benefits	Net Benefits
Loss of Ecosystem Services	-\$2		-\$2
Non-use Values	Costs	Benefits	Net Benefits
Loss of option/bequest value	-\$2		-\$2
Total Economic Values	Costs	Benefits	Net Benefits
TEV Summary	-\$9	\$2,417	\$2,408

Under our baseline scenario, the monetised TEV of the proposal is approximately \$2.4 billion in NPV terms. Benefits are dominated by future onsite GDP of approximately \$2.2 billion, which reflects the substantial ongoing employment and economic activity generated by industrial occupiers once the development is fully built out and occupied. Construction-phase GDP contributes a further \$205 million, and consumer surplus gains from increased industrial land supply add approximately \$35 million. Quantified costs total approximately \$9 million, reflecting foregone rural production.

11.2. Employment Effects

In addition to the monetised effects set out above, the proposal generates significant employment impacts during the construction phase and ongoing onsite industrial activity. Development of the site is estimated to support approximately 1,830 FTE-years of employment over the construction period. These effects arise across a range of sectors, including construction, professional services, and supporting industries. Once complete, the proposal will also support ongoing industrial employment of approximately 1,540 FTEs, compared to trivial onsite employment under the counterfactual.

11.3. Qualitative Effects

In addition to the quantified effects summarised above, the assessment has identified a number of economic effects that are not readily expressed in dollar terms but are nonetheless relevant to the Panel's consideration. These include:

- A significant contribution to Hamilton's industrial land supply at a time when the city faces a projected long-term shortfall of industrial capacity and the development pipeline has moderated;¹⁸
- Strengthened competition in the local industrial land market, incentivising timely development and more efficient pricing by other landowners;
- Support for well-functioning urban environments through comprehensively planned infrastructure delivery, coordinated lot layout, and the co-location of employment land with planned residential communities within the growth cell;
- Agglomeration benefits arising from the spatial extension of Hamilton's existing industrial base, including shared access to suppliers, improved labour market pooling, and reduced transaction costs;
- Wider ongoing employment impacts, including career development pathways, stable year-round employment, and supply chain linkages that extend economic benefits beyond the site itself;
- Alignment with the Future Proof Strategy, the Hamilton Urban Growth Strategy, and the Government's Going for Growth agenda;
- Support for the delivery and sequencing of regionally significant infrastructure, including the Southern Links Road of National Significance and the Southern Wastewater Treatment Plant;
- Investment signal effects that may help reduce perceived market risk and bring forward complementary investment in the region; and
- Accelerated delivery of all of the above benefits through the streamlined FTAA pathway.

11.4. FTAA Criteria

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.

¹⁸ Based on the existing consented and operative planning environment. We have not sought to account for other prospective developments that may be advanced under the FTAA or other future planning processes. While such projects may or may not eventuate, they do not currently form part of the consented environment and therefore carry no legal status or weight for the purpose of this assessment.

Table 18: Assessment Against FTAA Criteria

Criterion	Signpost	Assessment Summary
Contributes to the purpose of the Act – facilitates projects with significant regional or national benefits (s3; s81(2)(b); Sch 5 cl 17)	Sections 8 – 12	The proposal delivers significant regional benefits through a substantial increase in industrial land supply, significant construction-phase employment and GDP, and transformative ongoing employment. These outcomes, combined with strategic infrastructure support and alignment with regional growth strategies, align directly with the FTAA's purpose.
Benefits outweigh adverse effects (s85)	Sections 8 – 13	The economic benefits of the proposal are substantial, well-evidenced, and durable, with a quantified net TEV of approximately \$2.4 billion. Identified adverse economic effects, including foregone dairy production, loss of ecosystem services, and loss of option/bequest value, are negligible relative to the scale of benefits.
Nature and scale of benefits, including economic, employment, environmental, cultural, and social (s81(4))	Sections 8 – 12	The proposal delivers significant economic and employment benefits at the regional level, including both one-time construction impacts and substantial ongoing industrial employment. It provides employment land in proximity to planned residential communities, supports agglomeration within Hamilton's industrial base, and strengthens the sub-region's role within the Golden Triangle logistics network. Environmental and cultural matters are addressed separately within the AEE and specialist assessments.
Consistency with national direction and planning documents, including under the RMA (s81(2)(aab))	Sections 9 & 12	The proposal is strongly aligned with the NPS-UD, particularly in relation to competitive land markets, well-functioning urban environments, and the provision of employment land. It is consistent with the Future Proof Strategy (which identifies SL1 for industrial development and projects a long-term shortfall of industrial capacity), the Hamilton Urban Growth Strategy, and the Government's Going for Growth agenda. Detailed statutory planning matters are addressed separately within the planning assessment.
Greatest weight given to purpose of FTAA (Sch 5 cl 17)	Sections 8 – 13	The proposal squarely advances the FTAA's purpose by facilitating a development with clear and significant regional benefits and by accelerating the delivery of those benefits through a streamlined approval pathway. The scale of benefits, the certainty of delivery within an identified growth cell, and the timing advantages of the FTAA pathway collectively warrant substantial weight.

12. Appendix A: Methodology Description

12.1. Summary of Overall Approach

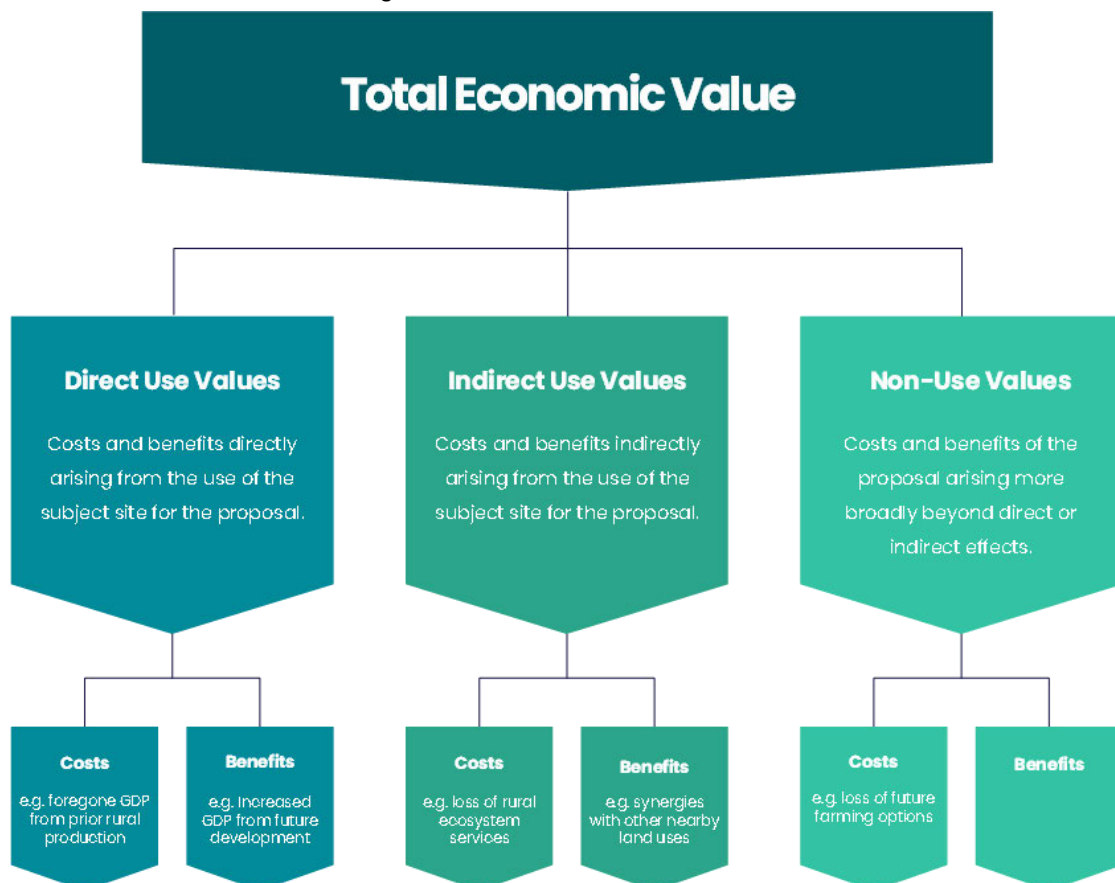
Our assessment adopts the total economic value (TEV) framework to compare all relevant economic costs and benefits of the proposal to the most likely use of the site absent it, which is called the counterfactual. To keep the analysis as conservative as possible, amongst other things, we assume that the proposal precludes rural production across the entire site from day one, rather than in a phased manner, as usually occurs with staged build outs in large-scale developments. We also account for the time value of money by converting quantified costs and benefits to net present values before weighing them up to assess the regional and/or national significance of the proposal's economic benefits.

12.2. Introduction to the TEV Framework

The TEV framework has been widely used since the 1980s to capture the full spectrum of economic effects associated with changes in land use, not just those readily quantifiable. By structuring the analysis around TEV, we ensure that all relevant economic effects are identified and considered, irrespective of the extent to which they can be quantified.

The TEV framework splits all relevant economic costs and benefits into those driven either directly or indirectly by the proposal, plus 'non-use' impacts arising more generally. Figure 5 below illustrates this classification of effects within the TEV framework.

Figure 5: Overview of the TEV Framework



12.3. Mapping of Proposal Impacts to TEV Framework

Table 19 below shows how the key option differences identified in Section 3 are mapped to the various TEV cost and benefit categories illustrated in Figure 5 above.

Table 19: Mapping of Proposal Economic Costs and Benefits to TEV Elements

TEV Category	BENEFITS of Proposal vs Counterfactual	COSTS of Proposal vs Counterfactual
Direct Use Value	Construction-phase economic activity (GDP)	Loss of rural production (dairy)
	Consumer surplus from increased industrial supply	None considered
	Ongoing onsite economic activity (industrial)	None considered
Indirect use value	None considered	Loss of ecosystem services (e.g. regulating functions)
Non-use value	None considered	Loss of option and bequest values associated with rural land

Several observations can be made about this mapping. First, the proposal's **direct use** values are broad, and mostly readily quantifiable. As a result, they form the focus of this assessment, including one-time construction impacts (which are estimated via multiplier analysis), ongoing employment impacts, and the efficiency gains of increased industrial supply (as estimated through its effects on consumer surplus). Direct use costs are centred on foregone rural production, which are also quantified herein via multiplier analysis.

Second, the **indirect use** values are more mixed and less readily quantifiable. Costs include that the urbanisation of rural land will reduce the site's contribution to certain ecosystem services.

Third, the **non-use** values are inherently difficult to quantify and outside our area of expertise. The theoretical loss of the option for future generations to use the land for farming is acknowledged, but is tempered by the fact that the site's productive potential is already constrained by its peri-urban context, and the pending development of the Southern Links transport corridor.

In summary, the TEV framework confirms that the proposal's benefits are concentrated in direct use values that are both significant and quantifiable, while its costs are spread across direct, indirect, and non-use categories and are generally modest, partially offset by design responses within the proposal, or limited by the existing condition of the site.

12.4. Indirect Use & Non-use TEVs of Rural Production

To calculate the indirect and non-use values of foregone rural production, we rely on a seminal New Zealand study by Patterson and Cole,¹⁹ which itemises the indirect and non-use values of various rural land uses per hectare basis across various ecosystem services, which are grouped into four types:

- **Provisioning services:** the direct production of goods such as food, fibre, and fresh water;

¹⁹ Patterson & Cole. (2013). *Total Economic Value of New Zealand's Land-Based Ecosystems and Their Services*.

- **Regulating services:** the regulation of biophysical and ecological processes, including climate regulation, flood control, waste treatment, and biological pest control;
- **Cultural services:** non-material benefits including recreation, aesthetic value, spiritual fulfilment, and contributions to cultural identity; and
- **Supporting services:** foundational ecological processes such as nutrient cycling, soil formation, and pollination that underpin the delivery of all other services. Because supporting services are already reflected in the value of provisioning, regulating, and cultural services, they are excluded from the aggregation of TEV to avoid double counting.

Overlaying our independent estimates of foregone rural output with these values, we fully capture the economic values of rural production foregone by development proposals. The counterfactual for this site involves dairy farming only (no horticulture or cropping), so the relevant Patterson and Cole values are those for agriculture ecosystems, as set out in the table below.

Table 20: Use Value of Ecosystem Services Derived from **Agriculture** Ecosystems (\$2012 million)

Ecosystem service	Supporting value	Regulating value	Provisioning & cultural value	Provisioning & cultural excl. GDP	Gross value	Net value
Water provisioning			85	68	85	85
Food production			8,363		8,363	8,363
Raw materials			514		514	514
Recreation			57	57	57	57
Cultural			57	57	57	57
Gas regulation		200		200	200	200
Waste treatment		2,488		2,488	2,488	2,488
Biological control		657		657	657	657
Soil formation	28			28	28	0
Erosion control	7,008			7,008	7,008	0
Pollination	715			715	715	0
Total	7,751	3,345	9,076	11,278	20,172	12,421

According to Table 20, food production accounts for approximately 67 percent of net TEV.²⁰ The remaining third is attributable to regulating services, principally waste treatment (\$2,488m), biological control (\$657m), raw materials production (\$514m), and gas regulation (\$200m), as well as smaller contributions from water provisioning, recreation, and cultural services. This means that the GDP, employment, and wage estimates for the dairy farming counterfactual capture around two-thirds of the total ecosystem service value of those land uses. To derive the full TEV of those counterfactual scenarios, the production estimates need to be scaled up by approximately 49 percent to account for the additional regulating and other service values not captured in standard economic output metrics.²¹

²⁰ Calculated as 8,363 net value of food production divided by 12,421 total net value.

²¹ The scalar equals the total net value of 12,421 for agriculture ecosystems divided by the net value of food production of 8,363. This results in a scalar of 48.5 percent to capture the other elements of TEV over and above our estimates of food production.

12.5. Analysis Horizon & Time-Value of Money

The analysis spans 50-years from the day that FTAA approval is (assumed to be) granted. This time horizon is much longer than the 30-year long-term planning period required under the NPS-UD, and ensures that the full stream of costs and benefits, including those associated with long-term foregone rural production, are adequately captured. All quantified effects are expressed in NPV terms 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.

13. Appendix B: About Multiplier Analysis

13.1. 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 rural 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.

13.2. 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 analysis traces 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.

13.3. 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.’

13.4. 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.²² 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.

13.5. 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

²² 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. Specifically, three scenario-based scaling factors are applied to account for the likely effects of capacity and resource constraints, namely a:

- Low scenario, which scales direct and indirect effects down by 50%;
- Baseline scenario, which scales direct and indirect effects down by 20%, and is our ‘best guess’ estimate of likely impacts; and
- High scenario, which assumes no scaling down of direct and indirect effects.

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 rural production ceases immediately sitewide under the proposal. In practice, however, former rural production is usually 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.

14. Appendix C: Consumer Surplus Impacts

14.1. Context

Our TEV assessment framework captures the likely impacts of a proposal on consumer surplus as a type of direct use benefit. For each transaction, consumer surplus equals the difference between what a buyer would have been willing to pay for the good or service minus what they do pay. For example, if a family buys a new home for \$800k, but they would have been willing to pay up to \$900k for it, the consumer surplus on that transaction is \$100k.²³

By aggregating these consumer surpluses across all transactions in a market over a given period, the total consumer surplus can be estimated. In addition, calculating these consumer surpluses both with and without a specific proposal enables its marginal effects to be directly estimated. Indeed, that is how we capture the consumer benefits of increased supply in our analysis.

The remainder of this section illustrates how consumer surplus is measured across each sub-market (with and without the proposal) to calculate its direct use benefits in our TEV framework.

14.2. Introduction to Supply & Demand Analysis

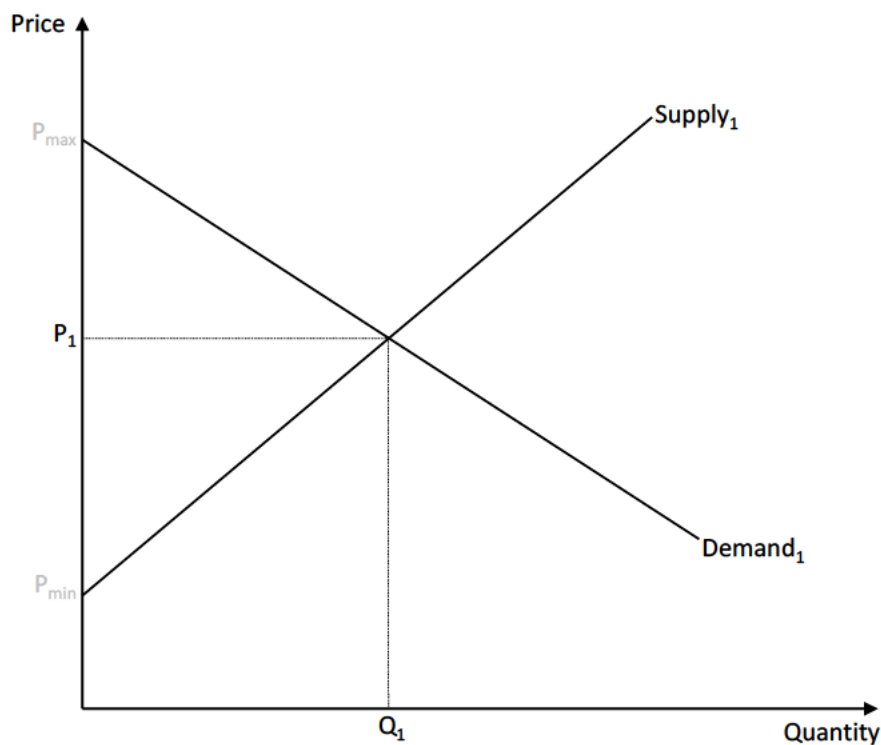
Economic analyses often use a graphical technique called supply and demand analysis to assess the potential impacts of future market changes, like the impacts of large-scale development proposals. Three key features of supply and demand analysis are the:

- **Supply curve:** which shows the minimum price that sellers will accept at each market quantity. The supply curve slopes up because, all other things being equal, higher prices are more profitable than lower ones, thereby enticing greater levels of supply.
- **Demand curve:** which shows the maximum price that consumers are willing to pay for any given quantity. It slopes down because, all other things being equal, lower prices make goods and services more attractive and affordable, inducing greater demand in the process.
- **Intersection of the supply and demand curves:** which determines the equilibrium market price and quantity because it represents the only combination that both (i) sellers are willing to accept, and (ii) consumers are willing to pay. No other combination of price and quantity satisfies this condition, so the intersection of the two curves defines the market equilibrium.

Bearing these concepts in mind, the figure below depicts a hypothetical market in equilibrium at Price P_1 and Quantity Q_1 .

²³ Calculated as \$900k minus \$800k

Figure 6: Supply & Demand Intersecting to Set Equilibrium Price & Quantity



14.3. Consumer Surplus & Producer Surplus

According to economic theory, the gains that buyers and sellers realise from trading with one another can be directly measured via their respective “surpluses.” For example, as noted above, the benefits accruing to buyers are measured by the consumer surplus. This is mirrored (in a graphical way) by a corresponding measure called producer surplus, which represents the benefits to sellers. It equals the difference between the market price and the minimum that sellers would have been willing to receive.

Consider a simple example, where a family buys a new home for \$800k. Let us further assume that:

- The family would have been willing to pay up to \$900k for the property; and
- The developer would have been willing to take as low as \$750k for it.

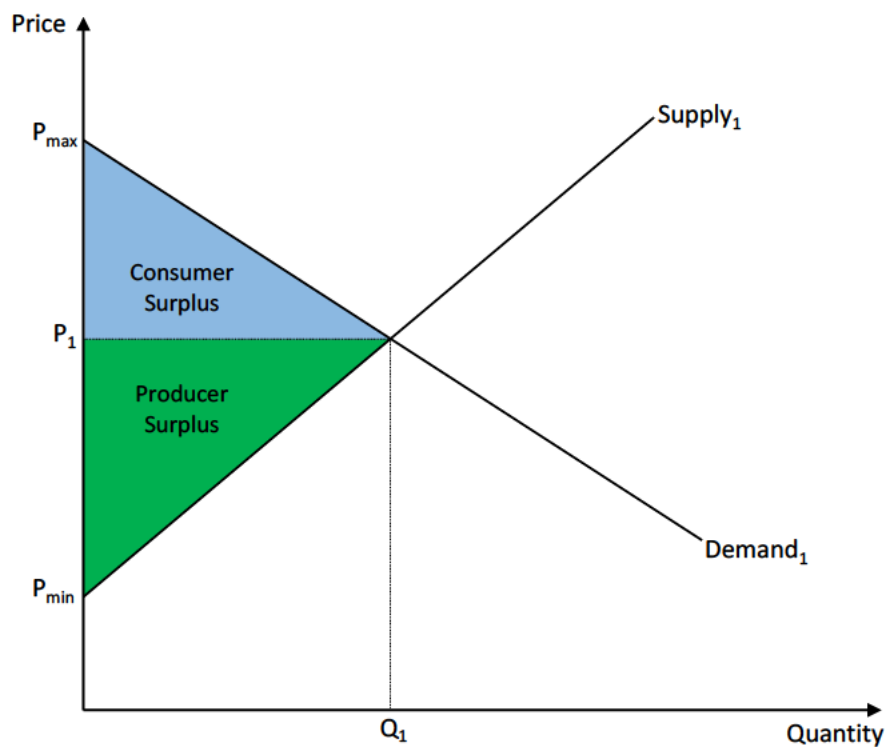
In this example, the consumer surplus is \$100k²⁴ and the producer surplus is \$50k.²⁵

The figure below graphically depicts the consumer and producer surplus for all transactions up to and including the hypothetical market equilibrium quantity Q_1 using the supply and demand curves from Figure 6 above. It utilises the fact that the demand curve represents the maximum price that buyers are willing to pay for each given quantity (which feeds into consumer surplus), while the supply curve represents the minimum that sellers are willing to take (which feeds into producer surplus).

²⁴ Calculated as \$900k minus \$800k

²⁵ Calculated as \$800k minus \$750k

Figure 7: Graphical Illustration of Consumer Surplus & Producer Surplus



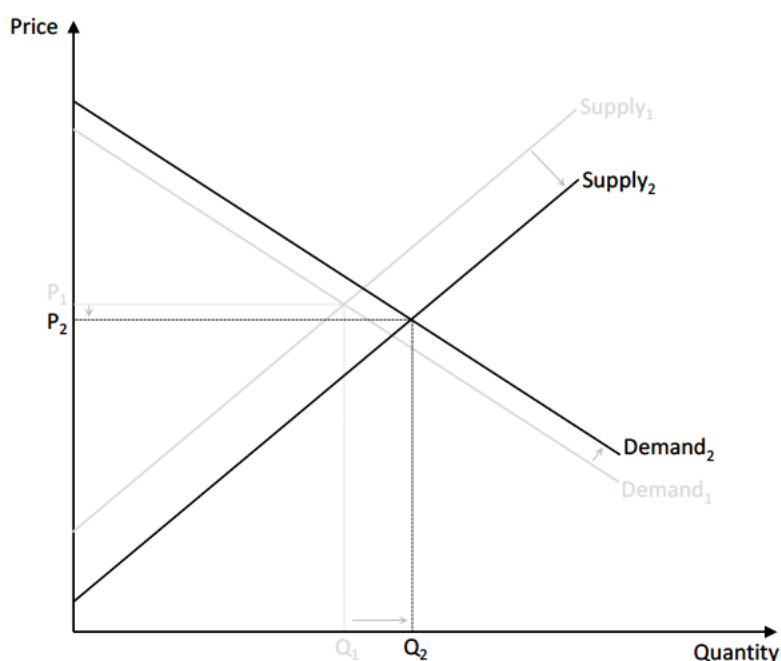
Note: while producer surplus is a theoretically sound and widely used measure of economic benefits too, we omit it because it is already captured in our GDP analysis. Accordingly, the rest of this section concerns only the calculation of consumer surplus, not also producer surplus.

14.4. Impacts of Proposal on Market Price & Quantity

Under the proposal, the market supply curve shifts out due to the development's direct injection of new homes and/or non-residential buildings into the local market. In addition, because large-scale master-planned developments may attract buyers whose needs were not previously met in the local market, they may also cause the demand curve to shift out too. Both movements affect the equilibrium price and quantity from which the consumer and producer surplus are calculated.

The figure below portrays the potential impacts of a proposal on the market supply and demand curves, plus the associated equilibrium market price and quantity. In this example, the supply curve shifts out by more than the demand curve, causing the market price to fall as the equilibrium market quantity increases.

Figure 8: Impacts of Proposal on Market Supply, Demand, Price, and Quantity



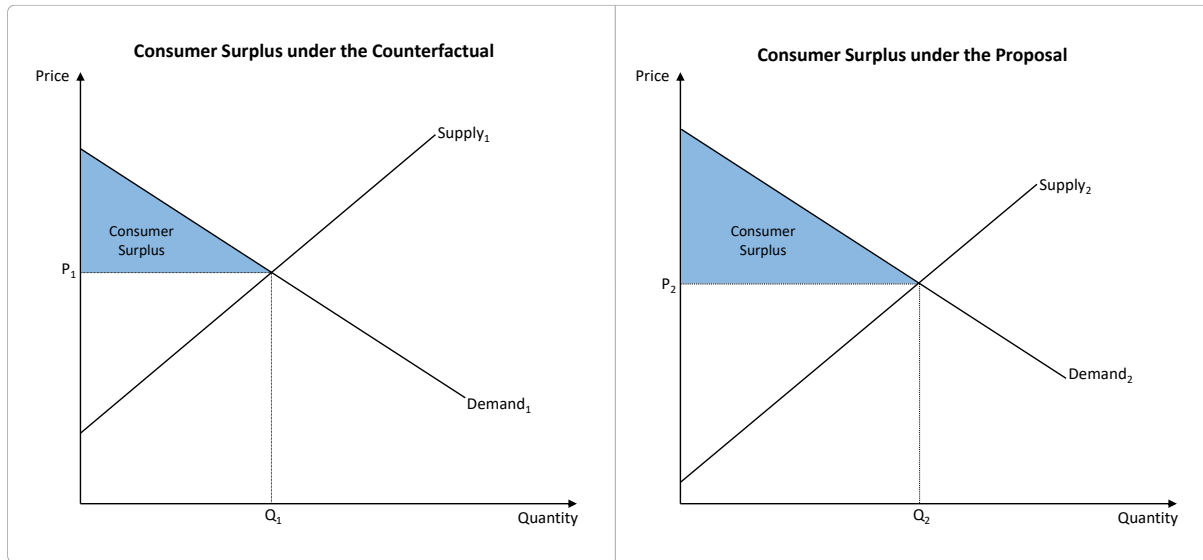
14.5. Impacts of Proposal on Consumer Surplus

Our model enables the (potential) two-sided effects of proposals on market supply and demand to be explicitly captured in the calculations of market prices and quantities, which then all flow into the calculation of consumer surplus. To elaborate, the diagram below shows the calculation of consumer surplus for the market equilibria under the counterfactual and proposal scenarios, respectively. In this diagram:

- The lefthand panel shows the counterfactual consumer surplus based on the supply and demand curves of Supply₁ and Demand₁, respectively; and
- The righthand panel shows the proposal consumer surplus based on the revised supply and demand curves of Supply₂ and Demand₂, respectively.

As we can see, the outward movement of both the supply and demand curves due to the proposal increases the consumer surplus for buyers, which is a direct use benefit of the proposal. We note for completion, however, that the proposal would increase consumer surplus even if its effects were confined only to shifts of the market supply curve. However, those increases would be lower than if the demand curve is also pushed out (albeit to a lesser degree) by the proposal.

Figure 9: Consumer Surplus With & Without the Proposal



Note that, while the modelled shifts in market supply and demand both increase the equilibrium quantity, their effects on price offset one another, with the net price effect depending on both the shapes of the curves, plus the extent to which each curve shifts due to the proposal. In general, though, since the proposal will likely have greater impacts on supply than demand, it is also more likely to *reduce* prices relative to the counterfactual, than increase them.

14.6. Calculating the Change in Consumer Surplus

The rest of this section mathematically derives the consumer surplus, with and without the proposal, to show how the proposal's impact is captured analytically.

Calculating the Counterfactual Equilibrium Price & Quantity

To advance the discussion, let the (inverse) market demand and functions be defined as follows:

- Supply: $P_s = a + bQ$
- Demand: $P_d = c - dQ$

Where **a** is the minimum price that seller is willing to receive, **c** is the most that any consumer is willing to pay, and **b** and **d** are the slopes of the inverse market supply and demand curves, respectively.

In equilibrium, supply equals demand. This, in turn, requires that:

$$a + bQ = c - dQ$$

Rearranging this, the equilibrium market quantity can be derived as:

$$Q = \frac{c - a}{b + d}$$

Plugging this into the market supply equation yields the corresponding equilibrium price of:

$$P = a + bQ = a + b \left(\frac{c - a}{b + d} \right)$$

Calculating Consumer Surplus Under the Counterfactual

Based on the formula for the area of a triangle, the value of consumer surplus equals half the market quantity multiplied by the difference between the (i) maximum price that any consumer would be willing to pay (as denoted by the parameter c) and the price they do pay, i.e., P . Plugging the algebraic solutions for market price (P) and quantity (Q) into this equation yields the following formula for Counterfactual consumer surplus:

$$\begin{aligned} \text{Consumer Surplus (Counter Factual)} &= \frac{Q}{2} [c - P] \\ &= \frac{c - a}{2(b + d)} [c - P] \\ &= \left[\frac{c - a}{2(b + d)} \right] \times \left[c - a - b \left(\frac{c - a}{b + d} \right) \right] \end{aligned}$$

With some rearrangement and simplification, this expression reduces to:

$$\text{Consumer Surplus (Counter Factual)} = \frac{d(c - a)^2}{2(b + d)^2}$$

Calculating Consumer Surplus Under the Proposal

Assuming the proposal causes the inverse market supply curve to shift out by a user-defined scalar i , and the inverse market demand curve to shift out by a user-defined scalar j , the value of consumer surplus under the proposal can be expressed as follows (via simple extrapolation of the corresponding formula for the Counterfactual scenario):

$$\text{Consumer Surplus (Proposal)} = \frac{jd(jc - ia)^2}{2(ib + jd)^2}$$

Calculating the Proposal's Net Impacts on Consumer Surplus

Subtracting the equation for the consumer surplus under the counterfactual from that of the proposal, the net Consumer effects on consumer surplus equal:

$$\text{Net Impacts on Consumer Surplus} = \frac{jd(jc - ia)^2}{2(ib + jd)^2} - \frac{d(c - a)^2}{2(b + d)^2}$$

Accounting for Transfers

Some of the additional consumer surplus calculated in the equation above represents a “transfer” from producers to consumers, which cancels out and has no net impact on society. Accordingly, the

final step is to remove these transfers. Employing some intermediate algebra, it can be shown that the final equation for the change in consumer surplus net of transfers is as follows:

$$Consumer\ Benefit = \frac{jd(jc - ia)^2}{2(ib + jd)^2} - \frac{d(c - a)^2}{2(b + d)^2} - \left[\frac{c - a}{b + d} \right] x \left[\frac{ad + bc}{b + d} - \frac{ij(ad + bc)}{ib + jd} \right]$$

This is the formula used to calculate the month-by-month impacts of the proposal on consumer surplus, which are then converted to net present value terms for inclusion in the TEV framework.