INSIGHT | ECONOMICS

Final Report: 21 October 2021

Economic Assessment of Proposed Private Plan Change in Rolleston – Brookside Road Plan Change

Prepared for:

Gallina Nominees, Heinz Wattie Pension Fund, and Brookside Road Residential Ltd

Authorship

This document was written by Fraser Colegrave and Danielle Chaumeil

Contact Details

For further information about this document, please contact us at the details below:

Phone: +64 21 346 553
Email: fraser@ieco.co.nz
Web: www.insighteconomics.co.nz

Disclaimer

Although every effort has been made to ensure the accuracy and integrity of the information and opinions presented herein, Insight Economics Limited and its employees accepts no liability for any actions, or inactions, taken based on its contents

Cover Photo Credit

Google Earth

Copyright

Contents

1. Executive Summary

Gallinas Nominees and Heinz Watties Pension Fund, in collaboration with Brookside Road Residential Ltd, are submitting a plan change on approximately 110 hectares of rural-zoned land on the western outskirts of Rolleston. To enable the eventual development of approximately 1,320 residential dwellings over time, the parties seek rezoning of the land to Living Zone (LZ). To assist, this report briefly assesses the likely economic effects of the proposal.

Having identified and described the subject land, we next assess the need for the plan change according to the National Policy Statement on Urban Development (NPSUD). We show that the Council is currently not meeting its obligations to provide at least sufficient capacity to meet the demand for new dwellings, as required by the NPSUD. This is both because the Council's estimates of demand for additional dwellings are inordinately low, while its estimates of likely capacity to meet that demand appear grossly overstated.

When the various issues identified herein are addressed to provide more reliable estimates of dwelling supply/demand, the district clearly faces significant supply shortfalls under the short, medium, and longer terms. Accordingly, additional land needs to be identified and rezoned as soon as possible to meet NPSUD obligations, and to enable the efficient operation of the local land market.

Having determined the need for the plan change to address chronic projected shortfalls, we assessed the likely economic costs and benefits of the proposal. Overall, we expect the proposal to provide strong economic benefits, including:

- Providing a substantial, direct boost in market supply to meet current and projected future shortfalls;
- Bolstering land market competition, which helps deliver new sections to the market quicker and at better average prices;
- Contributing to achieving critical mass to support greater local retail/service provision, including the community's vision for a renewed Rolleston Town Centre and improved public transport facilities/services; and
- The one-off economic stimulus associated with developing the land and constructing the dwellings that will be enabled there.

Conversely, the main economic cost of the proposal is potential losses of rural production. However, given the site's relatively poor soils, such effects are limited. In addition, rural production is constrained by potential reverse sensitivity from nearby land and limits on irrigation capacity.

Given the strong and enduring benefits of the proposed plan change, and noting the absence of any material economic costs, we support it on economic grounds.

2. Introduction

2.1. Context & Purpose of Report

Gallinas Nominees and Heinz Watties Pension Fund, in collaboration with Brookside Road Residential Ltd, are submitting a plan change on approximately 110 hectares of rural-zoned land on the western outskirts of Rolleston. To enable the eventual development of approximately 1,320 residential dwellings over time, the parties seek rezoning of the land to Living Zone (LZ). To assist, this report briefly assesses the likely economic effects of the proposal.

2.2. Structure of Report

The remainder of this report is structured as follows:

- **Section 3** locates the subject land, describes its current zoning and receiving environment, then outlines the proposed plan change;
- **Section 4** discusses the need for the plan change under the National Policy Statement on Urban Development (NPSUD);
- **Section 5** considers the likely economic costs and benefits of the plan change; and
- **Section 6** provides a short summary and conclusion.

3. About the Subject Site & Proposed Plan Change

3.1. Site Location & Description

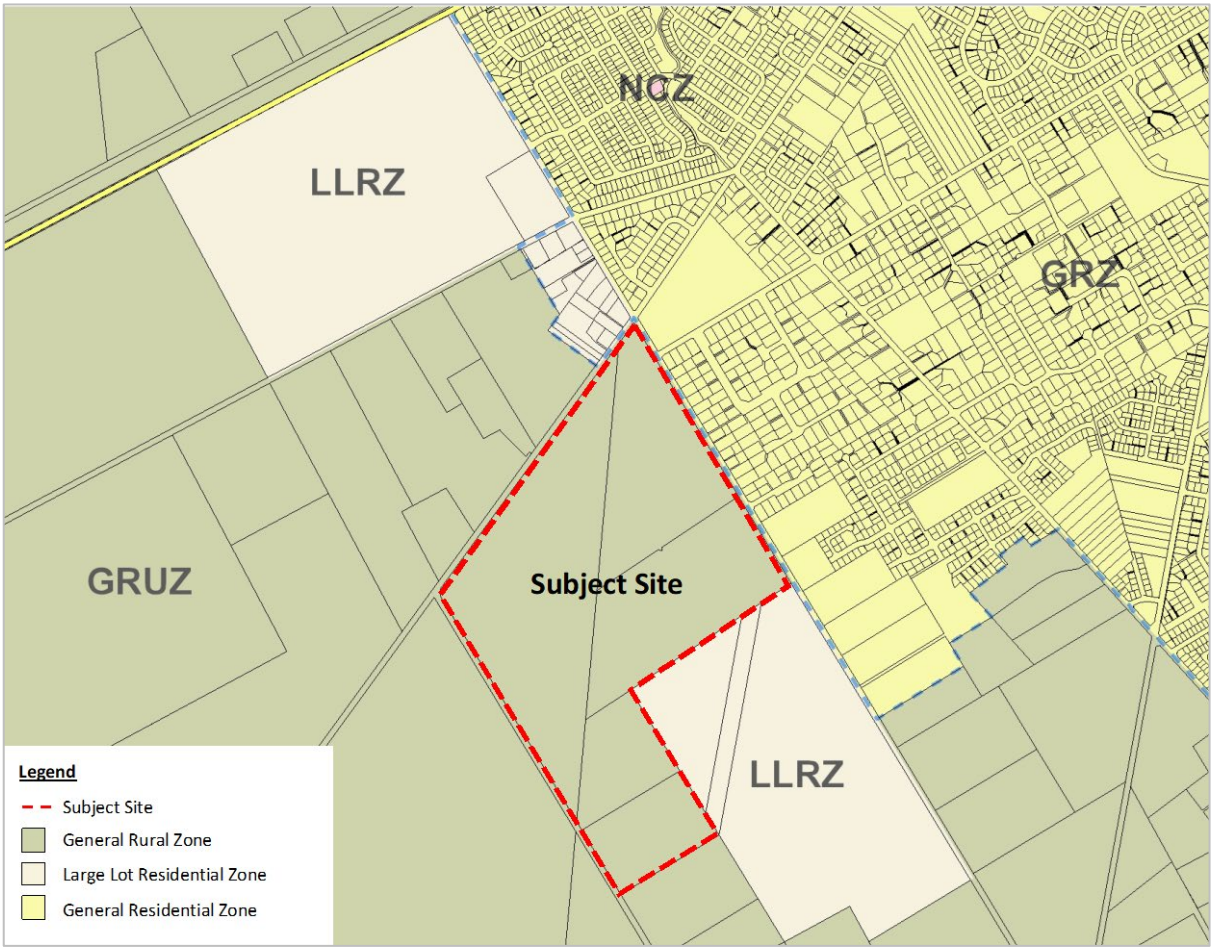
The subject site is located on the western outskirts of Rolleston in the Selwyn district. It is bound by Dunns Crossing Road to the east, Brookside Road to the north, Edwards Road to the west and rural land to the south. The yellow outline in the map below identifies the site.

Figure 1: Location of Subject Site

3.2. Zoning & Receiving Environment

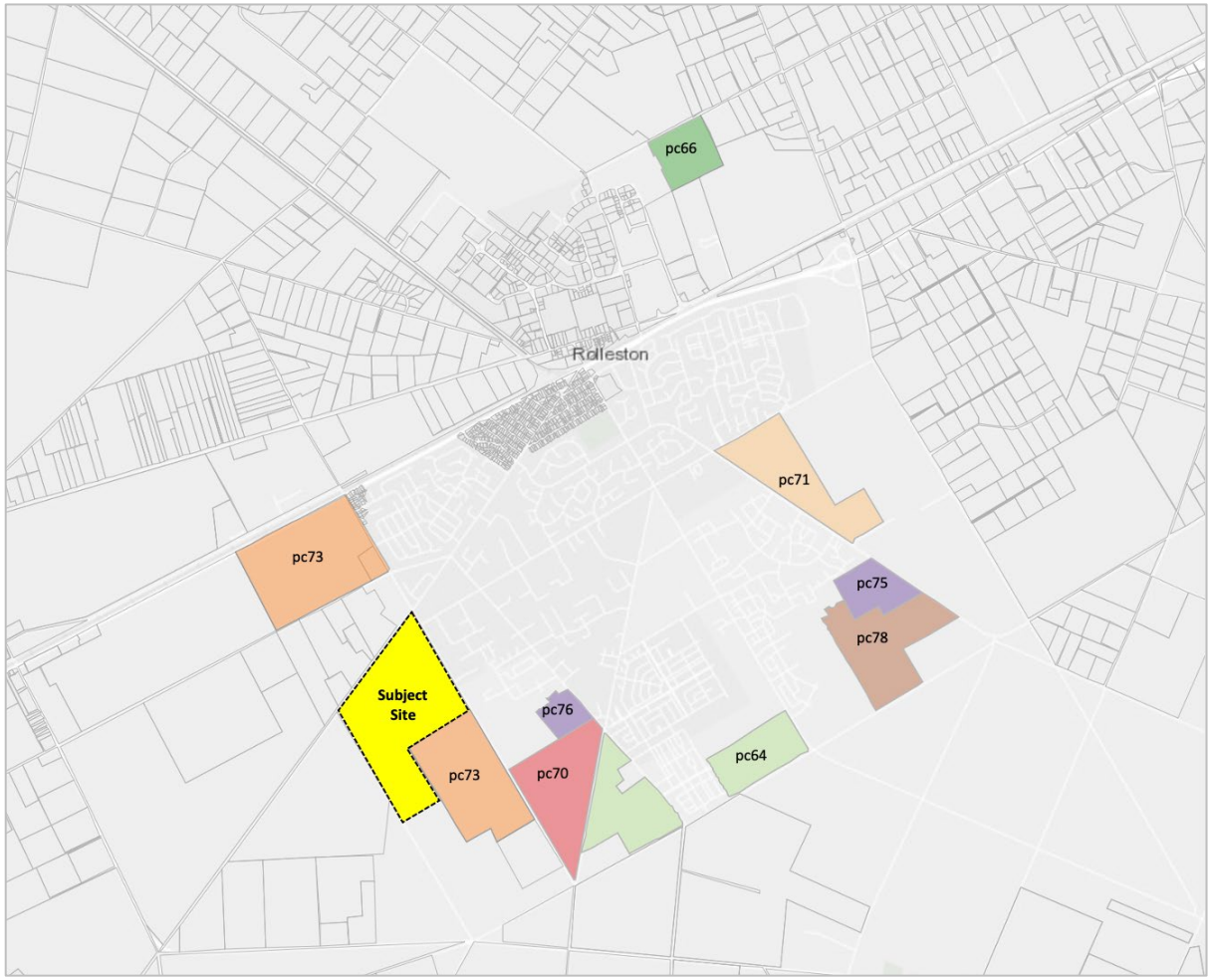
The site is currently zoned Specific Control Area 1 - Outer Plains under the Operative District Plan (ODP) and General Rural Zone (Specific Control Area: Rural Density 2) under the Proposed District Plan (PDP). The land immediately east of the site is zoned for general residential use, and there are large lot residential zones to the north and south, as illustrated in Figure 2 below.

Figure 2: Zoning of Subject Site under PDP



Various rezoning submissions have been received for land in and around Rolleston as part of the Selwyn District Plan review process. These rezoning submissions are supported by plan changes to the ODP. Notably, the subject site is located in between the two land parcels that comprise Plan Change 73, which seeks rezoning to allow for the development of approximately 2,100 dwellings and a small amount of supporting commercial activity. The map below shows the location of the subject site relative to land in and around Rolleston that is currently undergoing a plan change process.

Figure 3: Location of Subject Site Relative to Plan Change Submissions



The plan change seeks to rezone the subject site to Living Zone (LZ), to enable the development of around 1,320 dwellings over time.

4. Need for The Plan Change Under the NPSUD

This section assesses the need for the plan change according to the National Policy Statement on Urban Development (NPSUD).

4.1. Context

The NPSUD came into effect in August 2020. Like its predecessor, the NPSUDC 2016, the NPSUD requires Councils in high growth areas to provide (at least) sufficient development capacity to meet expected future demand for additional dwellings over the short-, medium-, and long-term. In addition, the NPSUD imposes strict monitoring and reporting requirements to ensure that any likely capacity shortfalls are identified and rectified as soon as possible.

The NPSUD's requirements for monitoring and providing at least sufficient development capacity vary across three tiers, with the strictest requirements imposed on Councils in tier 1 urban environments. These represent the highest-growth areas, and where capacity shortfalls have historically been the most acute.

Selwyn District comprises part of the Greater Christchurch Tier 1 urban environment and is therefore required under the NPSUD to complete a detailed housing and business development capacity assessment (HBA) every three years. The HBA synthesizes a raft of information about the supply and demand for new dwellings to ensure that sufficient capacity is being provided in the right places and at the right time to keep pace with demand through to the long term.

4.2. 2021 Greater Christchurch HBA

On 30 July 2021, the Greater Christchurch Partnership (GCP) published its latest HBA for its three partner Councils: Christchurch City, Selwyn District, and Waimakariri District.[1]

The table below summarises the estimated feasible capacity and projected future demand for additional dwellings in Selwyn according to the latest HBA for three different capacity scenarios:

- Excluding Rolleston's future development areas (FUDAs) (which were identified in the 2018-2048 Our Space strategy);
- Including Rolleston's FUDAs at a density of 12.5 households per hectare; and
- Including Rolleston's FUDAs at a density of 15 households per hectare.

[1] https://www.greaterchristchurch.org.nz/assets/Documents/greaterchristchurch/Capacity-Assessment-reports-2021/Greater-Christchurch-Housing-Development-Capacity-Assessment-July-2021.pdf

Table 1: Selwyn District Feasible Capacity and Dwelling Demand in Latest HBA

Scenario 1: Excluding Future Urban Development Areas (FUDAs)

Timeframes	Feasible Capacity	Demand incl buffer	Surplus/Shortfall
Short Term	4,578	2,714	1,864
Medium term	6,452	8,541	2,089
Long term	6,452	25,338	18,886

Scenario 2: Including Future Urban Development Areas (FUDAs) @ 12.5 hh/ha

Timeframes	Feasible Capacity	Demand incl buffer	Surplus/Shortfall
Short Term	4,578	2,714	1,864
Medium term	12,208	8,541	3,667
Long term	12,208	25,338	13,130

Scenario 3: Including Future Urban Development Areas (FUDAs) @ 15 hh/ha

Timeframes	Feasible Capacity	Demand incl buffer	Surplus/Shortfall
Short Term	4,578	2,714	1,864
Medium term	13,502	8,541	4,961
Long term	13,502	25,338	11,836

Table 1 shows that, when the FUDAs in Rolleston are excluded, the latest HBA reveals a significant shortfall in feasible district dwelling capacity over both the medium-term (3 to 10 years) and long-term (10 to 30 years). When those new growth areas are included, however, the medium-term shortfall disappears leaving only long-term deficits.

4.3. Critique of HBA Methodology & Conclusions

While the HBA's dwelling supply/demand figures imply no short-term need to provide additional dwelling capacity to meet demand, there are several compelling reasons why this is unlikely to be the case.

NPSUD Requirements are Minima Not Targets

First, the capacity requirements set out in the NPSUD are minima, not targets, and they must be achieved "at all times". Thus, even if a Council appears to have "sufficient" capacity to meet demand, that does not negate the benefits of providing additional capacity. The opposite is generally true. Thus, all other things being equal, the greater the capacity provided, the greater the degree of land market competition and the more efficiently that the market operates (for the wider benefit of the community).

Inclusion of FUDA in Medium Term Capacity Figures

Second, the Council has used the FUDA's as part of its medium-term capacity. However, clause 3.2 of the NPSUD requires that for capacity to be 'sufficient' to meet expected demand, it must be (among other things) 'plan enabled.' Clause 3.4 of the NPSUD goes on to state that development is 'plan-enabled' for housing if, in relation to the medium term, it is on land zoned accordingly for housing[2] under either an operative or proposed district plan. This is not the case

[2] Noting that clause 3.4(2) goes on to state that land is 'zoned' for housing only if the housing use is a permitted, controlled, or restricted discretionary activity on that land.

for the FUDAs in Rolleston and as such these areas cannot be considered in any medium-term development capacity assessment.

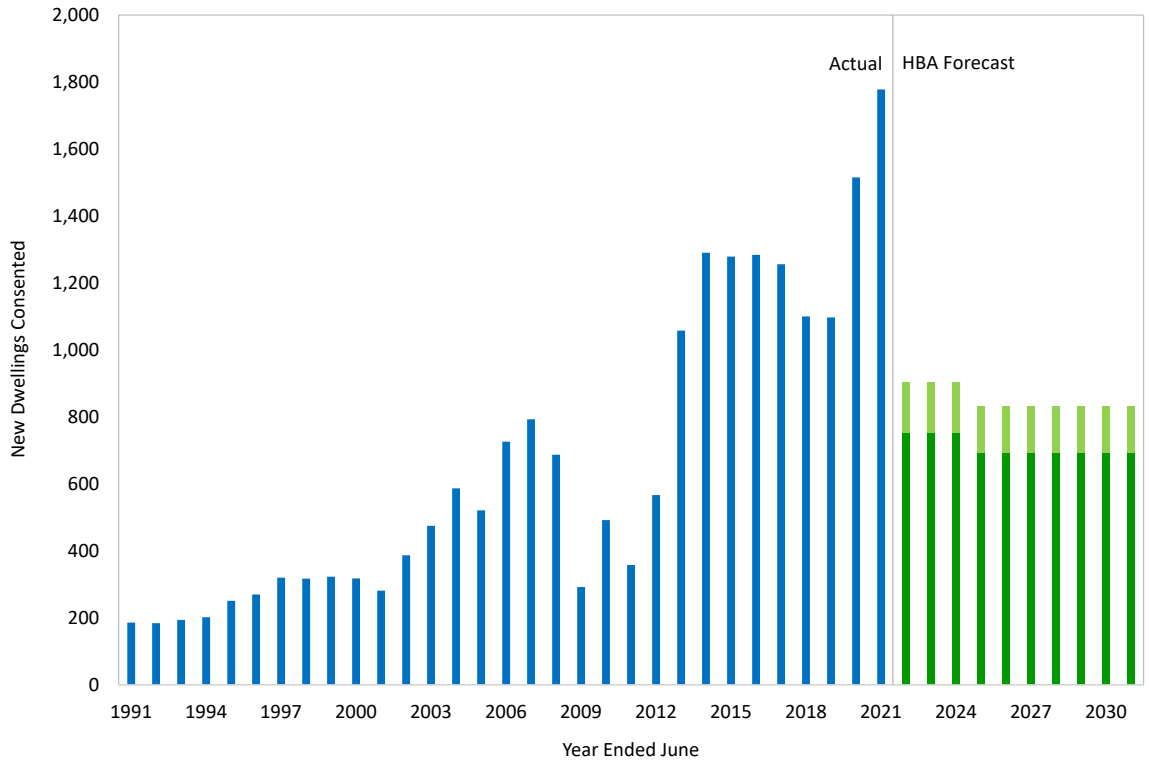
Demand Estimates Appear Implausibly Low

Thirdly, the Council's estimates of future dwelling demand appear very conservative. Specifically, the HBA assumes short-term demand for only 2,714 new dwellings over the next three years, and a medium-term demand for only 8,541 over the next 10 years (both including 20% competitiveness margins). These equate to annual run rates of about only 900 dwellings over the short term, and 850 over the medium term.

By contrast, the latest building consent data published by Statistics New Zealand show that nearly 1,800 new dwellings were granted in Selwyn during the 12 months ended June 2021, which is double the assumed short-run rate of only 900.

Figure 4 provides more details. It compares the HBA's projected dwelling demand to 2031 (the green bars) to actual district building consents granted since 1991 (the blue bars). The light green segments at the top of the HBA forecast bars represent the NPSUD competitiveness margins.

Figure 4: Recent Building Consent Volumes vs HBA Demand Estimates[3]



Clearly, the HBA's forecasts of short- to medium-term future growth defy recent trends and thus almost invariably understate the true extent of future demand. When the competitiveness margins (i.e. the light green bits at the top of the HBA bars) are stripped out to make it a like-for-like

[3] Building Consent data was retrieved from http://infoshare.stats.govt.nz/

comparison with the blue bars (which are raw consent numbers and thus exclude any margins), this anomaly becomes even more stark.

HBA Yield Assumptions

Not only does the HBA for Selwyn adopt inexplicably low estimates of demand, but its estimates of feasible capacity (to meet that demand) appear grossly overstated. There are several issues at play here, which we now work through one by one.

First, when calculating the feasible capacity for new dwellings still residing in existing greenfield areas, which account for most of the short-term supply, the modelling assumes that only 25% of such land will be used for infrastructure (such as roads, parks, and reserves). Thus, it assumes that 75% of the land will be available for development.[4]

To ground-truth this assumption, we reviewed a recent, detailed report on residential development densities by Harrison Grierson, which was commissioned by the GCP.[5] It profiles the development outcomes achieved across various recent greenfield subdivisions, several of which were in Greater Christchurch.

We extracted data from that report to identify the proportion of land in each subdivision used for residential dwellings versus commercial uses or infrastructure. The results are tabulated below, and show that only 60% of greenfield land is typically available for new housing, not 75% as the HBA modelling suggest.

Table 2: Land Use Coverage Ratios in Recent Greenfield Subdivisions

Greenfield Development	Residential	Commercial	Infrastructure	Total
Spring Grove (Belfast, Christchurch)	53%	0%	47%	100%
Golden Sands (Papamoa, Tauranga)	58%	1%	41%	100%
Huapai Triangle (Kumeu, Auckland)	58%	1%	41%	100%
Longhurst (Halswell, Christchurch)	63%	2%	35%	100%
Greenhill Park (Chartwell, Hamilton)	53%	0%	47%	100%
Faringdon (Rolleston, Selwyn)	63%	1%	36%	100%
Sovereign Palms (Kaiapoi, Waimakariri)	71%	1%	28%	100%
Average	**60%**	**1%**	**39%**	**100%**

We acknowledge that the proportion of land available for residential development varies across the case study areas in Table 2, and we also understand that geotechnical conditions are a key driver. For example, in low-lying, flood prone areas, more land is generally needed for stormwater management, with less required in more elevated and well-drained areas.

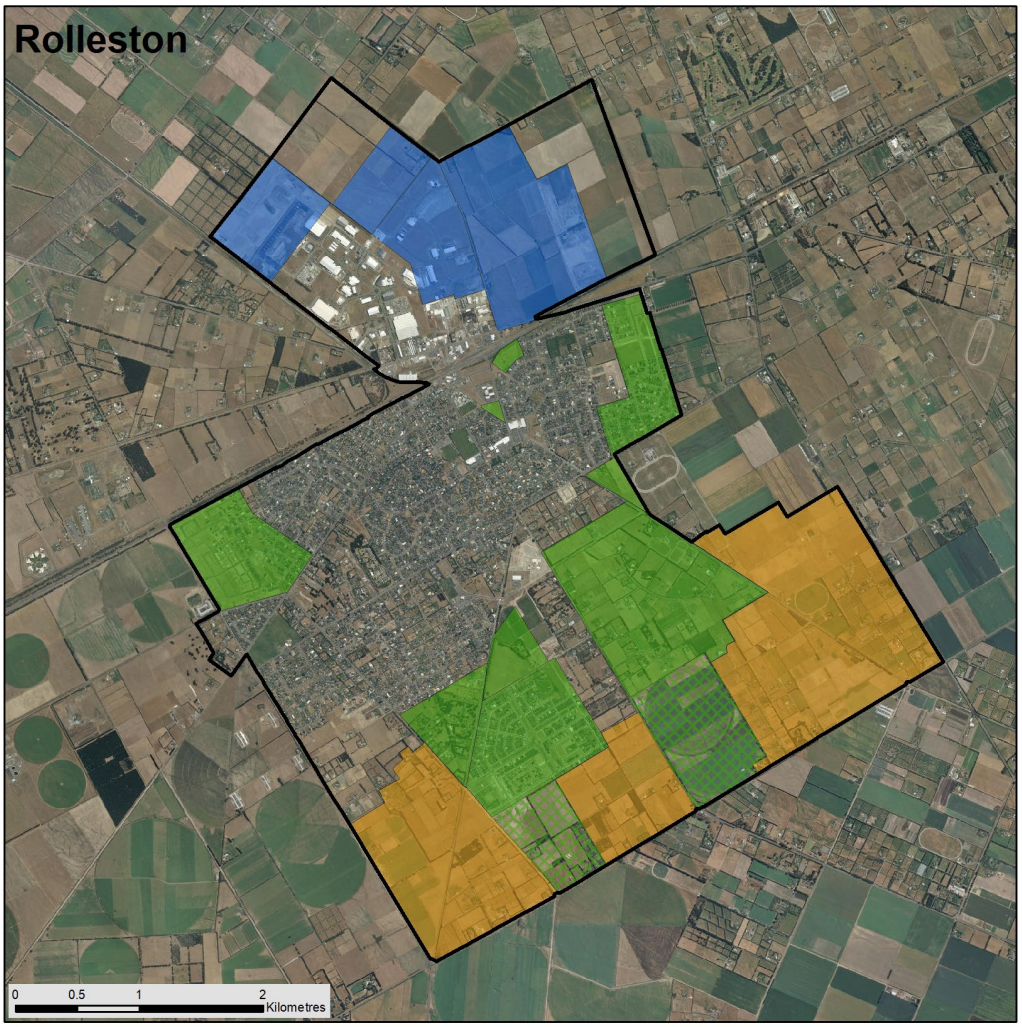
Based on discussions with district developers – including the developer of PC67, who has developed more than 2,700 sections across Greater Christchurch over the last 10 to 15 years – we understand that a net yield of 65% is more likely to reflect future development outcomes across Selwyn district, not the 75% assumed in the HBA. We return to this point shortly.

[4] See page 42 of the HBA (30 July 2021).

[5] https://www.selwyn.govt.nz/__data/assets/pdf_file/0005/475466/UG-Chapter-Appendix-3-HG-Greenfield-Density-Analysis.pdf

Yet another issue with the Council's estimates of feasible capacity relate to the FUDAs identified in the 2018-2048 Our Space Strategy, which are represented by the orange blocks in the map below.

Figure 5: Map of Rolleston Future Urban Development Areas (FUDAs)



According to the HBA, these FUDAs can accommodate an additional 5,756 to 7,050 dwellings at densities of 12.5 and 15 dwellings per hectare, respectively.

While the HBA is not explicit about the land area underpinning these estimates, the lower figure translates to approximately 460 hectares of developable land, while the higher equates to about 470 hectares. Hence there is a discrepancy of 10 hectares of land within the FUDAs in these figures.

To verify the amount of land contained with the FUDAs, which seem to differ between the HBA's two density scenarios, I used Canterbury Maps to trace their outlines. The results show that these FUDAs span roughly 462 hectares in total.

Herein lies the problem. As discussed just above, not all land in these FUDAs will be available for residential development, with some instead required for roads, reserves, and other infrastructure that is expressly excluded from the definition of net density in the Canterbury Regional Policy Statement and which dictates the 12 dwellings per hectare target. Consequently, the estimates of feasible capacity residing in the FUDAs need to be scaled down too to allow for the land required by these excluded features.

Because the assumed yields of 12 to 15 dwellings per hectare for the FUDAs reflect net densities, they already account for local roads and reserves etc. To account for other non-residential land uses – such as arterial roads, stormwater areas, commercial activities, schools, and so on – we understand that the FUDA yields should be scaled down by about 15%.

Assumed Profit Margin for House Construction

Another significant issue that seriously undermines the veracity of the HBA's estimates of feasible development capacity is the profit margin that is assumed to be required by developers.

According to official guidance published by MBIE, feasibility assessments should adopt a default development margin of 20%, with this value altered only upon review from the development community. This target return is accurate, although many developers target a higher return of 25% to reflect the significant risks associated with property development.

The analysis underpinning the latest HBA for Selwyn, however, adopts a far lower development margin of only 6.6%. This much smaller margin, in turn, lowers the financial hurdle required for hypothetical developments to be considered commercially feasible, and therefore directly overstates likely future dwelling supply.

Interestingly, bullet 2 in appendix 3 of the HBA acknowledges that a 20% development margin is recommended by MBIE, but notes that the assessment has departed from it "to better recognize local and actual market parameters."

We are unaware of any basis for this assertion. Indeed, we are unaware of any developers in the Greater Christchurch area that would risk millions of dollars of their own capital to potentially earn a 6.6% development margin. Nor are we aware of any lenders that would inject capital into a venture where the profit margins are so thin and hence the project is at risk of potential default. Interestingly, this inexplicably low profit margin also was not reviewed or endorsed by the development community, as required by official guidance.

To put it in context, a target return of 6.6% could only ever be considered a "black swan" scenario that might be used to assess the absolute worst case, but it would never be used as the baseline assumption. It simply makes no sense, so we dug deeper to better understand the origins of this rather unusual and misleading assumption.

Our query was answered on page 50 of the HBA, where the authors cite data from Stats New Zealand, which allegedly showed a development margin of only 6.6% for house construction.

We then obtained a copy of that data from Stats NZ and identified the 6.6% figure to put it in context. Regrettably, the HBA's authors appear to have mistaken two similar but entirely different financial metrics.

The first metric is the development margin, which is the profit that a developer seeks to earn over and above their costs for a given project. The second is net profit after tax, or NPAT, which measures the profit earned by a venture when all costs – including tax – are deducted.

In short, it appears that the HBA's authors have mistakenly used the NPAT figure from those financial data and assumed that it equals the developer margin. However, NPAT accounts for a wide range of costs that do not feed into the calculation of developer margins, such as fixed operating costs, depreciation, amortization, and income tax.

The upshot of all this is that the HBA has used an inordinately low developer margin to calculate the commercial feasibility of building new homes in the district, and therefore has significantly overstated the true extent of feasible development capacity. These figures are at least an improvement on the previous HBA, however, which oddly assumed that all plan-enabled capacity would be commercially feasible to develop.

Model Errors/Inconsistencies

In addition, we recently became aware that the model used to estimate feasible capacity contains several anomalies or inconsistencies, which further overstate district dwelling capacity. Specifically, the model:

- Appears to count capacity residing outside of the Greater Christchurch urban environment as defined by the NPSUD, such as the 144 lots included at Castle Hill (parcel ID 7971519). Overall, more than 1,000 lots outside the urban environment appear to have been included.

- Assumes that some district reserves will be developed for residential purposes. e.g. the Stonebrook subdivision water race is assumed to provide 6 infill sites (parcel ID 7703161 & 7703159).

- Includes residential capacity on developed non-residential sites. For example, the model assumes that the Kindergarten at 76-80 Granite drive can provide 2 infill sites, which is highly unlikely given the acute need for early childhood education provision in Rolleston. (parcel IDs 7636983 & 7636981).

To summarise, not only has the HBA understated likely future demand, but its estimates of feasible capacity are grossly overstated for several reasons. Collectively, these issues mean that the forecast shortfall in capacity identified in the HBA is likely to occur far sooner than expected.

Feasible Capacity vs Market Supply

Not only is feasible capacity significantly overstated for the reasons set out above, but there is also a critical difference between feasible capacity, as reported in the HBA, and likely market supply (which is ultimately tasked with meeting increased demand over time).

In short, while feasible capacity is an interesting metric, it should not be confused with market supply. There are several reasons why feasible capacity may not form part of market supply, particularly over the short to medium term. They include:

- *Developer intentions* - some landowners have no clear intention to develop in the short- to medium-term, nor to sell their land to others who may wish to develop it.

- *Tax implications* – greenfield land owners are liable for taxes on recent land value uplifts caused by rezoning. These taxes are greatest in the first year following the rezoning, but gradually diminish over time and then cease 10 years later. In some cases, efforts to avoid or minimise these taxes could cause land to be withheld from the market for up to a decade.

- *Land banking and drip-feeding* – other landowners intend to develop in future, but are currently withholding supply to capitalise on inevitable land price inflation, while some are drip-feeding supply to maintain prices and hence maximise returns.

- *Site constraints* – the Council's estimates of likely supply appear to consider only infrastructure as a potential site constraint and therefore overlook other factors that affect developability, such as contamination or awkward site shape/topography.

- *Operational capacity* – some landowners face operational capacity constraints, which limit the number of new residential lots that they can supply per annum.

- *Financing* – similarly, some landowners face capital/financing constraints that also limit their ability to supply.

Given these various market forces, it follows that actual market supply will only ever be a modest proportion of feasible capacity, and hence that reliance on "just enough" feasible capacity to meet demand will invariably lead to significant and prolonged market shortages.[6]

Revised Estimates of Demand and Supply

To provide a more reliable basis for assessing the adequacy, or otherwise, of the district's current land supply, we recreated our table 1 above to reflect the various supply/demand issues just discussed. These revised supply/demand estimates take

[6] This is confirmed in the PC67 evidence of Mr Gary Sellars (registered valuer), who identified only 34 sections currently available – or about to become available – for sale in Rolleston. This is only a tiny fraction of the Council's latest estimates of feasible capacity for Rolleston, which is supposedly more than 2,000 dwellings.

Table 1 as their starting point, and incorporate the following adjustments that we adopted:

- Short-term demand equals 80% of the number of new consents granted in the district over the last 5 years (plus a 20% competitiveness margin).

- Medium term demand equals 70% of the number of new consents granted in the district over the last 5 years (plus a 20% competitiveness margin).

- Long term demand equals 60% of the number of new consents granted in the district over the last 5 years (plus a 15% competitiveness margin).

- The FUDAs are excluded from medium-term capacity because they do not meet the definitions in section 3.4 of the NPSUD as being plan-enabled.

- 65% of land residing in existing greenfield areas will be available for residential development, with the other 35% used for roads, reserves, and commercial activities.[7] For the FUDAs, 85% of the land will be available for residential development.

- Likely market supply equals 60% of short-term feasible capacity, 75% of medium-term, and 90% of long-term. This reflects the fact that the various market constraints identified above are typically more acute in the short-term but less so in the longer term.

- No adjustments are made for the inordinately low developer margin of 6.6% because it is impossible to identify the impacts on feasible capacity. Neither are any adjustments made for the various modelling inconsistencies noted earlier. Accordingly, our revised totals are conservative and continue to overstate feasible capacity and hence likely market supply.

- Sufficiency is based on the relationship between demand and likely market supply, not demand and feasible capacity.

Bearing these adjustments in mind, Table 3 presents our revised dwelling supply/demand estimates for the district.

[7] Further, 80% of existing feasible capacity is assumed to be within the district's greenfield areas, and 20% within infill areas.

Table 3: Revised Dwelling Supply/Demand Estimates

Scenario 1: Excluding Future Urban Development Areas (FUDAs)

Timeframes	Feasible Capacity	Likely Market Supply	Demand incl buffer	Surplus/Shortfall
Short Term	4,090	2,454	3,886	-1,432
Medium term	5,764	4,323	11,819	-7,496
Long term	5,764	5,187	30,438	-25,251

Scenario 2: Including Future Urban Development Areas (FUDAs) @ 12.5 hh/ha

Timeframes	Feasible Capacity	Likely Market Supply	Demand incl buffer	Surplus/Shortfall
Short Term	4,090	2,454	3,886	-1,432
Medium term	5,764	4,323	11,819	-7,496
Long term	10,656	9,591	30,438	-20,847

Scenario 3: Including Future Urban Development Areas (FUDAs) @ 15 hh/ha

Timeframes	Feasible Capacity	Likely Market Supply	Demand incl buffer	Surplus/Shortfall
Short Term	4,090	2,454	3,886	-1,432
Medium term	5,764	4,323	11,819	-7,496
Long term	11,756	10,581	30,438	-19,857

4.4. Implications for This Plan Change

Table 3 confirms that, when the Council's supply and demand estimates are revised to better reflect reality, that there are significant shortfalls across all three timeframes. Accordingly, additional supply needs to be identified and rezoned as soon as possible (despite the findings of the HBA). Otherwise, the likely prolonged supply shortfalls will place undue pressure on house prices, which undermines affordability and limits the district's strong growth potential.

5. Cost & Benefits of the Plan Change

Having established above that there is a pressing near-term need to identify and rezone additional land to meet forecast growth in demand, we now consider the likely economic costs and benefits of the plan change.

5.1. Boost in Market Supply

Perhaps somewhat obviously, the proposed plan change will provide a substantial, direct boost in the district's dwelling capacity, thereby helping to narrow the gap between likely future supply and demand. All other things being equal, this supply boost will help the market to be more responsive to growth in demand, thereby reducing the rate at which district house prices grow over time (relative to the status quo).

Further, although the district's housing has been reasonably affordable compared to other parts of New Zealand in the past, its prices have surged recently. This is illustrated in the chart below, which incorporates the latest data published under the NPSUD to 30 June 2021.

Figure 6: Selwyn District Median Dwelling Prices (from NPSUD Data)

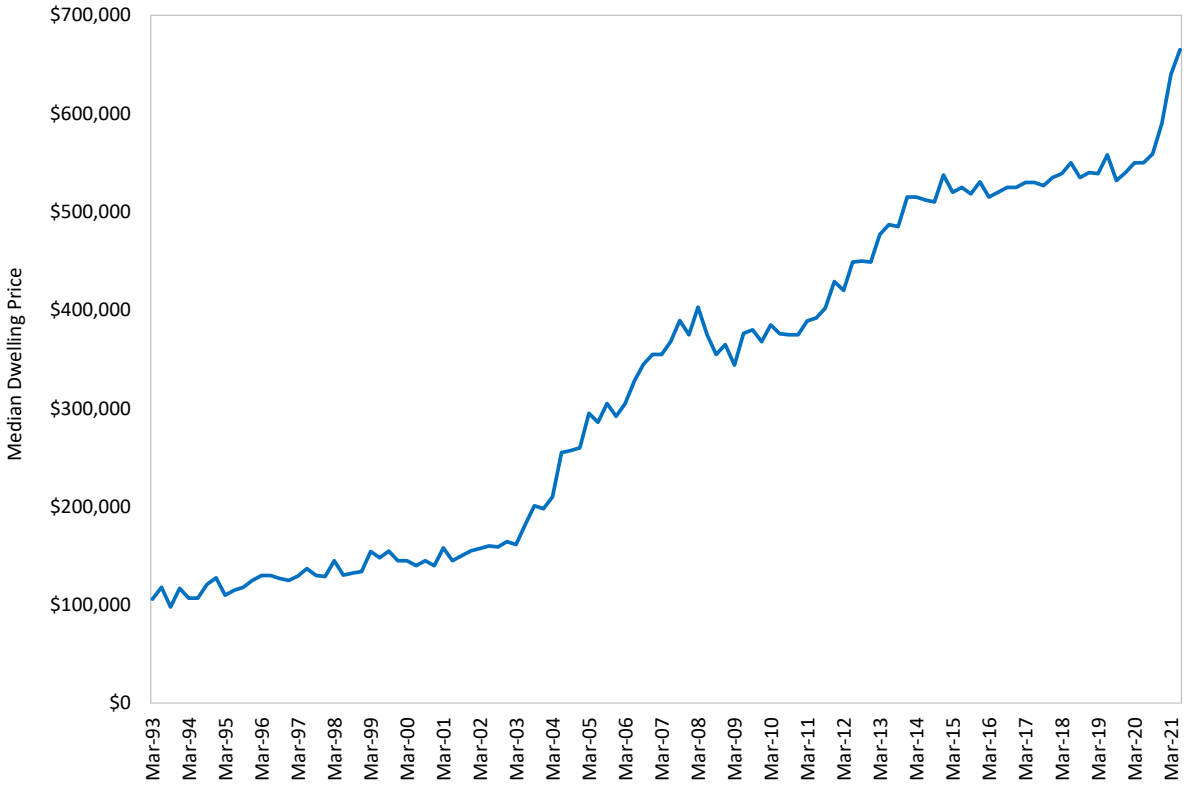


Figure 6 confirms that district dwelling prices have increased steadily over time, but recently shot up after a prolonged period of consolidation. In fact, they increased 21% over the 12 months ended 30 June 2021, which will likely be starting to reduce affordability.

Even prior to this recent spike in house prices, district housing had started to become relatively unaffordable. For example, the latest affordability report by Core Logic (as at December 2020)

showed that the median house price was nearly six times the median household income. By comparison, the benchmark for affordability is a ratio of only three.

In addition, the latest Core Logic report showed that it takes about 7.7 years to save the deposit for a new home in Selwyn. Thus, not only are house prices themselves increasingly unaffordable, but even the task of saving the deposit for a new home is an onerous task that is staring to become well beyond the reach of many households.

The plan change directly responds to this need for additional dwelling capacity by enabling the development of approximately 1,320 new homes over time.

In our view, and from an economic perspective, this represents a highly significant boost in supply. To assess whether this satisfies the definition of "significant" in clause 3.8 of the NPSUD (which relates to unanticipated or out-of-sequence plan changes), we reviewed the latest HBA. At page 10, it discusses consultation with the development community (while writing the HBA) and describes landowners that could develop 20 or more dwellings as being significant.

As such (and particularly given the shortfalls we have described), we consider that the proposed development of approximately 1,320 dwellings on the subject site represents an extremely significant increase in capacity for the Selwyn district, from both an economic and market perspective and by virtue of the way that term is used in the HBA (and by extension how it might be considered for the purposes of clause 3.8 of the NPSUD).

To put the supply boost in context, we note that the 1,320 new lots provided would increase likely short-term district supply by 54%, and medium term by 31%.[8] We consider this a very significant contribution, especially from just one development.

5.2. Land Market Competition

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

Absent competition, landowners experience "market power", which enables them to charge more for land and be slower in releasing it to the market. Both outcomes conspire against affordability and reduce the overall efficiency of the housing market. Indeed, this sort of market power is likely to explain some of the rapid growth in land and dwelling prices over the last 12 months, as shown in Figure 6.

[8] Based on the likely short term supply estimate of 2,454 dwellings in Table 3, and the medium term figure of 4,323.

Moreover, not only do the direct boost in supply and increased land market competition (discussed above and created by the proposal) have direct economic benefits by making land and dwellings more affordable than they would have been otherwise, they can also have broader impacts.

Specifically, by reducing the rate at which dwelling prices grow, future residents will spend less on weekly rent or mortgage payments than they would have otherwise, which will boost disposable incomes. With a significant proportion of that extra money likely to be spent locally, lower future dwelling prices (relative to the status quo) will also create additional economic stimulus for the wider benefit of the local area through increased household spending over time.

5.3. Critical Mass to Support Greater Local Retail/Service Provision

Currently, Selwyn district residents rely heavily on centres in Christchurch City to meet their daily household needs. For example, the table below shows the destination of Selwyn district resident spend in 2019 using detailed Marketview data provided to us by Waimakariri District Council on a recent, separate matter.

Table 4: Destination of Selwyn District Resident Spend in 2019

Spending Categories	Selwyn District	CHCH City	Rest of Region	Rest of NZ	Total
Apparel and Personal	15%	73%	3%	10%	100%
Cafes, Restaurants, Bars, Takeaways	31%	47%	6%	15%	100%
Department Stores and Leisure	16%	73%	3%	8%	100%
Fuel & Automotive	44%	40%	8%	8%	100%
Groceries & Liquor	50%	39%	4%	6%	100%
Home, Hardware & Electrical	10%	80%	3%	6%	100%
Other Consumer Spending	18%	58%	6%	18%	100%
All Categories	**34%**	**52%**	**5%**	**9%**	**100%**

Table 4 shows that only a third of Selwyn resident spend is retained in the district, with more than half leaking out to Christchurch City. While some of that city spending may occur before, during, or after working there, others reflect specific trips.

By enabling the resident population to grow, including via additional development on the subject site, the district will eventually be able to support greater local retail/service provision and hence be less reliant on the city to meet its household needs.

This, in turn, will not only support greater district economic activity and hence employment, but also reduce vehicle travel and the harmful emissions associated with it.

More specifically, greater district critical mass – including at the subject site – will help the Council and community to realise its ambitions for a renewed Rolleston Town Centre, thereby elevating its current status as a lower-order KAC to a fully-functioning town centre that fulfils a wider range of roles and functions.

To put this in context, we estimated likely future spending originating on the subject site at full build-out by applying regional average spending from the latest Household Economic Survey. The

results are tabulated below, and reflect total annual spending by 1,320 new households. To be conservative, these estimates ignore ongoing growth in annual household spending over time.

Table 5: Projected Future Spending Originating Onsite

Expenditure Group	Annual Spend per Household	Total Annual Spend ($ millions)
Food	$12,270	$16.2
Alcoholic beverages, tobacco, and illicit drugs	$1,650	$2.2
Clothing and footwear	$2,400	$3.2
Housing and household utilities	$15,510	$20.5
Household contents and services	$2,360	$3.1
Health	$2,050	$2.7
Transport	$10,680	$14.1
Communication	$1,850	$2.4
Recreation and culture	$6,570	$8.7
Education	$1,060	$1.4
Miscellaneous goods and services	$6,340	$8.4
Other expenditure	$7,820	$10.3
Total Household Expenditure	**$70,560**	**$93.1**

Table 5 shows that future households on the subject site will spend $93 million per annum on a wide range of household goods and services, many of which will likely be purchased from the Rolleston Town Centre. Accordingly, future development of the land will provide significant commercial support for Rolleston businesses.

In addition, future residents of the plan change area will help create critical mass to support the provision of improved public transport facilities and services over time.

5.4. One-Off Economic Stimulus

Constructing the 1,320 new homes enabled by the proposal will generate significant one-off economic impacts. We quantified these using a technique called multiplier analysis, which is based on detailed matrices called input-output tables. These tables describe the various supply chains that comprise an economy, and therefore enable the wider economic impacts of a change in one sector (or sectors) to be traced through to estimate the overall impacts.[9]

[9] The multipliers used here are for the Canterbury region, and were derived by our organization. They are widely used by a range of public and private organisations across New Zealand, including Lincoln University.

These impacts include:

- *Direct effects* – which capture onsite activities directly enabled by the proposal; plus

- *Indirect effects* – which arise when businesses working directly on the project source goods and services from their suppliers, who in turn may need to source good/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 (directly or indirectly) are spent in the local/regional economy and therefore give rise to additional rounds of economic impacts.

These economic effects are usually 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 (excluding wages/salaries). It captures the value that a business adds to its inputs to produce its own outputs.

- *The number of people employed* – this is measured in terms of employment counts, which include both part-time and full-time workers, because Statistics New Zealand does not provide data on full-time equivalent employees (FTEs).

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

Having defined these key terms, the following table shows the estimated economic impacts of the various activities enabled by the proposal.

Table 6: One-Off Regional Economic Impacts of Construction

Economic Impact Measures	Direct	Indirect	Induced	Total
Regional GDP ($ millions)	$140	$95	$50	$285
Employment (people-years)[10]	1,525	1,050	490	3,065
Wages/Salaries ($ millions)	$75	$50	$20	$145

In summary, we estimate that future construction activity enabled by the proposal could boost regional GDP by $285 million, including flow on effects, generate employment for 3,065 people years, and generate $145 million in household incomes.

Assuming (say) a 10-year construction period, these translate to annual impacts of $28.5 million in regional GDP, including flow on effects, full time employment for 306 people, and $14.5 million in household incomes.

[10] One person-year means one person employed for a full year. Hence, 100 people-years could mean 100 people employed for one year, 50 people employed for 2 years, and so on.

5.5. Foregone Rural Production

The main potential economic cost of the proposal is the loss of the land for rural production, namely agriculture and/or horticulture.

However, the site comprises Lismore stony silts, which are light soils. These soils are not classified as versatile (Land Use Capability (LUC) Classes 1-2) or highly productive as defined in the Proposed National Policy Statement – Highly Productive Land (LUC 1-3).

This means that the site's soil has:

"...severe physical limitations to arable use. These limitations substantially reduce the range of crops which can be grown and/or make intensive soil conservation and management necessary. In general, class 4 land is suitable only for occasional cropping (once in five years or less) although it is suitable for pasture, tree crops or production forestry. Some class 4 land is also suited to vineyards and berry fields".

We further note that, at 110 hectares, the subject site comprises less than 0.02% of the district's total rural land.[11] Accordingly, the loss of this land for rural production will not undermine the district's economic potential, with an abundance of opportunities remaining elsewhere in the district.

[11] GIS files show that the district's rural areas span just over 6,300km^2. The subject site is less than 0.02% of this amount.

6. Summary and Conclusion

This assessment has shown that future development enabled by the plan change represents a highly significant boost in dwelling capacity, which will help keep pace with demand, while also helping to meet NPSUD requirements. Overall, the proposal will generate a wide range of enduring economic benefits and avoid any material economic costs, such as foregone rural production. Accordingly, we support the proposal on economic grounds and see no reason to deny it.