



Final Report: 3 June 2021

Economic Assessment of Proposed Fast-Track Development in Waimakariri District

Prepared for:
Bellgrove Rangiora Limited

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1. Executive Summary

The Waimakariri District is one of the fastest growing areas in New Zealand. During the 10 years ended 30 June 2020, Waimakariri had the third-highest rate of population growth in New Zealand. Although recent population growth was spread across several locations, Rangiora is the district's primary urban area and one of its main growth locations. However, Rangiora's residential land is now largely depleted, with more required to meet projected growth over time.

Bellgrove Rangiora Limited (BRL) own nearly 100 hectares of rural land in two blocks on the eastern outskirts of Rangiora, which is currently zoned for rural purposes. To help bring some of that land to market as quickly as possible, BRL is considering seeking consent under the COVID-19 Recovery (Fast-track Consenting) Act 2020. To assist, this report assesses the likely economic effects of the development, particularly its impacts on the local housing market, and its impacts on jobs and incomes. In addition, this report briefly considers a range of wider economic effects of the proposal.

Having identified the site and then briefly described its strategic context and expected yields, we next summarise the current state of the local housing market for context. We show that Rangiora locals have different characteristics to the district average, including that they are typically older, less likely to live with a partner, more likely to have recently moved to the district, and more likely to need a smaller dwelling than has previously been provided. We also summarise the findings of a recent housing assessment by Livingstone and Associates, which projected demand for an additional 3,950 dwellings in Rangiora over the next 30 years. However, despite this strong growth in demand, Rangiora has run out of residential land, with only limited scope to provide additional housing within the existing urban area. Accordingly, additional land like the proposal is immediately required to enable dwelling growth to keep pace with demand over time.

The proposed development of approximately 200 lots within the Fast-Track stages of the development will have important effects on the local land and housing markets. First, it will help restore the supply of local residential land, which is important given the recent profound and prolonged shortage. Second, it will help better meet the needs of an evolving population by enabling smaller homes to be built on more compact sections. Indeed, despite ongoing changes in local demography, recent additions to the building stock have mainly been large, three- or four-bedroom homes on sections of at least 600m². These are too big for many households, particularly the smaller and older households that are projected to become far more common in future. We also note that the proposal's economic merits are bolstered by the fact that it will be a master-planned development by a willing and able group with a proven track record of delivering quality outcomes in the district.

Future development of the land, and the subsequent construction of new dwellings on it, will also create significant one-time boosts in regional and national GDP, jobs, and wages. We estimated these using a well-known technique called multiplier analysis, which traces development spending through its various supply chains to estimate the overall economic impacts, including flow-on

effects. To summarise: including flow-on effects, over a two- or three-year period, we estimate that the proposal could have the following **regional impacts**:

- A one-time boost in regional GDP of \$44 million;
- Employment for 476 people-years (e.g. 238 people employed full time for 2 years); and
- Additional household incomes of \$22 million.

The corresponding **national impacts**, which are higher than the regional ones because the national economy captures more of the overall flow-on effects, are:

- A one-time boost in national GDP of \$89 million;
- Employment for 894 people-years (or 447 people employed full-time for 2 years); and
- Household incomes of \$43 million.

This additional employment will not only help the district to recover from the devastating effects of Covid-19, but it will also help gradually improve district employment self-sufficiency. This is important, because the district had the second lowest number of jobs per working age resident in 2019, with about 40% of its workers commuting daily to Christchurch City for employment.

Finally, we considered a range of other likely economic effects of the proposal. They include:

- *Critical Mass and Support for Key Activity Centres (KACs)* – Future residents of the new subdivision will help create critical mass for various local services that may otherwise not be viable. This is important, because the district is currently very reliant on Christchurch City for everyday household goods and services. Overall, we estimated that future households of the Fast-Track homes will spend about \$5.4 million per annum on core retail goods and services.
- *Infrastructure Efficiency* - the subject site is just across the road from a recent growth area and is also within Rangiora's projected infrastructure boundary. As a result, it is likely to achieve high levels of infrastructure efficiency. This, in turn, avoids unnecessary financial risks and costs for the Council while helping to keep the prices of new homes as low as possible.
- *Highest & Best Use of Land* - the proposal will also enable the land to be put to its highest and best use, which is a precondition for economic efficiency to hold in the underlying land market.
- *Investment Signal Effects* - the development will provide a signal of confidence in the district economy, which may help spur on, accelerate, or bring forward other developments.

Given the various economic benefits of the proposal, as summarised above, we strongly support it on economic grounds.

2. Introduction

2.1. Context and Purpose of Report

The Waimakariri District is one of the fastest growing area in New Zealand. During the 10 years ended 30 June 2020, Waimakariri had the third-highest rate of population growth in New Zealand. Although recent population growth was spread across several locations, Rangiora is the district primary urban area and one of its main growth locations. However, Rangiora's residential land is now largely depleted, with more required to meet projected growth over time.

Bellgrove Rangiora Limited (BRL) own nearly 100 hectares of rural land in two blocks on the eastern outskirts of Rangiora, which is currently zoned for rural purposes. To help bring some of that land to market as quickly as possible, BRL is considering seeking consent under the COVID-19 Recovery (Fast-track Consenting) Act 2020. To assist, this report assesses the likely economic effects of the development, particularly its impacts on the local housing market, and its impacts on jobs and incomes. In addition, this report briefly considers a range of wider economic effects of the proposal.

2.2. Structure of Report

The remainder of this report is structured as follows:

- **Section three** identifies the location of the proposed development, describes its zoning and strategic context, then identifies the number and sizes of new residential lots that it seeks to create.
- **Section four** briefly describes the current state of the local housing market to provide context for the proposal.
- **Section five** assess the proposal's likely impacts on the local housing market.
- **Section six** estimates the proposal's impacts on GDP, jobs, and wages, and
- **Section seven** briefly describes other wider economic effects of the proposal.

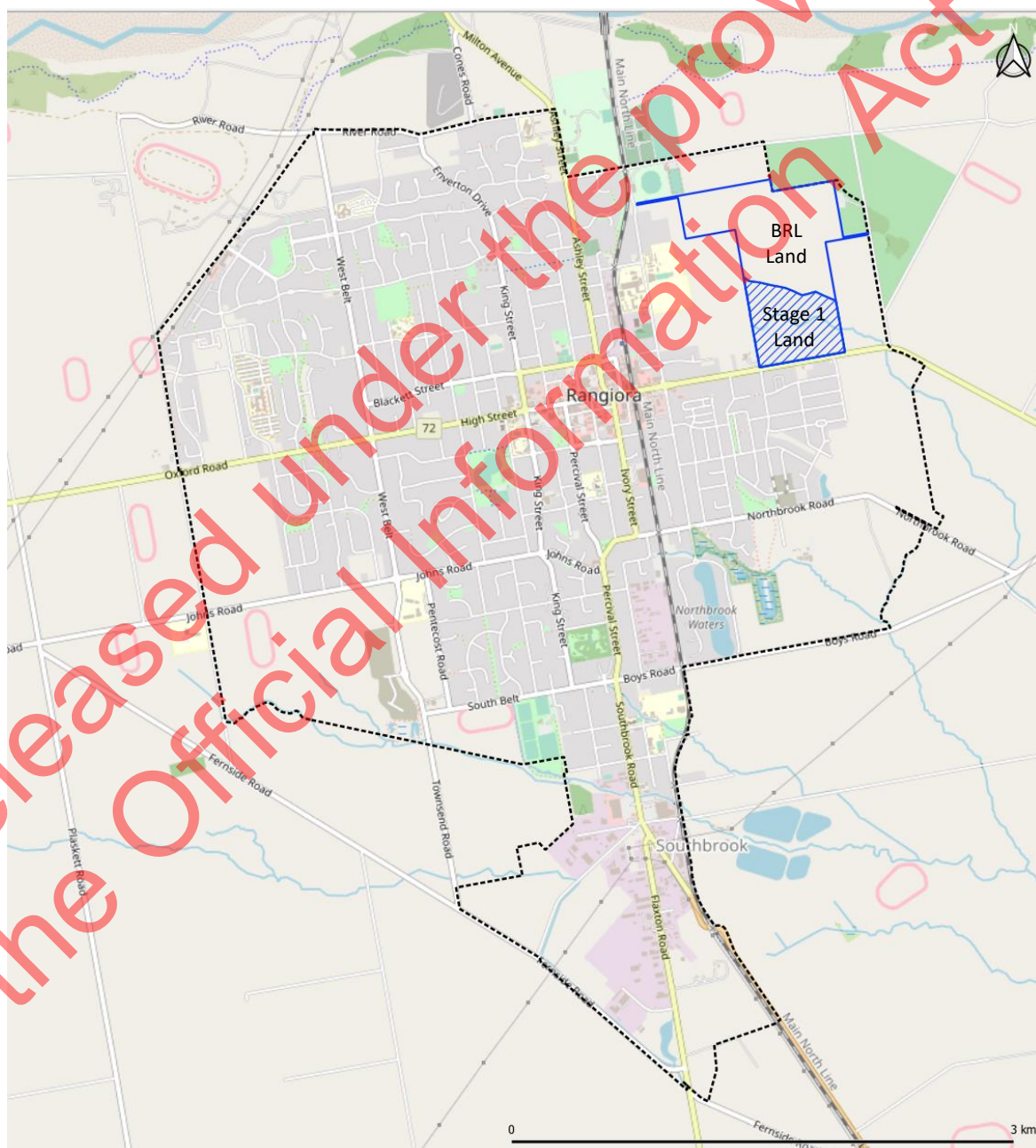
3. About the Development

This section briefly describes the proposed development.

3.1. Location & Description of Subject Site

The subject site is located at 52 Kippenberger Avenue (as indicated by the blue outline in Figure 1). It is bound by Coldstream Road and the Rangiora Golf Club to the north, rural land to the east and west, and Kippenberger Avenue to the south. The site spans approximately 63 hectares and is relatively flat. It also falls within Rangiora's projected infrastructure boundary, which is depicted by the dotted black line in the figure below. The hatched blue area shows the land proposed for Fast-Track consent.

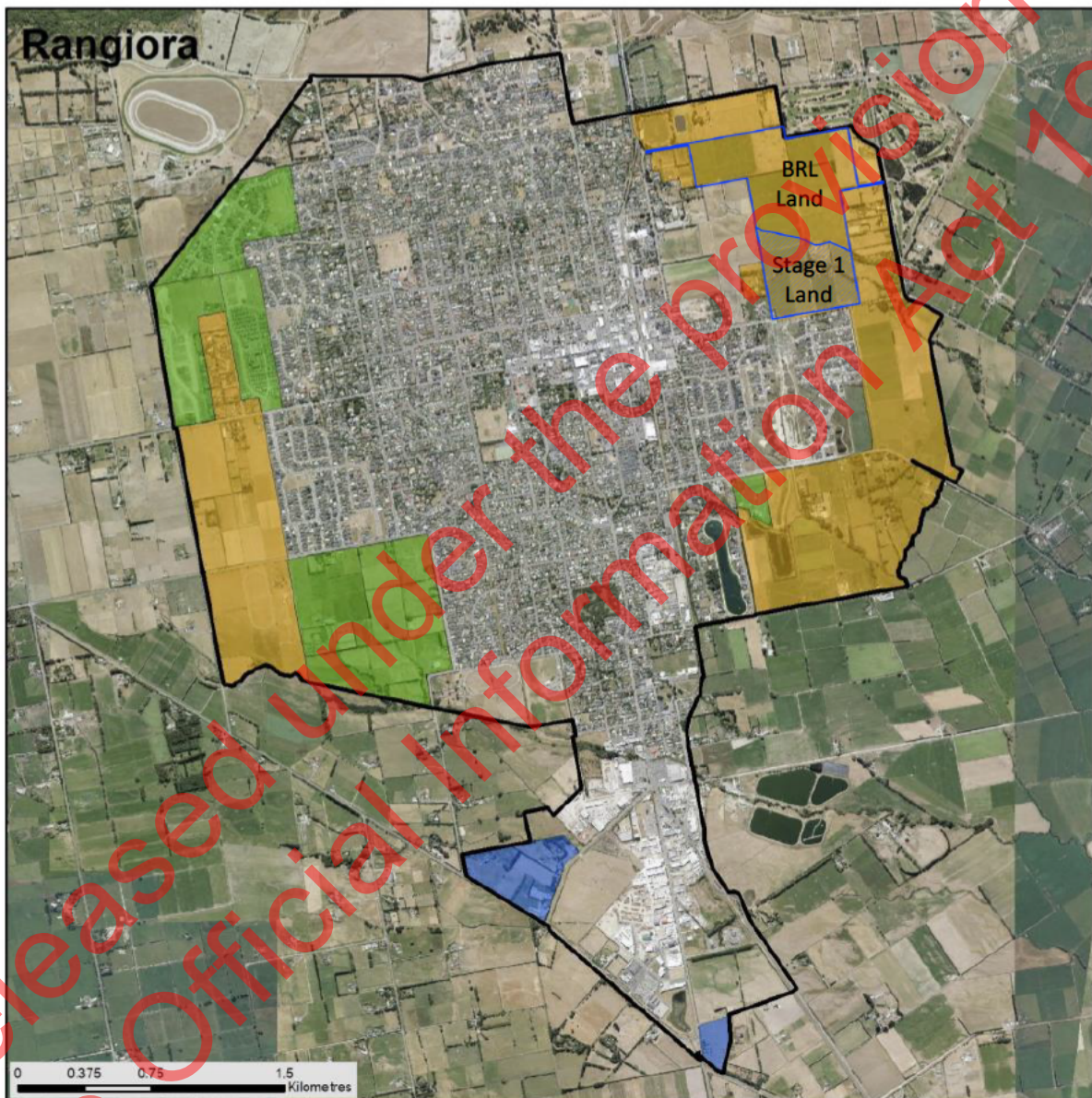
Figure 1: Location of Subject Site



3.2. Zoning & Strategic Context

The site is currently zoned Rural under the Waimakariri District Council (WDC) Operative District Plan (ODP). However, spatial planning undertaken by WDC in collaboration with its subregional partners – Christchurch City Council (CCC) and Selwyn District Council (SDC) – recently identified the site and land around it as a future development area. The map below shows these future development areas shaded in orange, with the subject site's boundary overlaid in blue.

Figure 2: Location of Subject Site within Proposed Future Development Areas (Shaded in Orange)

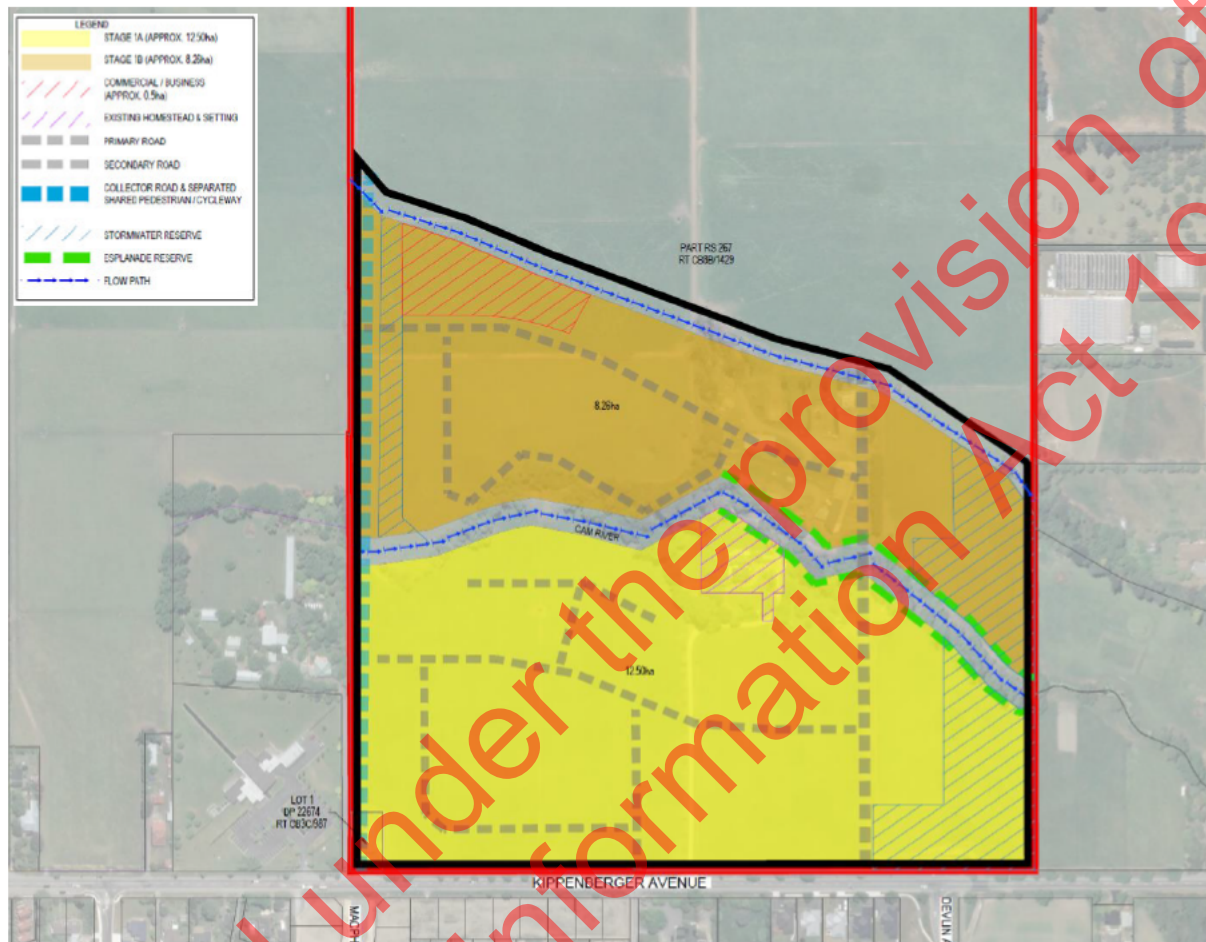


These proposed future development areas will be advanced via plan change 1 to the Christchurch Regional Policy Statement. In the meantime, WDC and BRL are working collaboratively to bring forward parts of the subject site for development as soon as possible.

3.3. Indicative Structure Plan – Fast-Track Stages

The development's proposed fast track stages occupy the southwestern corner of the site, spanning 16 hectares. The map below shows an indicative structure plan and associated zoning pattern.

Figure 3: Indicative Structure Plan and Proposed Zoning for Fast Track Land



In summary, most of the Fast-Track land will be zoned for residential purposes, with a small amount (~0.5 ha) of supporting Commercial/Business zoned land in the northwestern corner.

Land to the east is unsuitable for development due to geotechnical conditions, so it will be used for stormwater management and passive recreation purposes instead.

3.4. Indicative Fast-Track Yields and Lot Sizes

Figure 4 shows the latest indicative subdivision plan for the proposed Fast-Track stages, which yields 208 lots of varying shapes and sizes.

Figure 4: Fast-Track Stages Indicative Lot Sizes and Layout

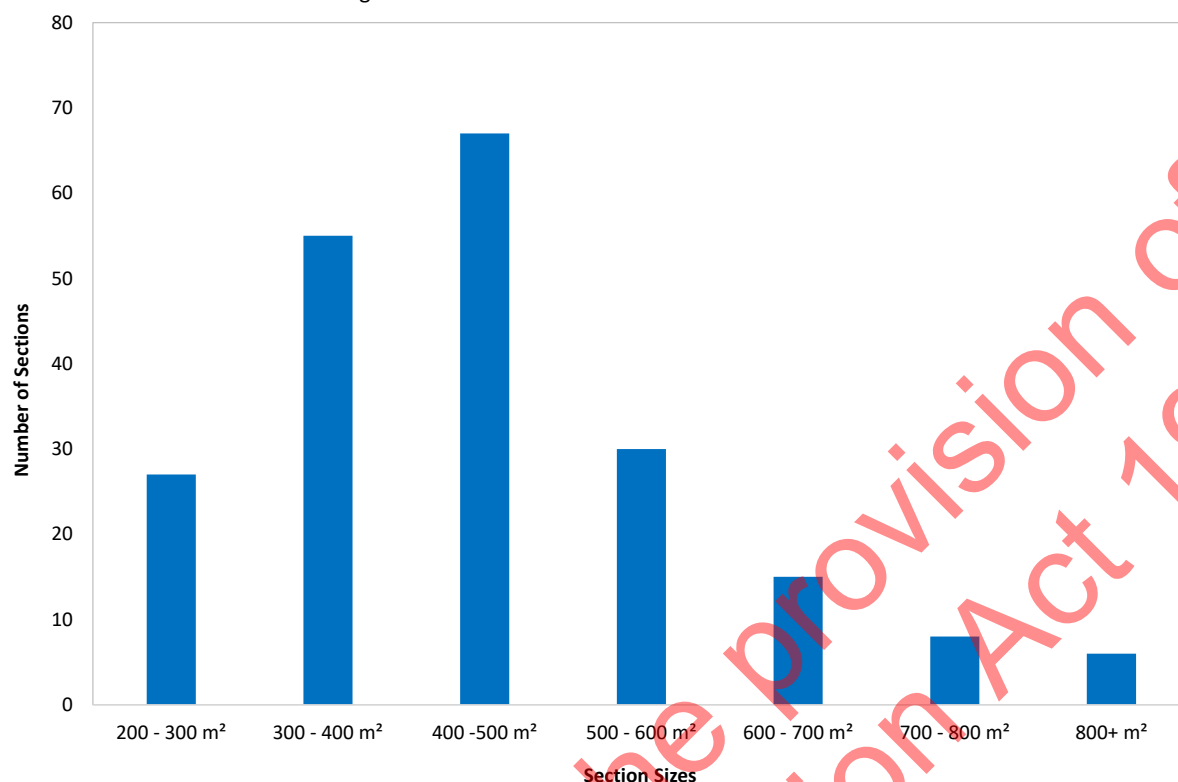


Table 1 and Figure 5 summarise the sizes of lots created via the Fast-Track stages.

Table 1: Summary of Indicative Fast-Track Lot Sizes (m²)

Statistics	Fast-Track Stages
Number of Lots	208
Average Size	455
Median Size	440
Mode (most common size)	250
Minimum Size	232
Maximum Size	1,016
Range (max-min)	784

Figure 5: Distribution of Indicative Fast-Track Lot Sizes



The median section size in the Fast-Track stages is 440m², while the average is 455m². The smallest section is 232m², the largest is 1,016 m², while the most common (applying to 11 lots) is 250m². Overall, the section sizes provided in the Fast-Track stages are significantly smaller than has previously been provided in Rangiora.

4. Housing Market Context

4.1. Demographic Summary

In early 2018, as the latest census, there were almost 7,000 households with 17,800 usual residents living in Rangiora. This translates to an average household size of 2.58, which is lower than the rest of the district (where the average household size was 2.7). Rangiora's smaller household sizes partly reflects its older population, who tend to live in smaller households. Specifically, 25% of Rangiora's population was older than 65 in 2018, compared to only 16% for the rest of the district.

Further, compared to the rest of the district, Rangiora's population in 2018 was:

- Less likely to live with a partner
- Less likely to be working or in the labour force
- If working, more likely to be a sales worker and less likely to be a manager
- Less likely to earn over \$70,000 per annum (the highest personal income bracket)
- More likely to live in an attached dwelling than stand-alone
- More likely to live in a dwelling with three or fewer bedrooms
- More likely to have only one motor vehicle
- More likely to have moved to the district in the last five years, and
- More likely to be on NZ superannuation.

4.2. Projected Dwelling Demand

In 2020, Livingstone and Associates were commissioned to analyse the district's housing market to help inform Council planning and processes. Their report is very comprehensive and, amongst other things, includes household projections for Rangiora and the rest of the district. These are shown in the table below.

Table 2: Household Projections (from Livingstone & Associates Report)

Year	Rangiora	Rest of District	Total
2018	7,370	16,130	23,500
2023	8,250	18,450	26,700
2028	8,930	20,420	29,350
2033	9,570	22,230	31,800
2038	10,160	23,840	34,000
2043	10,740	25,330	36,070
2048	11,320	26,840	38,160
Change	3,950	10,710	14,660
Annual Growth Rate	1.4%	1.7%	1.6%

According to Table 2, the number of households in Rangiora will increase by nearly 4,000 between 2018 and 2048 (from 7,370 to 11,320). This represents an annual average growth rate of 1.4%. Slightly higher growth is forecast in the rest of the district, where the annual growth rate is forecast to be 1.7%.

While not clear from the projections above, Livingstone and Associates also note that the district's demography will change significantly over the next 30 years, which will alter the types and sizes of dwellings required to house its future population. For example, nearly all the projected growth in households tabulated above represents couples without children or people living alone. In addition, the average age of residents is projected to increase significantly. Accordingly, future households will require smaller dwellings located in areas with easy access to essential services.

4.3. Available Residential Land

We used Core Logic's Property Guru tool to identify all dwellings built and sold in Rangiora over the last 10 years to identify their general location within the township. These new dwellings are illustrated by the red and orange outlines in the map below, with the subject site overlaid for context.

Figure 6: Location of New Dwellings Built and Sold since 2010 in Rangiora

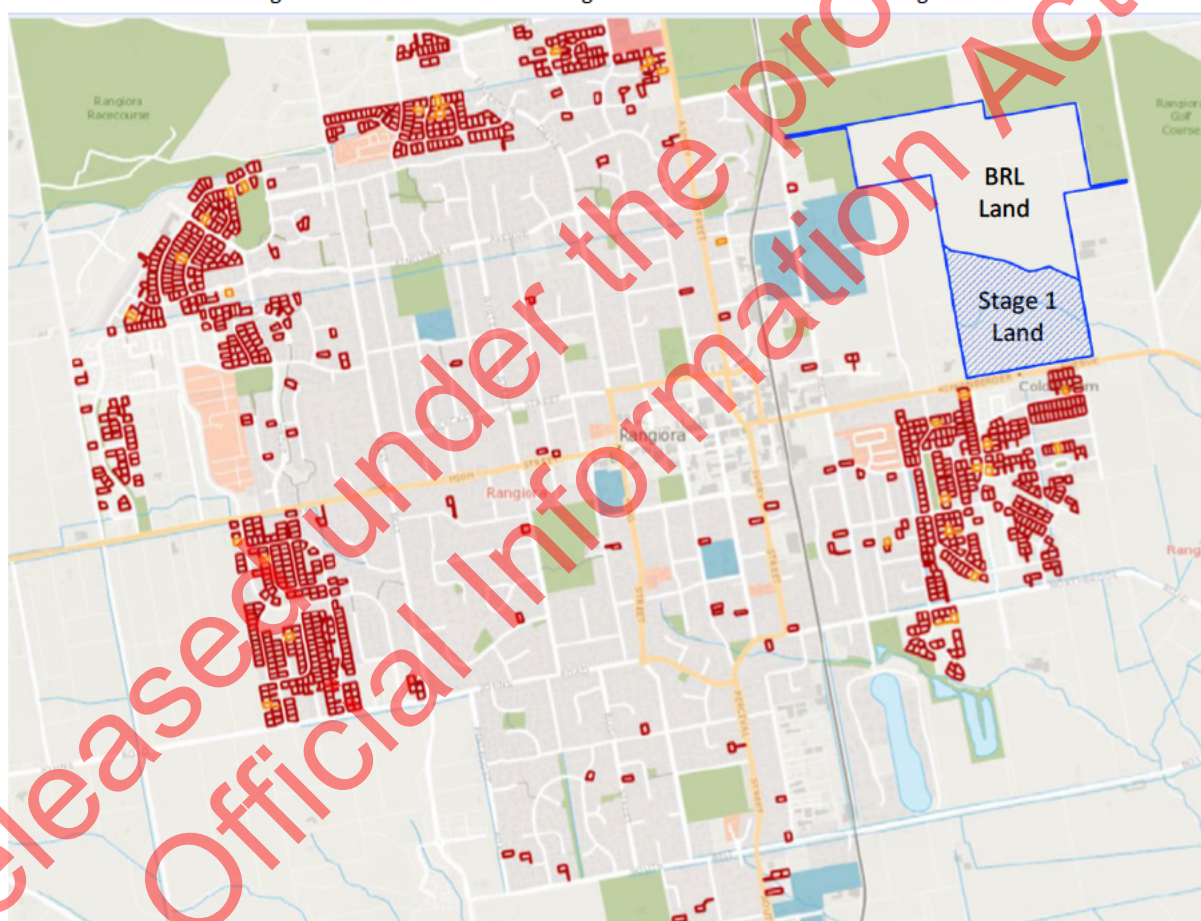


Figure 6 shows that most Rangiora dwellings built and sold since 2010 have been in new greenfield locations on the town's eastern, northern, and western edges. In fact, of the approximately 1480 new dwellings built/sold since 2010, only about 2% were inside the existing core urban area, with the other 98% or so dotted around the edges.

This high concentration of new development on the urban periphery differs from many other areas of New Zealand, where new dwellings are spread more evenly across new and existing urban

areas. This profound lack of development inside Rangiora’s existing urban area, in turn, appears to reflect its relatively low land prices, which erodes the financial merits of redeveloping existing sites and therefore push new development to greenfield areas on the urban fringe.¹

Herein lies an issue for the district, and for Rangiora more specifically. Currently, there is little – if any – greenfield land available for development in Rangiora. In fact, according to discussions with local property market participants, there are no residential sections currently available in Rangiora.

There is a small amount of undeveloped land at Townsend Fields, but this won’t become available until mid-2022. However, with only 50 titles available in the next stage, and with registrations of interest already received from 500 parties, it will sell-out within days if not weeks.

The lack of available land is also supported by recent trends in building consents for Rangiora, as plotted in Figure 7 below. In short, the number of new dwellings consented in Rangiora in 2020 was less than half the 10-year average, and 70% lower than the peak of 350 in 2016. Accordingly, we conclude that there is very little residential land available for development in Rangiora, with more needed immediately to enable dwelling growth to keep pace with demand over time.

Figure 7: Number of Consents for New Dwellings Granted in Rangiora between 2011 and 2020



¹ Generally speaking, the higher the value of land relative to the value of improvements/buildings, the more viable that redevelopment of existing sections is, and vice versa.

5. Impacts on the Housing Market

This section analyses the proposal's housing market impacts.

5.1. Restoring the Supply of Residential Land

As shown in the previous section, Rangiora is devoid of developable residential land. The only land that will be available in the short-term is the next stage of Townsend Fields, where 50 new titles will be released next year. However, with more than 10 expressions of interest already received per new title available, that land is effectively sold before it even hits the market.

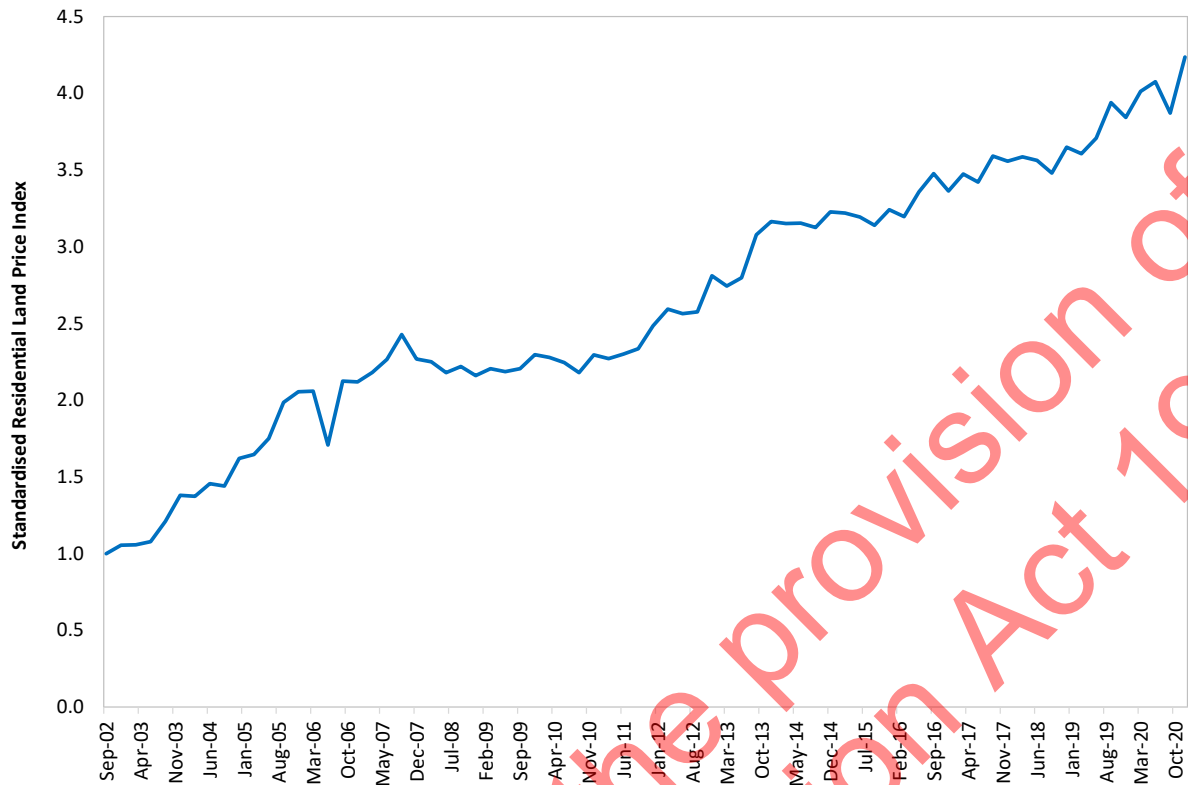
Rangiora aside, the next closest residential subdivision is at Ravenswood, which is about a four-minute (4 km) drive east of the subject site along Rangiora-Woodened Road. That development is expected to yield approximately 1,100 sections upon completion but, like other nearby subdivisions, has also been inundated with enquiries by building companies and individuals alike. In fact, demand for new sections at Ravenswood has been so acute that the developer is now using a ballot system to ration new sections as they become available.

The significant and prolonged mismatch between the market supply and demand of residential sections in and around Rangiora has placed upward pressure on land, and thus dwelling, prices. For example, we understand that sections in Ravenswood that sold for \$140,000 to \$160,000 prior to the Covid-19 lockdown in 2020 are now selling for between \$180,000 to 220,000 (an increase of about 33% over a 12-month period).

There has also been a noticeable increase in the prices of new sections at Townsend Fields. For example, stage 1 of that development also went on sale before Covid-19, with sections going for \$180,000 to \$220,000. Now, 12 to 18 months later, other sections of similar sizes are selling for \$250,000 to \$280,000 (again, an increase of more than 30%). A similar story has played out at Pegasus, which is also less than a 10-minute drive from Rangiora.

These market observations are confirmed by data published under the national Policy Statement on Urban Development 2020 (NPSUD). This requires Councils in high growth areas – like Waimakariri District – to monitor and report changes in the quality- and size-adjusted prices of new residential sections. This indicator removes the effects of changes in section size and quality from one period to the next so that a consistent time series can be tracked. According to that indicator, which is reproduced below, the price of a new residential section in the district has more than quadrupled over the last 18 years. This equates to a compound annual growth rate (CAGR) of 8.4%.

Figure 8: Standardised Land Price Index for Residential Sections in Waimakariri District (from NPSUD)



While these increases in land price are yet to cause profound affordability issues, with district prices still relatively affordable compared to elsewhere in New Zealand, they are starting to have an impact. For example, a recent report on housing affordability by Core Logic at the end of 2020 showed that the district's median dwelling price is nearly six times the median income, while a value of three is commonly accepted as the benchmark of affordability.² In other words, prices are now almost double the affordable level.

Further, the same report showed that a first-home buyer household in the district would need to save 15% of their gross incomes for 7.5 years to accumulate a 20% house deposit. Thus, not only are house prices themselves increasingly unaffordable, but even the task of saving a deposit is a significant undertaking.

The proposal acknowledges and directly responds to the acute need for more residential land to meet growth in demand over time. While the Fast-Track stages of the proposal are not large enough alone to resolve mounting pressures on land prices, they are a big step in the right direction.

5.2. Meeting the Needs of an Evolving Population

Rangiora's population, like most of New Zealand, is changing. People are getting older, and households are getting smaller. However, despite these demographic shifts, new dwellings built and sold in Rangiora over the last 10 years are relatively unchanged, with:

² Core Logic, The NZ Housing Affordability Report, February 2021

- 83% having at least 600m² of land;
- 80% having at least 160m² of floorspace; and
- 93% having three or four bedrooms.

These large, new homes on generous-sized sections are unlikely to meet the future needs of a rapidly-evolving population. For context, Figure 9 compares the section sizes of new dwellings built in Rangiora over the last 10 years to those that comprise the Fast-Track stages of Bellgrove.

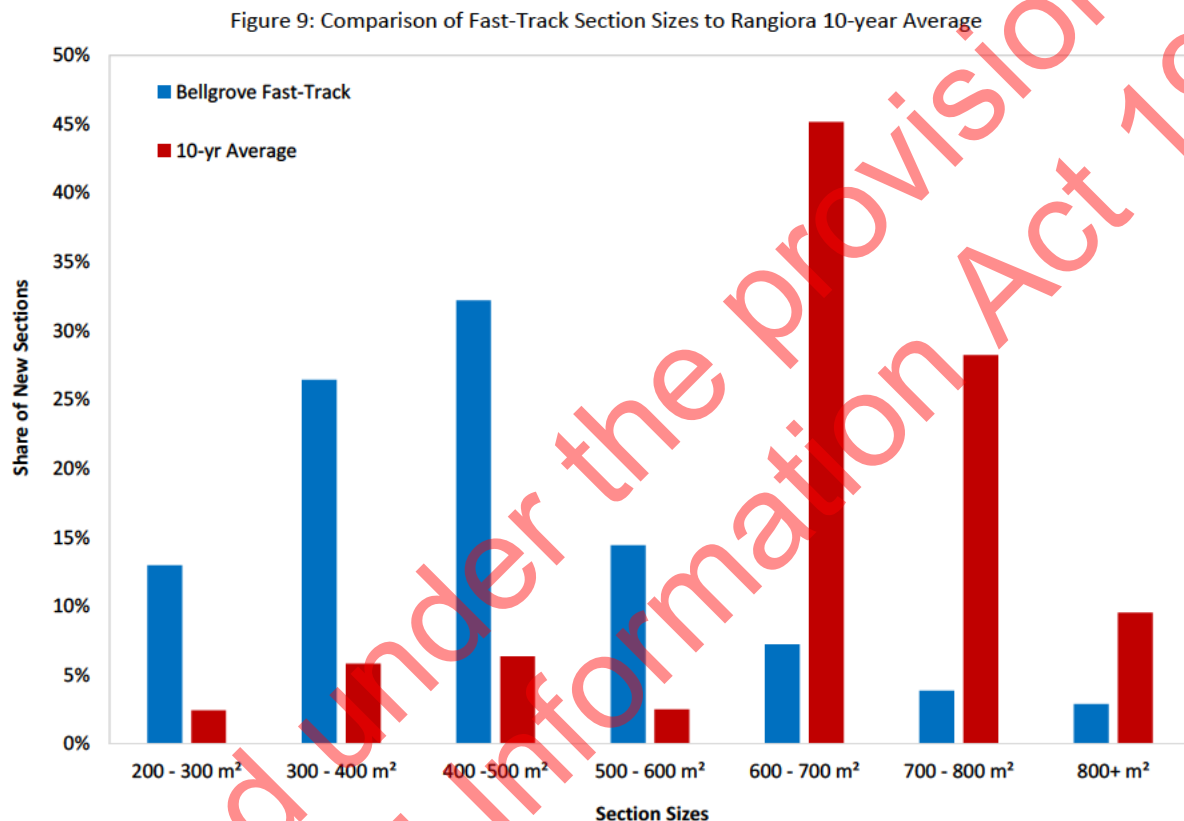


Figure 9 confirms that the proposed Fast-Track stages will deliver much smaller section sizes than have previously been provided. For example, whereas only 17% of new sections over the last 10 years were 600m² or smaller, 70% of Bellgrove's Fast-Track stages will be 600m² or smaller. These smaller sections, in turn, will improve affordability by reducing land costs. Also, by enabling more intensive use of that land, as measured by the floorspace ratio, more floorspace can be provided per square metre of land.

The floorspace ratio, or FAR as its better known, equals a property's floorspace divided by its land. Thus, if a 200m² home occupies an 800m² site, its FAR is 0.25. The FARs of homes recently built in Rangiora are relatively low, partly because land has historically been cheap and hence there has been less incentive to use it as intensively as in other parts of New Zealand. In fact, the average FAR of new homes built in Rangiora since 2011 was only 31%. In other areas, a FAR of double this is not uncommon.

By providing much smaller sections at Bellgrove, while also enabling/encouraging higher FARs, a typical Rangiora dwelling (or something smaller) can still easily be provided. For example, a 200m² home can still fit on a 400m² section with a FAR of 50%, which is highly achievable.

In summary: the proposed Fast-Track stages will combine smaller section sizes with more intensive development intensity to provide more affordable dwellings that better meet the needs of an evolving local population. At the same time, these smaller sections put the land to its highest and best use, which is a precondition for economic efficiency to hold in the underlying land market.

5.3. Fit With Market Preferences for Section/Dwelling Sizes

To elaborate further on the discussion about meeting the needs of an evolving population, we note that – from an economic perspective – the optimal mix of sections sizes and hence dwelling sizes/densities will depend on several factors, as follows:

- 1) Demand side
 - a) Housing preferences
 - b) Future household sizes and compositions
 - c) Local incomes and hence ability/willingness to pay
- 2) Supply side
 - a) Land prices
 - b) Subdivision costs (including infrastructure)
 - c) Building costs

While it is impossible to properly assess the proposal against these factors in the time available, our managing director (Fraser Colegrave) recently stayed in the district for a hearing on another matter (PC30). As part of his hearing preparations, he drove around some of the district's new housing areas, including subdivisions on the edge of Rangiora. A notable observation was that nearly all new dwellings built recently are single-level, stand-alone homes. While there were a few terraced houses in Pegasus, these represent only a handful of the several hundred recently developed there.

If section sizes on the Bellgrove Fast-Track land are forced to be smaller than they would have been otherwise, it may result in some homes having to be double-storied to meet prospective household's floorspace requirements. Although that will be fine for some people, for others it may be unworkable, particularly for the large (and growing) number of older people, who are over-represented in Rangiora.

In addition, double-storied homes are more expensive to construct than single-level ones with the same floorspace, which may undermine efforts to provide more affordable homes. Indeed, since land is still relatively inexpensive in the district compared to the more urban parts of New Zealand, there is less of a need to create smaller sections to reduce house prices and thus improve affordability.

Another factor to consider among all of this is the suite of planning controls that will apply to the subject land. If these enable only relatively modest building coverage ratios and/or require setbacks on all sides, very small sections may not be able to house a dwelling large enough to meet the needs and wants of prospective purchasers.

In our view, the best outcome would be for all parties – Bellgrove Rangiora Limited, WDC, and MfE – to acknowledge and accept the need to provide smaller sections over time to meet the needs of a changing population, but to not try to get there too quickly. Indeed, a more orderly transition to smaller section sizes, as provided by the proposed subdivision plan, still represents a significant step in the right direction while also retaining options for those that still need/want a single-level home.

More generally, adhering too rigidly to a high-density approach may result in unintended consequences, such as an unreasonably slow uptake of sections. This would not only affect the viability of the wider Bellgrove development, but also slow the rate at which Council investments in infrastructure are recouped via development contributions (and/or funding from private developer agreements).

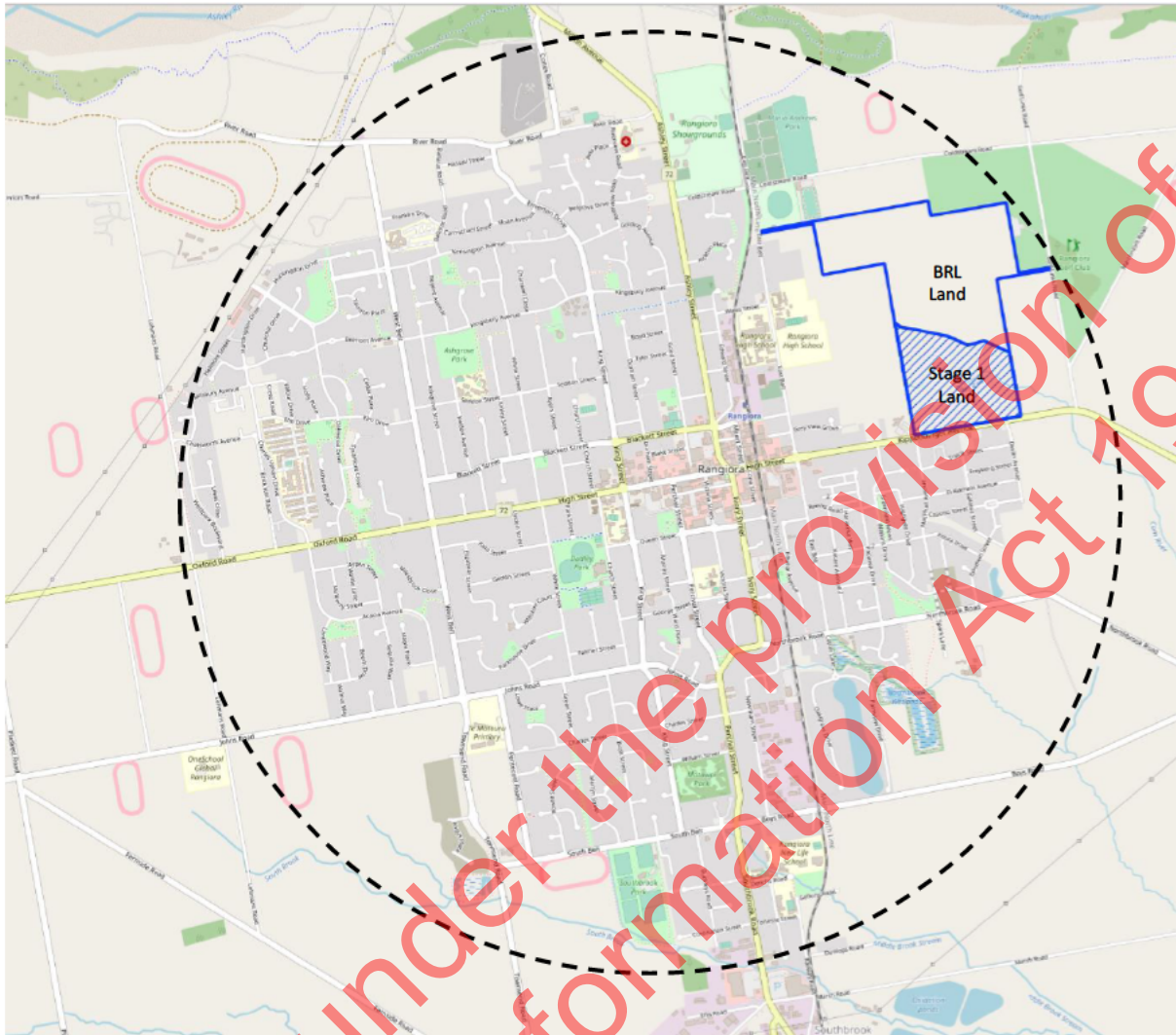
In addition, an unreasonably slow uptake of sections would curtail some of the economic benefits outlined elsewhere in this assessment, including the economic stimulus of dwelling construction, and support for the district's KACs.

We therefore support the section sizes in the latest subdivision plan which, as explained above, are already much smaller overall than has previously been provided in and around Rangiora.

5.4. Location and Developer Benefits

Finally, we note that the proposal's economic merits are bolstered by the fact that it will be a master-planned development completed by a willing and able group with a proven track record of delivering quality outcomes in the district. Further, because the site is adjacent to recent growth on the southern side of Kippenberger Ave, the development represents an orderly expansion of the town that helps fill notable gaps in the northeast. This is illustrated below in the figure below.

Figure 10: Role of Development in Plugging “Spatial Gaps” in the Northeast of the Township



6. Impacts on GDP, Jobs, and Wages

This section describes the methodology used to estimate the development's economic impacts.

6.1. Overview

The process of developing the land, then planning for, designing, and constructing the various homes that will comprise the proposed Fast-Track stages will draw in a wide range of workers and hence create jobs and incomes for numerous district workers. We quantified the likely one-off economic impacts of this activity using a technique called multiplier analysis, which is based on detailed matrices called input-output tables. These describe the various supply chains that comprise each 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, including flow-on (supply chain) effects. 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 and profits). 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 reported as 'household incomes.'

6.2. Methodology

We developed a land development and building construction model to capture the financial flows of the two activities by key stage, including planning, consent, design, land development, building construction, and sell-down. A share of each cost was then allocated to the regional economy, with the balance allocated to the rest of New Zealand. Then, we overlaid those regional/national costs estimates with corresponding economic multipliers to derive the one-off impacts on GDP, incomes, and employment. In addition, we captured the impacts of people directly or indirectly employed by the process, and modelled subsequent spending by them in the regional/national economy to estimate the overall impacts of the development, including flow-on effects.

6.3. Development Inputs and Assumptions

BRL provided us with indicative land development costs, which total about s 9(2)(b)(ii). These cover all costs required to ready the site for development, including onsite infrastructure. To estimate likely building costs, we first grouped sections by size to estimate the likely size of new homes built. Then, we converted that total residential GFA to an estimate of total construction costs using average build rates provided in consent data, which suggest an average of about s 9(2)(b)(ii). In addition, we capture the economic impacts of the subsequent marketing and sales

process assuming 2% realtor fees on an average dwelling price of \$9(2)(b)(ii). Table 3 presents our assumed dwelling sizes by section size band.

Table 3: Assumed Dwelling Sizes by Section Size

Section Size	No. of sections	Assumed FAR	Avg. Land Area	Avg. GFA
Up to 400m ²	82	0.45	325	145
400m ² to 500m ²	67	0.40	455	180
500m ² to 600m ²	30	0.35	555	195
600m ² and over	29	0.30	725	215
Total Fast-Track Stages	208	0.37	460	170

6.4. Estimated Regional Economic Impacts

We combined the methodology and inputs/assumptions above to estimate the one-off regional impacts of site preparation, construction, marketing, and sell-down for the proposal's Fast-Track stages. Table 4 presents the results.

Table 4: One-Off Regional Economic Impacts (spread over 2 to 3 years)

Regional Impacts	Direct	Flow-on	Total
GDP \$m	\$21m	\$23m	\$44m
Employment (people-years)	226	250	476
Household Incomes \$m	\$11m	\$11m	\$22m

To summarise: Including flow-on effects, over a two- or three-year period, we estimate that the various tasks associated with developing and selling new homes on the land could have the following **regional impacts**:

- A one-time boost in regional GDP of \$44 million;
- Employment for 476 people-years (e.g. 238 people employed full time for 2 years); and
- Additional household incomes of \$22 million.

6.5. Estimated National Economic Impacts

The corresponding national economic impacts, which tend to be higher than regional ones because the national economy is more self-sufficient and hence captures a higher proportion of total flow-on effects³, are shown in the table below.

Table 5: One-Off National Economic Impacts (spread over 2 to 3 years)

National Impacts	Direct	Flow-on	Total
GDP \$m	\$23m	\$66m	\$89m
Employment (people-years)	254	640	894
Household Incomes \$m	\$13m	\$30m	\$43m

³ In multiplier analyses, the broader the geographic scope of the study area, the more likely it is that firms can source all the goods and services that they need from other firms in the study area, rather than having to import them from elsewhere. As a result, the broader the study area, the higher the total economic impacts of a proposed development, because a higher proportion of the supply chain spending remains in the study area and hence gives rise to flow-on effects. As a result, national economic impacts almost invariably include higher flow-on effects than regional ones.

Including flow-on effects, over a two- or three-year period, we estimate that the various tasks associated with developing and selling new homes on the land could have the following **national impacts**:

- A one-time boost in national GDP of \$89 million;
- Employment for 894 people-years (or 447 people employed full-time for 2 years); and
- Household incomes of \$43 million.

6.6. Direct & Indirect Full-Time Jobs by Project Stage

In addition to the aggregate economic impacts of the Fast-Track stages, as presented above, we also estimated the direct full-time jobs created at each key stage of the project. These are set out below, and represent national full-time employees. Full time-employees, in turn, have been derived from employment counts at a ratio of 0.9 FTEs per employee.⁴

- In 2022, 12 direct FTE jobs will be created in the planning/design/consent stages, with a further 7 FTE jobs created indirectly in sectors that support planning/design/consent.
- In 2023, 37 direct FTE jobs will be created in the earthworks and local infrastructure stages, with a further 53 FTE jobs created indirectly in sectors that support earthworks and local infrastructure.
- In 2024, 171 direct FTE jobs will be created in house construction, with a further 315 FTE jobs created indirectly in sectors that support house construction.
- In 2025, 9 direct FTE jobs will be created in sectors that support house sales, including marketing agencies, realtors, and conveyancing lawyers. In addition, a further 9 indirect jobs will be created in sectors that support the tasks associated with house sales.

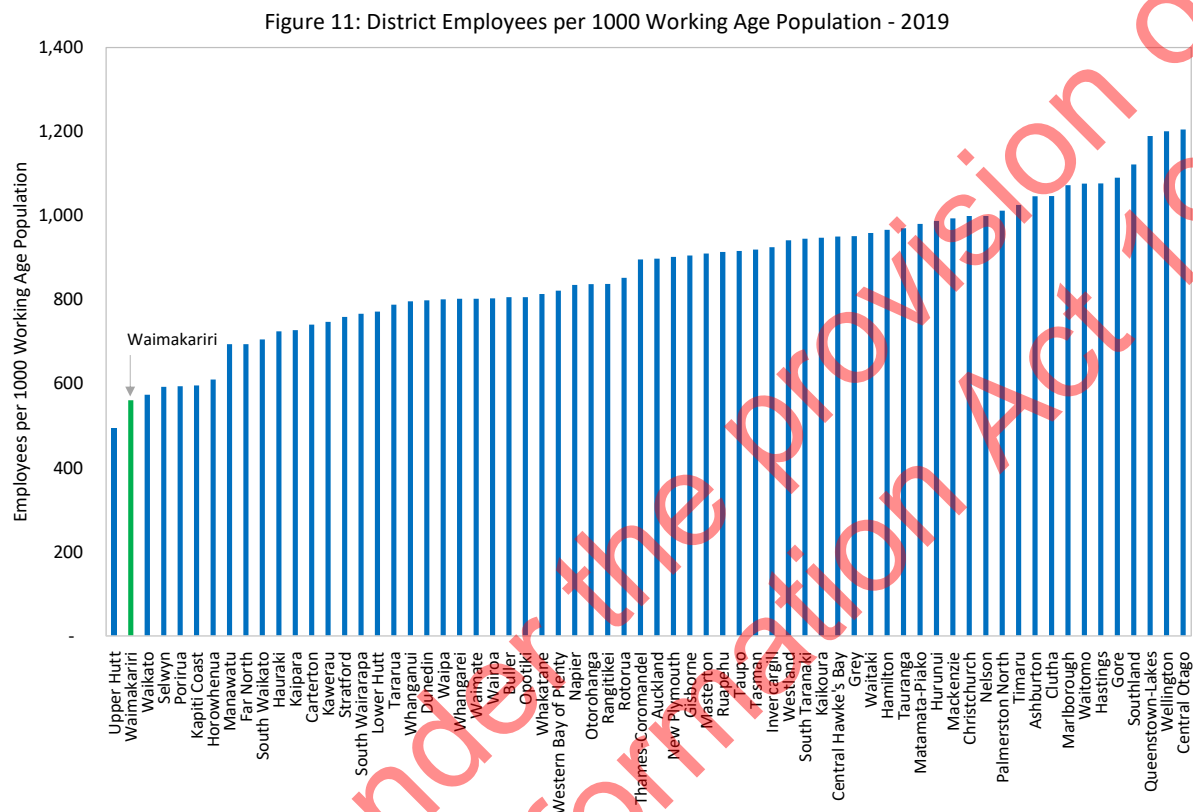
6.7. Support for Covid-Affected Workers

Although New Zealand has done an outstanding job of stopping the spread of Covid-19 by entering lockdown earlier than most other countries, and has also benefitted from its isolated geography, the pandemic's economic effects have still been profound. While the proposed development is not a panacea for the economic woes foisted on the region by the pandemic, it will provide a strong, short-term demand for labour, some of which can potentially be filled by workers that have lost their jobs to Covid-19. Indeed, with construction expected to provide full-time employment for 447 kiwis for two years, it will provide a much-needed boost in short term employment.

⁴ The ratio of 0.9 FTEs per worker was derived from detailed Australian data on employment for the construction industry, which we assume reflects New Zealand's workforce.

6.8. Improved District Employment Self-Sufficiency

Not only will the proposal provide employment for Covid-affected workers, but it will also help to improve the district's overall employment self-sufficiency. This is critical because, as shown in the figure below, Waimakariri district's employment self-sufficiency was the second lowest in New Zealand in 2019.



In 2019, the district had just 561 jobs per 1000 working age residents, compared to a national average of 898. This low rate of local jobs per worker is why so many district residents commute to Christchurch City. In fact, 2013 census data showed that 40% of all workers living in the district worked in Christchurch City – one of the highest rates of outflow in the country.

7. Wider Economic Effects of Proposal

This section briefly considers a range of wider economic effects of the proposal.

7.1. Critical Mass and Support for Key Activity Centres

The proposed development is located just east of the Rangiora Key Activity Centre (KAC), and is also just a short distance west of the emerging Ravenswood KAC. As the proposed new subdivision is developed and fills up with residents, they will help create critical mass for a range of local services that may otherwise not be viable. This is important, because the district is currently very reliant on Christchurch City to supply a wide range of everyday household goods and services.

In fact, detailed Marketview (electronic transaction) data provided to us by the Council during another recent project showed that nearly half of all district resident spending on core retail goods and services leaked out to Christchurch City in 2019. The development, along with existing residents and the future residents of other growth areas, will provide critical mass to gradually improve the viability of local service provision. As a result, it will reduce the need to commute to the city. That, in turn, will reduce fossil fuel use, reduce harmful emissions, and reduce the scope for motor accidents.

To provide a sense of scale, we used our *Integrated Retail Model* – which has been used to successfully support dozens of retail developments across New Zealand – to estimate likely core retail spending by future occupants of the homes proposed in the Fast-Track stages of Bellgrove. Table 6 presents the results.

Table 6: Estimated Annual Spending on Core Retail Goods/Services by Fast-Track Households

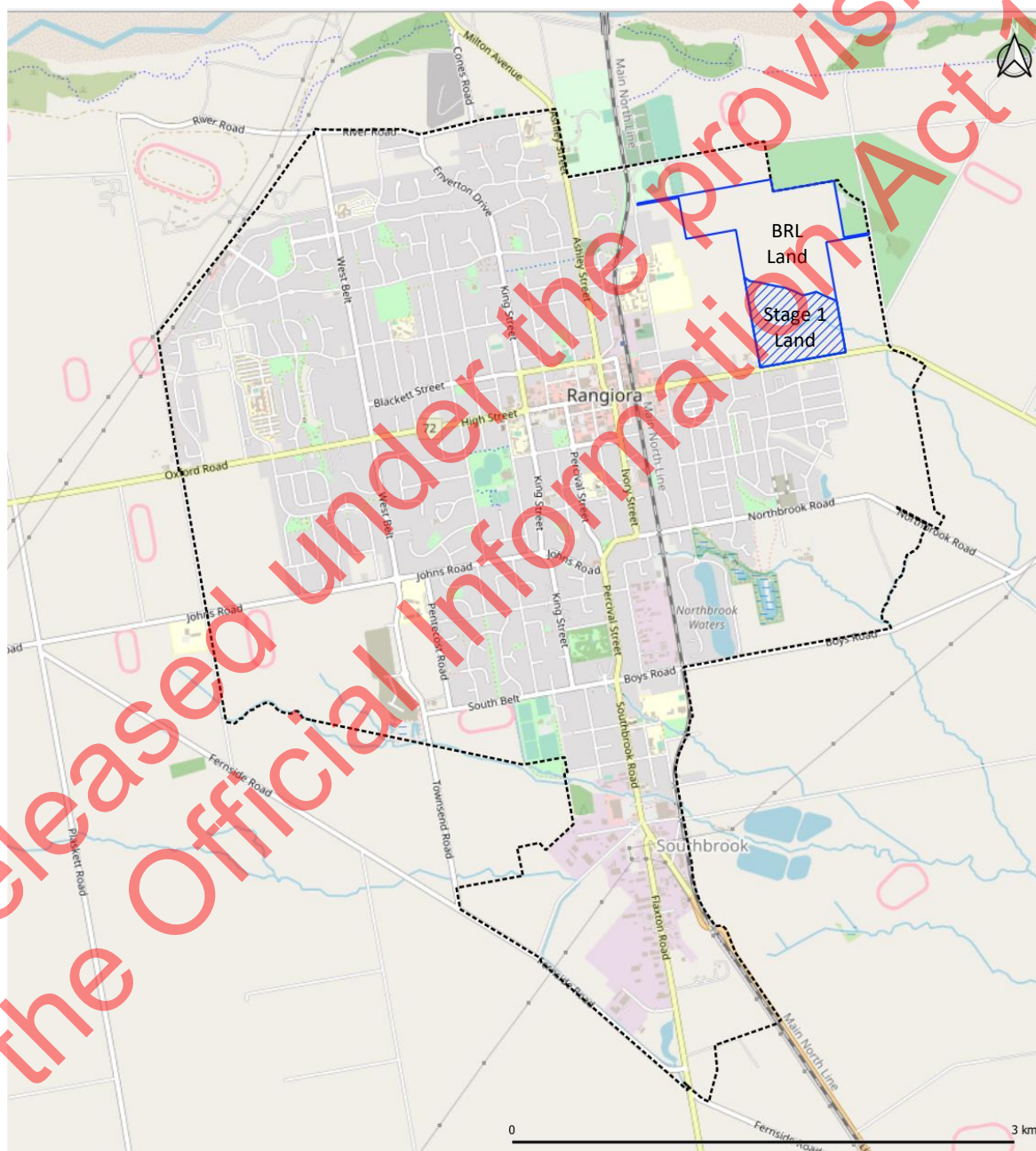
Core Retail Store Types	Annual Spend
Clothing, footwear, and personal accessories retailing	\$335,000
Department stores	\$445,000
Electrical and electronic goods retailing	\$290,000
Food and beverage services	\$715,000
Food retailing	\$2,170,000
Furniture, floor coverings, houseware, and textile goods retailing	\$210,000
Hardware, building, and garden supplies retailing	\$690,000
Pharmaceutical and personal care goods retailing & other	\$340,000
Recreational goods retailing	\$205,000
Total Core Retail Spending	\$5,400,000

In summary, we estimate that future households of the proposed Fast-Track homes will spend about \$5.4 million per annum on core retail goods and services. This additional spending will help support the district's new and emerging KACs while improving the viability of local goods/services provision for the benefit of all.

7.2. Infrastructure Efficiency

While growth confers many benefits on the district, such as critical mass to support local businesses, it also carries significant costs. For Councils, one of the most pressing costs associated with growth is the need to provide local infrastructure, such as water, wastewater, and roads. Fortunately, the subject site is just across the road from a recent growth area and is also within Rangiora's projected infrastructure boundary (as denoted by the dashed black outline in the map below). As a result, the development is likely to achieve high levels of infrastructure efficiency. This, in turn, avoids unnecessary financial risks and costs for the Council – as service provider – while helping to keep the costs of new homes as low as possible.

Figure 12: Location of Subject Site within Infrastructure Boundary



7.3. Highest & Best Use of Land

The proposal will also enable the land to be put to its highest and best use, which is a precondition for economic efficiency to hold in the underlying land market.

7.4. Investment Signal Effects

Finally, we note that the development will provide a strong signal of confidence in the district economy, which may help spur on, accelerate, or bring forward other developments.

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