PROPERTY ECONOMICS

MAITAHI BAYVIEW

ECONOMIC COST BENEFIT

ASSESSMENT

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SCHEDULE

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1. INTRODUCTION

Property Economics has been engaged by CCKV Maitai Dev Co LP and Bayview Nelson Ltd to undertake an economic and social cost benefit analysis for a proposed Private Plan Change Request (**PPCR**) in Nelson. The PPCR would enable the development of a range of residential dwelling typologies on land that, despite its close proximity (3km) from the Nelson CBD, at present remains rural farmland.

As a strategic location for future residential growth, the subject land has already been identified as a potential urban expansion area by the Nelson City Council (**NCC**). The PPCR aims to bring forward development on the land, thereby initiating the requisite infrastructure upgrades necessary to service the new homes.

This report is designed to provide a robust economic cost and social benefit analysis that would enable the developers and NCC to make informed decisions regarding the appropriateness and likely costs and benefits generated of enabling this PPCR. In doing so, it will also address the key RMA matters from an economic perspective and be able to stand up to scrutiny in any plan change process.

1.1. KEY RESEARCH OBJECTIVES

The core objectives of this economic research include:

- Summarise:
    a. the expected demand for residential dwellings distributed geospatially over the medium (10 year) and long term (30 year) periods.
    b. the above demand with identified zoned, serviced and feasible residential capacity within the City through the medium and long-term timeframes.
    c. the current supply of residential sections in terms of vacant, consented and zoned sections for the wider Nelson City area.
    d. the current vacant residential capacity geospatially to identify proximity of existing capacity to Nelson City Centre.
- **Economic Benefits**: Q**uantify and qualify the potential economic benefits** associated with the PPCR including potential impact on residential housing price, Impact on choice and diversity, benefits on proximity to the CBD, and efficiencies on infrastructure provision and marginal costs.
- **Economic Costs**: Outline the potential for diversion of residential demand (based on the unique nature of the PPCR, as well as the location and competitiveness of existing capacity), at a market level and the opportunity and cumulative costs associated with this potential.
- **Economic Cost Benefit Assessment** – Outline the potential benefits accrued directly to the market: including likely sell-down rate, costs and an overall NPV for the 10 and 30-year timeframes, and high level community / social benefits associated with the PPCR.

1.2. INFORMATION & DATA SOURCES

Information and data have been obtained from a variety of sources and publications available Property Economics consider to be reliable and credible including:

- Census of Population and Dwellings 2018
- Household and Population Projections – Statistics NZ
- Housing and Business Development Capacity Assessment (**HBA**) – NCC
- Housing Prices – MBIE
- Infrastructure Costings – Tonkin and Taylor
- Proposed PPCR - CCKV Maitai Dev Co LP and Bayview Nelson Ltd

2. EXECUTIVE SUMMARY

The Maitahi Bayview Private Plan Change could provide availability for 600 - 900 homes to be established over the next 20 years. The development will have a range of typologies and is situated approximately 3km from the Nelson City Centre. Over the project life the offsite infrastructure expenses total an estimated $33m with an additional developer expense of $92m in earthworks and infrastructure.

The HBA which outlines Nelsons' residential capacity determined a lack of capacity by 2028 to service a high growth scenario. Furthermore, given the yield on the subject site is below what was anticipated as an expansion zone in the HBA, Nelson has insufficient homes to service growth over the long term assuming medium growth from 2028. This would therefore similarly restrict the potential for above medium growth over the long term. This insufficient supply of homes will invariably enable Richmond / Tasman to redirect population growth to the vast quantities of vacant land that is available for growth.

There were a number of potential economic benefits that are identified from the proposed PPCR, including:

- Housing choice,
- Housing price,
- Infrastructure Efficiency, and
- Greater spending retention
- Provide support for the Nelson City centre
- Support economic activity

Essentially, the addition of new homes to the Nelson market that are desirable options due to their location benefits the residents who choose to live there. This additional supply also contributes to lowering price and ensuring the competitiveness of Nelson in respect to Richmond, a clear substitute for living in Nelson.

Furthermore, unlike many of the other identified growth nodes the subject site is in close proximity to the City Centre. This provides a number of salient economic benefits in regard to consolidation of activity and improved viability and productivity of the City Centre through greater spending retention and patronage. Additionally, this reduces transportation requirements and improves usage of amenities, thereby increasing efficiency of infrastructure.

While there are multiple economic benefits that arise from this development, this needs to be balanced against some of the salient economic costs. In this instance, they include:

- Opportunity cost of the land,
- Financial investment of required infrastructure upgrades, and,
- Potential to undermine serviced capacity.

The opportunity cost of the land in this case is small because the current use is farming grazeland, a comparatively low value usage. Notably, the required infrastructure upgrades result

in an opportunity cost to the City Council. However, since this residential capacity is required, the opportunity cost is using the funds required to provide residential capacity elsewhere.

Overall, having examined all relevant economic costs and benefits, Property Economics considers the proposed PPCR is likely to result in a significant net economic benefit to Nelson. This is primarily driven by the comparative benefits of proximity and the need for additional residential capacity in Nelson over the forecast period.

The HBA has shown that additional residential land is required to service the anticipated population and associated household growth over the 30-year long-term period, and that insufficient capacity is expected to be made available by 2028 to achieve the high growth household projection.

While it is entirely possible that Nelson does not reach this high growth projection, given recent growth in Richmond exceeds the high growth scenario, it has a strong potential as long as the Nelson residential market remains competitive. For this reason, the benefits to housing choice and price go a long way in enhancing community benefit and retaining population growth in Nelson in comparison to the potential for 40 rural residential lots and 12-15 15 hectare lots (developable under the Plan.

Furthermore, the subject site is farmland that is 3km away from the Nelson City Centre which is of low productive value and therefore has a small opportunity cost of land compared to its value as a residential development. As discussed, the benefits of this consolidation of activity and improved spending retention can be broken down into several significant benefits including improved infrastructure efficiency both in regard to local amenities and transportation, performance, viability and productivity of the City Centre.

Conversely, while there is an opportunity cost to the requisite financial investment, it will ultimately be necessary to fund residential development in an alternative location. Due to the strategic advantages of housing on the subject site, it is unlikely that the benefits of alternative options would exceed this development.

Therefore, the primary economic cost of significance is the potential diversion of demand away from serviced and feasible residential capacity. While this development may redistribute growth away from other zoned and serviced land, it is also likely to bring additional residents into Nelson, particularly from the Richmond area. Having examined the capacity against expected demand in the HBA, it is expected that the delay in filling the zoned capacity is unlikely to be sufficient such that the overall efficiency of infrastructure is lost.

3. MAITAHI BAYVIEW DEVELOPMENT OVERVIEW

The proposed PPCR seeks to rezone 298ha of rural and small holdings land in Maitahi and Bayview. The landowners have collaborated to provide an integrated and staged structure plan and thereby ensuring a more efficient and integrated overall outcome.

While development plans are still being refined, a structure plan has been included in Appendix 1.

Figure 1 following shows the subject site in the context of its comparative location to the Nelson City Centre. Residential expansion on these sites has been previously identified in the Nelson Council Housing and Business Capacity Assessment (**HBA**) for long term growth (10 – 30 years).

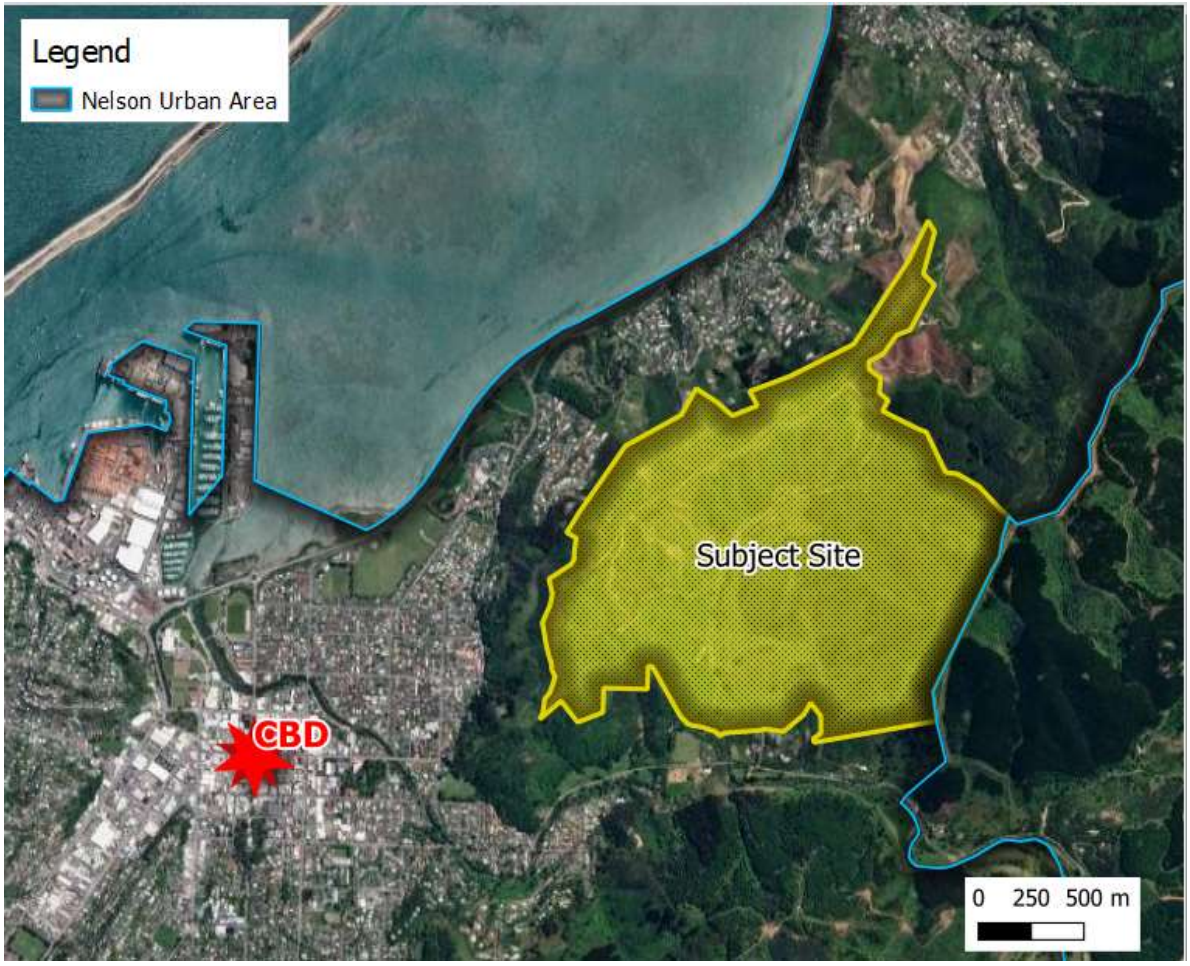
The area highlighted red is identified in the HBA as Expansion Area 25: Kaka Valley while the Green Bayview area is a combination of Areas 27: Atawhai Hills and Area: 28 Upper Kaka Valley. Compared to currently zoned land, the land has been primarily constrained by a lack of infrastructure, topography and subsequent upgrades that will be required to service the new dwellings.

Kaka Valley was identified as a location of high strategic significance due to its proximity to the City Centre, reasonable cost to service and potential to offer a wider range of higher-density and diverse housing typologies where the topography allows.

For the proposed residential lots on the hills, capacity is constrained by the geology, topography, and natural values. For this reason, the developable area will vary over the site

Despite being comparatively more expensive to service, the residential activity on these sites accommodate more expensive dwellings with a higher quality product that derive value from the close proximity to the CBD (relative to other parts of Nelson) and scenic sea views. Across the entire development there is therefore an ability to provide a range of residential typologies at different prices points.

FIGURE 1: SUBJECT SITE IN RELATION TO NELSON URBAN AREA AND REGIONAL BOUNDARIES



Source: Property Economics

3.1. INFRASTRUCTURE COSTS

Table 1 outlines the timing of infrastructure and the requisite financial investment from CCKV Maitai Dev Co LP and Bayview Nelson Limited. This also shows the anticipated staging of the project with 53% projected housing to be developed in the first 10 years, and the remaining 47% housing after the 10-year period.

CCKV Maitai Dev Co LP and Bayview Nelson Limited will be required to pay for significant earthworks and infrastructure totalling $92.4m over the investment period.

TABLE 1: INFRASTRUCTURE COSTING ESTIMATES ($000)

Includes, Construction, Design and Consenting	2022	2023	2024	2025	2026-2030	2030 +	Total
New Homes	**0**	**50**	**50**	**50**	**250**	**350**	**750**
Earthworks	$570	$1,710	$2,275	$2,275	$11,425	$15,995	$34,250
Infrastructure	$388	$3,488	$3,875	$3,875	$19,375	$27,125	$58,125
Total Private Expense	$958	$5,198	$6,150	$6,150	$30,800	$43,120	$92,375

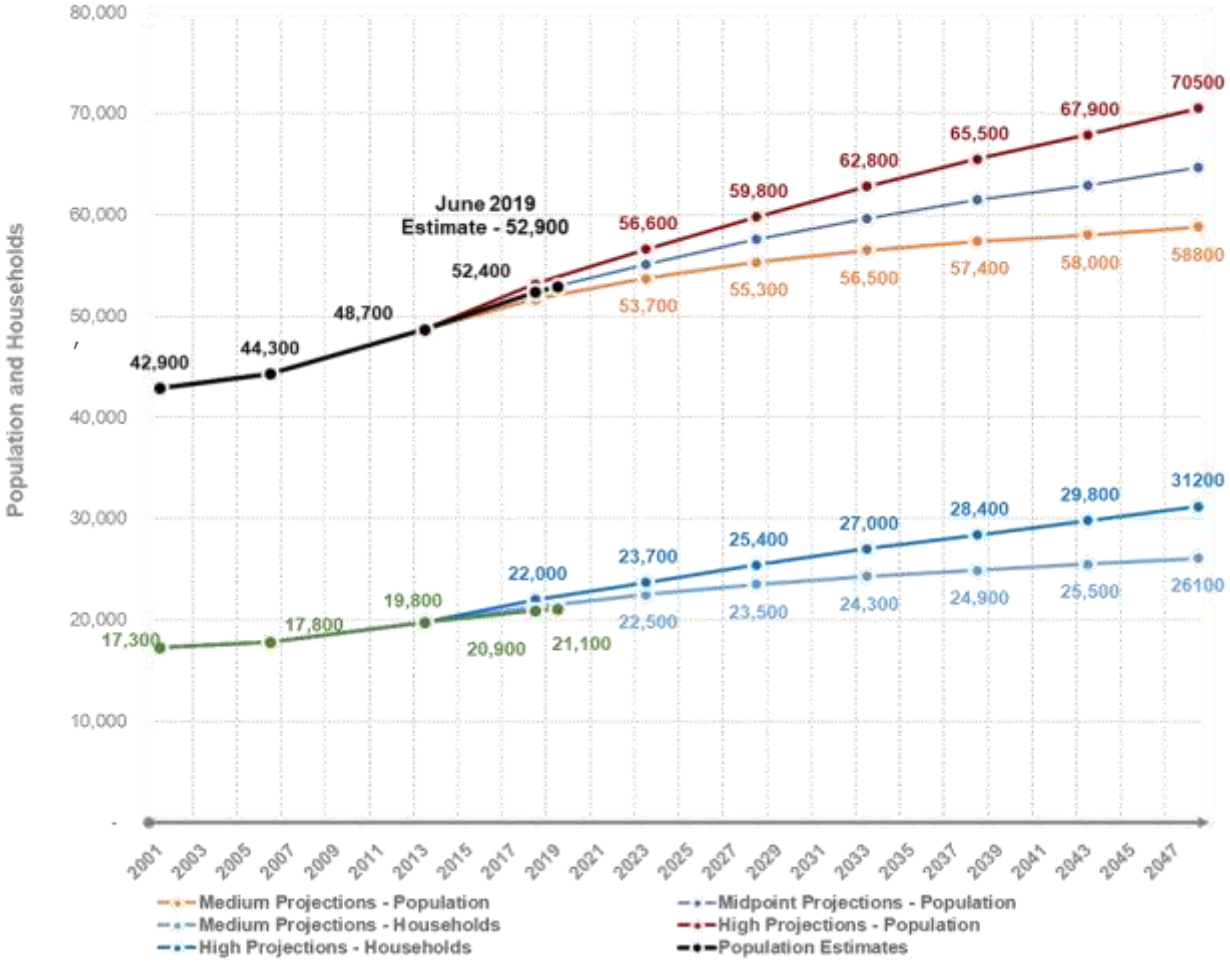
Source: Property Economics, Tonkin + Taylor

4. POPULATION AND HOUSEHOLD PROJECTIONS

Figure 2 displays the population and household growth forecasts for the Nelson Region. These are derived from the latest available Statistics NZ Population growth projections for both the High and Medium growth series.

These projections series are yet to be updated to reflect the 2018 Census base. We therefore make a comparison against the current population estimates based off the 2018 Census data to contrast the growth that was anticipated.

FIGURE 2: POPULATION PROJECTIONS FOR NELSON REGION



Source: Property Economics, Statistics NZ

Where the Medium growth series predicts the city's growth rate will flatten off over the forecast period, the High growth scenario assesses the possibility of Nelson continuing to grow at a slightly faster rate than the previous intercensal period (2006 – 2013).

In comparison to these two population projections, the actual growth experienced over the past six years has aligned with the midpoint of these two growth projections (based on the latest 2019 Statistics NZ population estimate for Nelson). A continuation of growth along this 'midpoint projection' would result in an increase of circa 4,650 people over the medium term (2019 – 2028) and 11,750 people over the long term (2019 – 2048). Comparatively, High and Medium projections expect either 5,850 additional or fewer people respectfully by 2048.

Figure 2 also shows the household projections indicates that growth in the number of households under the projections series is forecast to increase at a faster proportional rate than the population due to an expected fall in the person per dwelling ratio over the forecast period. This anticipated trend was not isolated to the identified catchment but projected to occur across the whole country due to an ageing population, smaller families and a higher proportion of 'split' or single households.

However, the results of the 2018 census and subsequent population estimates have shown that the reverse has been true. That is, that the population per household ratio has increased across the country with Nelson rising from 2.46 in 2013 to 2.51 in 2018. As a result, despite population growth exceeding the medium projections, the growth in the number of households has fallen short.

There are a number of possible reasons for this reversed trend, not least of which is a potential shortage of new homes entering the Nelson market (relative to demand), and the rate of house price growth, both which may have contributed to driving an increase in multiple households residing within a single dwelling.

As a result, the recent household growth has followed the medium projection series under which there is an expected demand for 2,200 homes over the medium term 2018 – 2028 and an additional 2,600 over the long term (2028-2048). While a continued increase in people per household will lower the anticipated number of dwellings required, this is partially a self-fulfilling prophecy. Providing for additional households would lower housing price pressures.

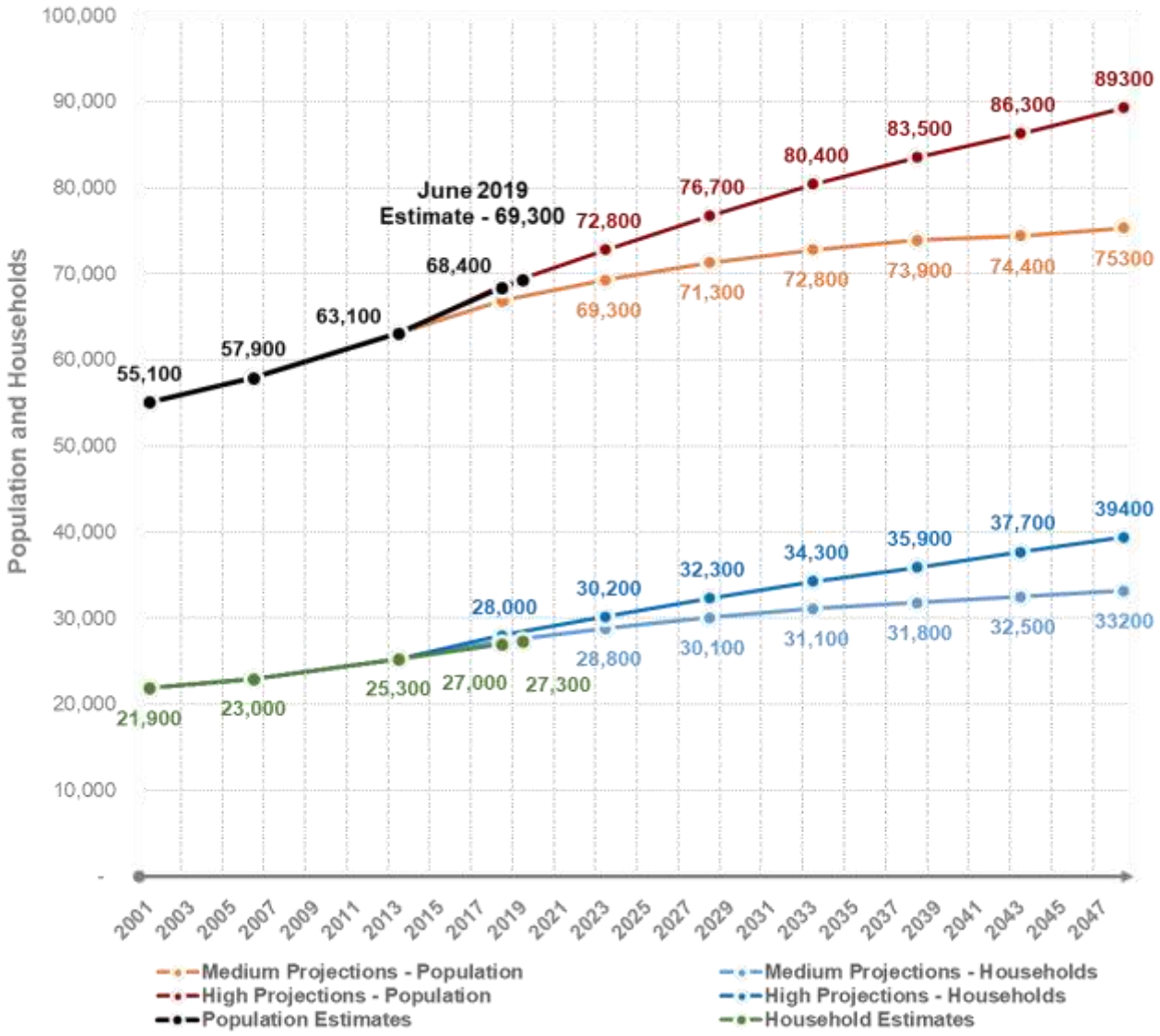
4.1. NELSON URBAN AREA

The Nelson City Urban area is a defined urban region that extends south to include the Richmond and Hope areas, a part of the Tasman District Council. While the NCC is not responsible for housing demand across the Tasman border, it is considered pertinent to also 'factor in' residential capacity and demand in the Richmond area as it is largely transferable. That is, residential options in and around Richmond are direct substitutes for living in Nelson, forming part of Nelson City from a resident's perspective with many locals commuting into the Nelson City Centre.

Figure 3 below shows the population and household projections for the Nelson Urban Area. Where population in Nelson City has grown between the Medium and High projections, the growth in the Richmond area was well above the high projection series. This occurred across the Tasman region with an annualised average growth rate that was 38% higher than Nelson.

As a result, the net growth for the Nelson Urban Area aligns with the high projection series which, as later discussed, was the assumption used in the HBA for Nelson. Under this high projection series, there is expected to be an additional 11,400 homes over the long term (2018 and 2048). Again, this assumes a decline in population per household which, while expected under suitable market conditions, is yet to be observed.

FIGURE 3: NELSON URBAN AREA POPULATION AND HOUSEHOLD PROJECTIONS



Source: Property Economics, Statistics NZ

5. NELSON RESIDENTIAL BACKGROUND

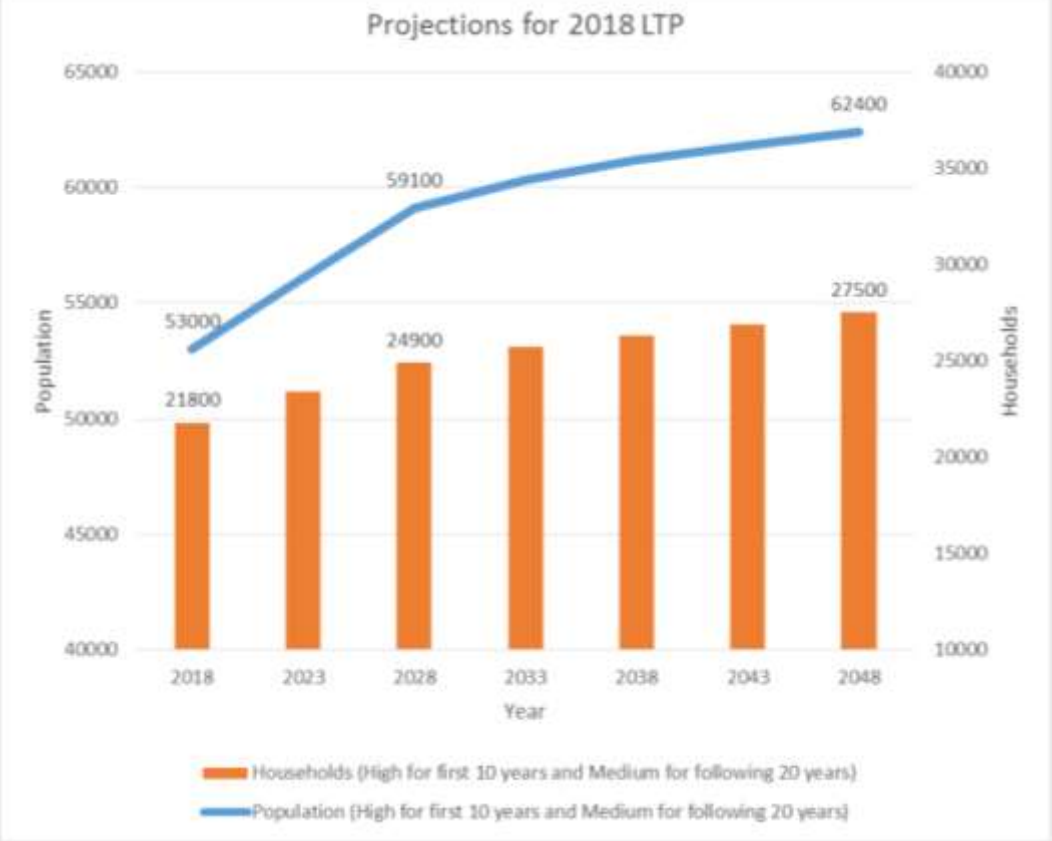
The purpose of this section is to develop a detailed understanding of the relevant factors influencing Nelson's residential market. This focuses on examining market supply and demand, both from a future projection perspective and looking back at recent residential consents and market pricing trends.

A vital point of reference in this section is the Nelson Housing and Business Development Capacity Assessment (**HBA**). This document, which was published in 2018, evaluates the demand and supply of housing and business land to ensure efficient land use and future land requirements for sufficient capacity is provided. This report is the primary basis of information regarding identified zoned, serviced and feasible residential capacity.

5.1. HBA POPULATION ESTIMATES

Under this capacity assessment for the Nelson region, it was deemed appropriate to use the high growth population and household projections for the first decade and medium for the following couple of decades. These projections are shown in Figure 4 which has been directly taken from the HBA.

FIGURE 4: NELSON CITY POPULATION AND HOUSEHOLD PROJECTION USED IN HBA



Source: NCC

The high projection shown above forecasted an additional 600 people in 2018 than the recent estimates which, at the current population per household ratio, is equivalent to 240 homes. The projection used above also anticipates an additional 2,000 residents over the medium term (2028) compared to the midpoint trajectory, but 1,300 fewer over the long term (2048) due to using the medium growth series from 2028 onwards.

It is important to note that the previously indicated midpoint projection was simply used to show the current trajectory. Nelson has a propensity for high growth and as Figure 3 showed, the high growth projection was accurate for the Nelson urban area as a whole. What was not accounted for was the proportionally larger residential growth that was experienced in Tasman and has likely redirected growth away from Nelson.

Unlike the geographical constraints faced in Nelson, the Richmond area has excess quantities of vacant land that is cheaper to service and easier to develop than the hilly terrain in Nelson.

5.2. HOUSEHOLD SUPPLY

Table 2 shows the breakdown of existing capacity for new dwellings over the short term with over half being consented or zoned and serviced greenfield. In addition to this capacity, Table 3 outlines the approximately 1,650 medium and 370 long term greenfield development capacity with residential zoning.

TABLE 2: SHORT TERM DEVELOPMENT CAPACITY

	No. Potential New Dwellings
Vacant Residential Sections	392
Backyard Infill	425
Infill by Redevelopment	210
Greenfield Subdivisions Consented	421
Zoned and Serviced Greenfield	1,679
Total	**3,127**

Source: NCC

Figure 5 of the HBA, on page 18, shows the map that details the location of existing and future residential development areas identified in Table 3. These areas are subject to varying servicing requirements for water, transport and stormwater infrastructure as has been assessed within the HBA and indicated by the cost to service.

TABLE 3: FUTURE RESIDENTIAL CAPACITY

Area Number	Capacity Area Name	Estimated remaining capacity	Time Frame	Projected Yield	Cost to service per lot
3	Ngawhatu Valley	345	Medium	800	$1,575
4	Marsden Valley	650	Medium	920	$2,714
9	Tasman Heights	314	Medium	500	$5,198
11	Toi Toi	102	Medium	202	$474
19D	Lower Bayview	100	Medium	100	$12,600
19E	Upper Bayview	136	Medium	136	$13,929
22	Todd Valley	4	Medium	4	$388,677
10A	Emano	96	Long	96	$11,640
10B	Murphy	75	Long	75	$18,239
16	Campbell Terrace	15	Long	15	$133,436
17	Upper Nile Street	10	Long	10	$76,500
19A	Brooklands	5	Long	15	$35,232
19b	Paremata	10	Long	10	$31,553
20	Werneth	20	Long	20	$17,847
24	Enner Glynn	110	Long	110	$68,052
21	Wastney Terrace	29	Long	29	$131,786

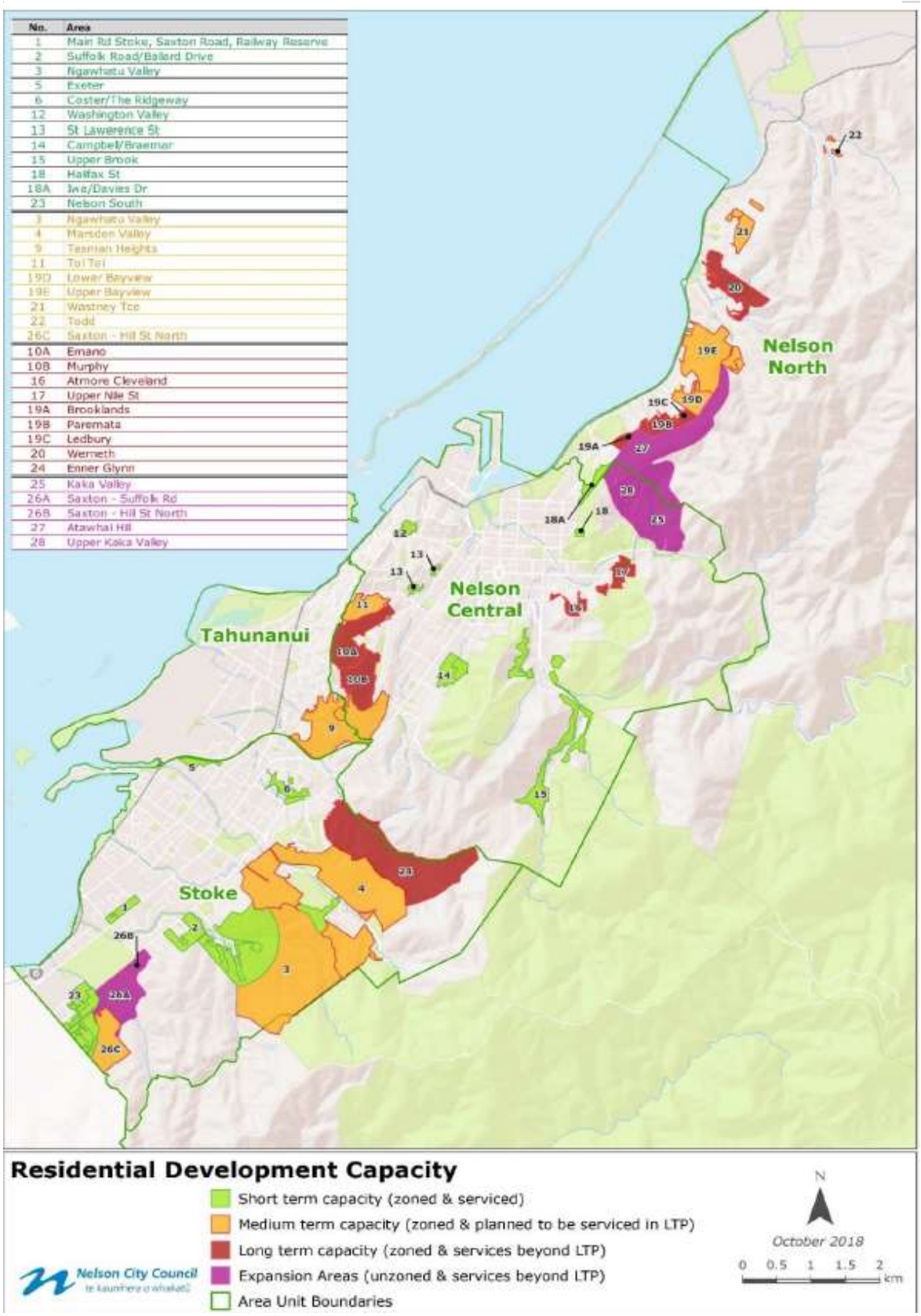
Source: NCC, Property Economics

Those defined for the Medium term have infrastructure either under construction or are within the Long-Term Plan (plan of infrastructure projects undertaken by NCC over the following 10-years).

Conversely, those identified for the long term are zoned but do not have funding in place due to NCC prioritising infrastructure in more strategic locations, and some smaller areas being infeasible for the Council to service.

In addition to this zoned capacity, three expansion areas are not zoned, or serviced but could supply an additional 3,400 homes to the market. This includes 1,620 homes on the subject land (combined Area 25 and Area 27), and up to 1,760 dwellings in Saxton (Area 26) if high-density dwellings are enabled and encouraged. As has become apparent, the desired 1,620 homes on the subject land areas is not feasible due to the topographic constraints and subsequent geotechnical requirements.

FIGURE 5: NELSON EXISTING AND FUTURE CAPACITY AREAS, AND EXPANSION AREAS

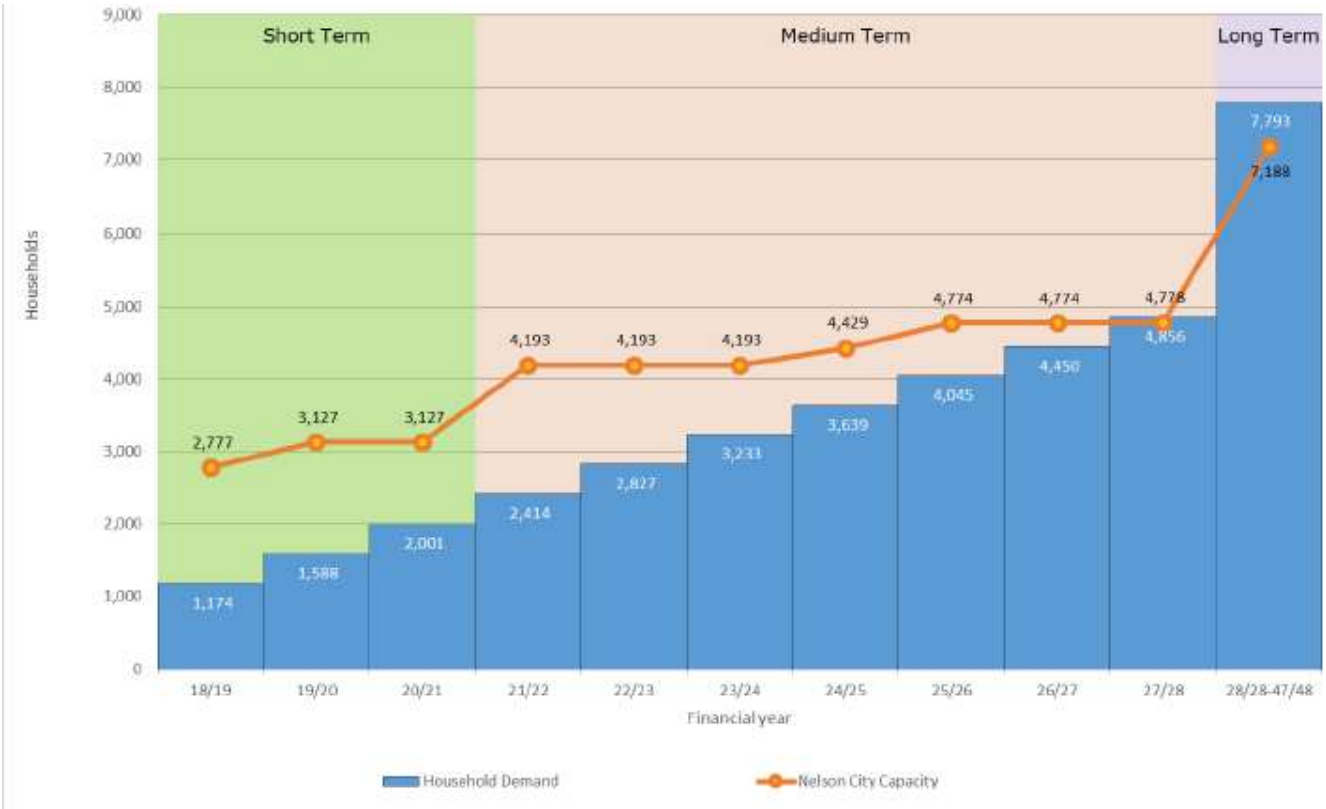


5.3. HOUSEHOLD DEMAND SUPPLY DIFFERENTIAL

Figure 6 outlines the comparison from the HBA between expected new dwellings over the medium and long-term timeframes against the capacity for development. Over the forecast period (2018 – 2048), Nelson is expected to require a total of 7,793 new dwellings including around 2,000 over the first three years (2018 – 2021), 2,855 homes over the medium term (2021 – 2028), and a further 2,938 over the long term. These numbers include a 5% provision for holiday homes and the additional margins or capacity buffers required under the NPS requirements.

Figure 6 shows that under these household projections, there is expected to be a shortfall in zoned and planned capacity to meet demand, and the NPS – UDC requirements, over the long term. Therefore, in addition to the expansion zones the HBA recommends enabling higher density infill within existing areas which would provide for the redevelopment of an estimated 1,160 new dwellings.

FIGURE 6: HOUSEHOLD DEMAND AND SUPPLY NELSON INCLUDING EXPANSION AREAS



Source: NCC

As mentioned, the circa 750 dwellings proposed in the Maitahi Bayview PPCR is below the 1,620 anticipated as an expansion node in the HBA. Assuming the Saxton expansion area achieves full capacity and the 1,160 infill capacity mentioned above, this would still leave Nelson around 350 residential dwellings short of long-term capacity requirements.

5.4. RESIDENTIAL HOUSING PRICE

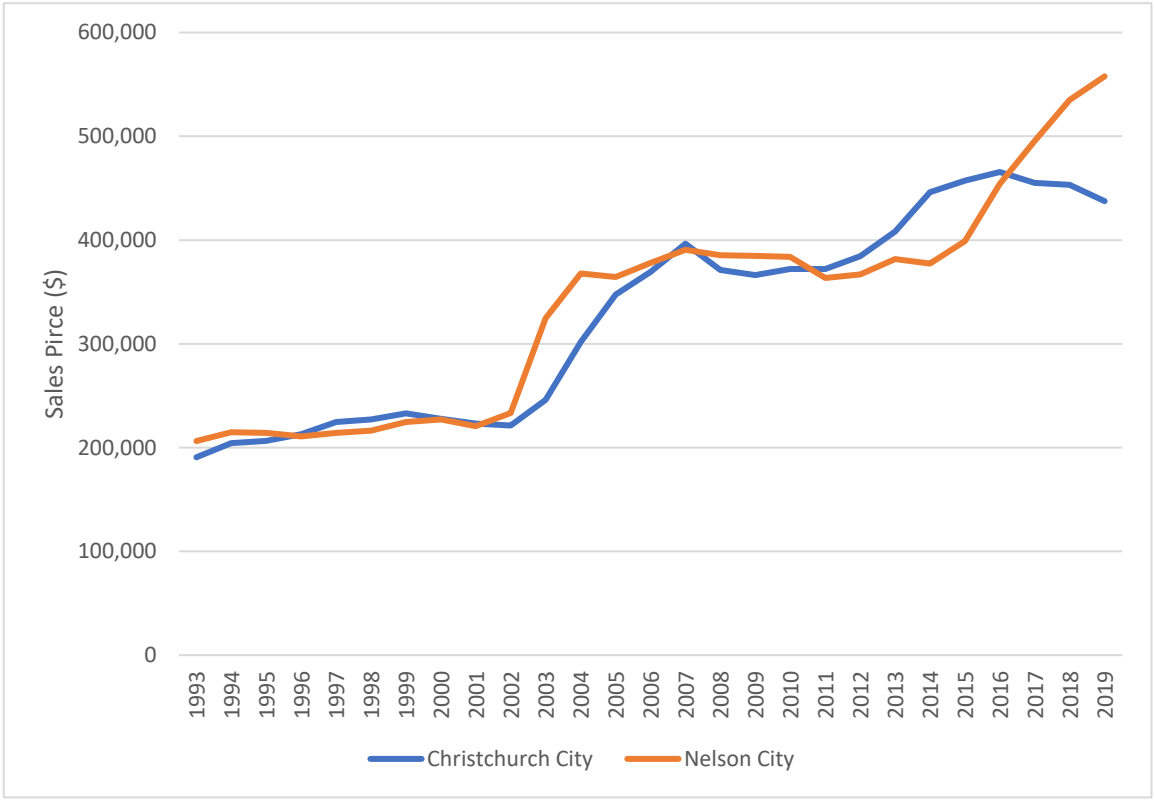
Affordable housing is a growing planning issue that has been highlighted in various urban areas across the country.

The Massey University School of Economics and Finance recently ranked the Nelson and Tasman regions third and second respectfully in their housing affordability index behind Auckland. This problem was highlighted in the HBA which reported MBIE housing affordability measure showing 85% of first home buyers as being unable to afford a typical first home.

Figure 7 shows the median sales price of Nelson homes from 1993 to 2019 which is placed in comparison to Christchurch as the largest city in the South Island. As can be observed, where the differential between the median sales price of the two cities has historically been small, there is a sharp difference in their current trajectory.

Christchurch saw an incline in response to the earthquake rebuild but has since tapered off and even declined in response to lower than expected demand. Conversely, while the median sales price in Nelson stayed roughly consistent for the decade between 2004 and 2014, over the past 6 years the median sales price has consistently risen, moving from $377k to around $557k.

FIGURE 7 NELSON VS CHRISTCHURCH MEDIAN SALES PRICE FROM 1993 TO 2019



Source: Property Economics, Ministry of Housing and Urban development

5.5. RESIDENTIAL BUILDING CONSENTS

Table 4 shows the building consents for new dwellings across the Nelson and Tasman regions which are further broken down to focus on the Nelson Urban Area. A similar table was published in the Urban Development Capacity Monitoring Report which has been updated by Property Economics to include consents over the second half of 2019. This has been kept to the limited two-year period in context of planned development from the HBA which was published in 2018.

TABLE 4: BUILDING CONSENTS ISSUED FOR NEW DWELLINGS

	Mar-18	Jun-18	Sep-18	Dec-18	Total 2018	Mar-19	Jun-19	July - Dec 2019	Total 2019
Nelson Urban Area	132	124	112	131	**499**	168	106	300	**574**
NCC within Urban Area	63	75	86	79	**303**	122	58	128	**308**
TDC within Urban Area (Richmond)	69	49	26	52	**196**	46	48	172	**266**
NCC - all District	63	75	86	79	**303**	122	61	129	**312**
TDC - all District	116	102	76	100	**394**	105	114	281	**500**

Source: Property Economics, NCC, Statistics New Zealand

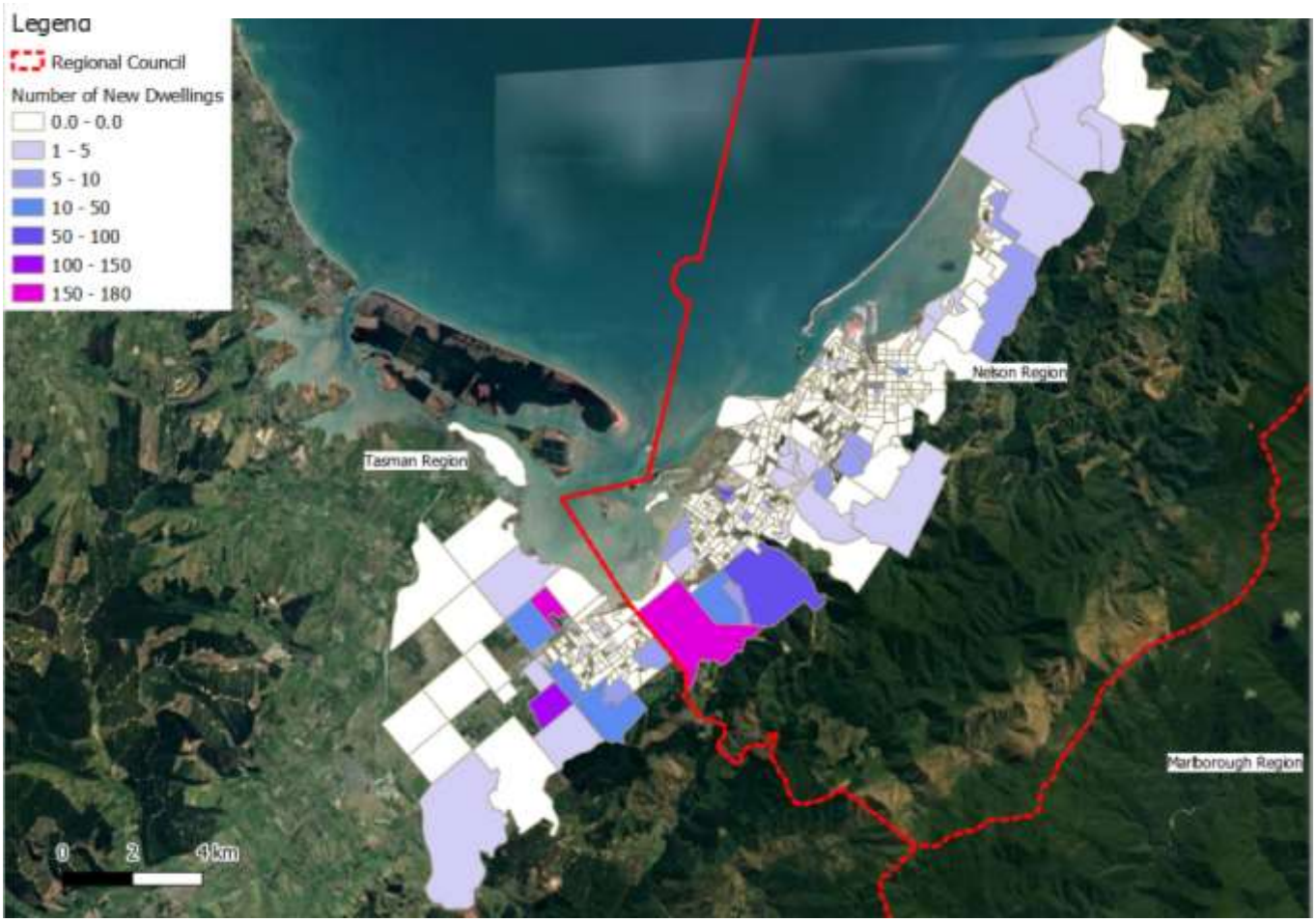
Over the 2018 – 2019 period there were 615 new homes consented within the Nelson region and 462 in Richmond. At a rate of just over 300 new homes per annum in Nelson, this falls short of the predicted household demand in Figure 6, as did the population estimates.

While Nelson stayed reasonably consistent over the period, the second half the 2019 saw almost an additional 100 new dwellings over the same period in Richmond. The result is that 47% of all new dwellings in the Nelson Urban Area are built in Richmond, which is disproportionate considering three quarters of residents live within Nelson. Notably, many of these consents are likely to be directly related to a new retirement village in Lower Queen Street, which is a specific development rather than reflecting demand that can be attributed to the broader market.

Figure 8 following shows the comparative location of these new dwelling consents to where the population growth is being located. From this map, it becomes immediately apparent that the new dwellings are predominately located in the southern most section of Nelson City, one of the largest vacant residential zones identified in the HBA.

Also, interestingly, is the clear expansion of Richmond. While there were some consented dwellings around the central and northern sections of Nelson, the balance of growth has not favoured the Nelson City Centre in any meaningful way.

FIGURE 8: CONSENTED NEW DWELLINGS ACROSS NELSON URBAN AREA

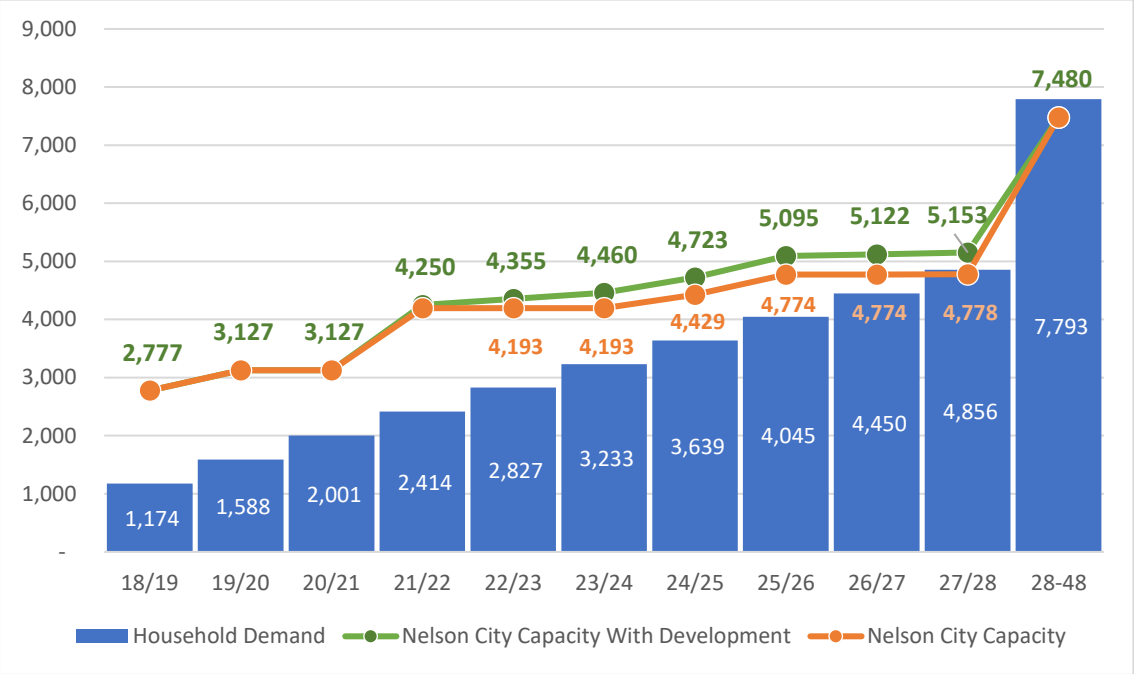


Source: Property Economics, Statistics New Zealand

5.6. IMPACTS OF MAITAHI BAYVIEW PPCR

Figure 9 shows the Nelson housing supply and demand differential that was previously shown in Figure 6 but updated in light of the proposed PPCR. While the long-term capacity includes the additional 1,160 infill homes, there is a loss in capacity from what was anticipated in the HBA for the subject land. As a result, assuming no other changes to the HBA plan, there will be insufficient capacity to meet long term demand by around 350 homes.

FIGURE 9: UPDATED HOUSING DEMAND AND SUPPLY



Source: Property Economics, NCC

It is important to remember that these demand numbers assume the high growth projection till 2028 and the medium growth projection over the long term. Consequently, the projected demand for the first couple of years exceeded what has been observed in the population estimates for the past couple of years.

However, the quickly rising house prices and higher than anticipated growth in Tasman suggest that the reason for this is less likely to be a lack of demand, but rather the comparative competitiveness of Tasman residential dwellings in comparison to the limited options in Nelson. Tasman's high growth suggests Nelson has a strong potential to achieve the high population growth initially assumed if it is able to increase residential supply.

Furthermore, there is the possibility for the population growth to exceed the medium projection over the long term. However, both these possibilities will only occur if the growth is enabled by sufficient capacity being provided in Nelson, acknowledging Richmond is a direct competitor and has no shortage of vacant residential land. Certainly, under the current prognosis, Nelson is less likely to reach the housing demand figures shown in Figure 9 simply because the capacity falls short of what is required.

The purpose of Figure 9 is to highlight the difference in the timing as a result of consenting the PPCR now rather than in the long term. While the PPCR adds little impetus to solving Nelson's capacity problems over the long term, the additional 425 homes built by 2028 would enable Nelson's residential capacity to exceed the projected high demand in 2028 whereas it previously fell short. The remaining circa 325 dwellings built soon after the 10-year period and the development well finished by 2048, meaning the PPCR would continue to assist Nelson's residential supply over foreseeable future and assist in keeping house price growth slower making Nelson more competitive with Tasman.

6. SOCIAL AND ECONOMIC BENEFITS

There are a number of potential economic benefits from the proposed PPCR, including:

- Housing choice,
- Housing price,
- Infrastructure Efficiency, and
- Greater spending retention.
- Provide support for the Nelson City centre
- Support economic activity

These are expanded upon in the following sections.

Housing Choice

In a world where different people have different circumstances, expanding the residential typologies or choices available to consumers enable them to make decisions that better suit their personal needs and preferences. In this fashion, the provision of any additional residential product provides more options that, putting aside the costs element, will improve the community wellbeing. However, what is important is the extent of this benefit or demand for the product in comparison to the costs. Afterall, there are particularly good reasons why apartment blocks are not built in many small townships for example.

In the case of this planned residential development, the produced residential options are likely to be highly desired by the community. The availability of new homes in such close proximity to the Nelson City Centre, some with hilltop views, is naturally constrained by the geographic constraints of Nelson. This has led to limited supply and high demand for such dwellings which are naturally indicated in their comparative prices i.e. typically more expensive.

This development is therefore in a prime location to provide residential typologies that provide greater utility to consumers who desire these qualities. For example, higher density homes near the City Centre are likely to be attractive to young professionals who want to work and recreate in the central city (particularly the evening economy), and are less concerned about the size of their backyard given their stage in life. Also, the older age cohorts who want easy access to all the services and amenities of the City Centre.

Similarly, while Nelson has several beachfront areas, these are limited and often expensive. The properties near the top of the hill will likely benefit from highly desirable sea and city views.

In summary, this development will provide a range of typologies that is likely to have variation on what is currently offered in the market and / or expansion of residential products in high demand, proving more choice to consumers and raising overall utility.

Housing Price

As indicated in the section above and earlier in the report, both the Nelson and Tasman regions have a housing affordability issue with consistent rises in the median house price over the past six years. Basic economic theory tells us that the price of goods is set by supply and demand,

that is, the price point where quantity demanded is equal to quantity supplied. Where there is an oversupply in the market, (quantity supplied > quantity demanded) the price of goods will fall and vice versa for an undersupply.

It is important to realise that supply and demand in a market is rarely static and this is no less true for the complexities in the housing market which is summarised on Figure 10.

FIGURE 10: FLOW DIAGRAM OF HOUSING MARKET

Source: Property Economics

The Housing market is renowned for the stochastic (random) nature that is driven by speculative investors and moving interest rates. The supply of housing is dependent on the construction of new buildings which in turn is dependent on housing which theoretically results in an equilibrium. When additional capacity is provided where there is sufficient demand, this will rise the equilibrium supply of housing which, ceteris paribus[1], will result in a downwards pressure on housing price.

Importantly, it should be pointed out that the over or undersupply of homes in a market can have a far more significant impact on housing price when comparing it proportional to the base housing stock. This was made clear in Auckland where the undersupply of around 16,000 homes, (less than 3% of total housing stock) was stated to be the driving factor behind the well documented rise in Auckland's housing market over the past five years.

[1] *All other things remaining equal*

This is because current residents who transfer houses within a region generate both supply and demand, and the vast majority of homes are outside of the market at any one point in time. Therefore, the demand for new homes originates from net migration, population growth and changing housing desires of the population (i.e. kids moving out of home), and it is this demand that the new homes need to service.

For this reason, Property Economics believes that the addition of circa 750 homes to the market via the proposed PPCR could have a sizable impact in alleviating housing price pressures in the Nelson market over the coming years.

Proximity to the CBD

Figure 11 shows the proximity of the subject land to the Nelson City Centre in direct comparison to the residential capacity identified in the HBA (similar to Figure 5)[2].

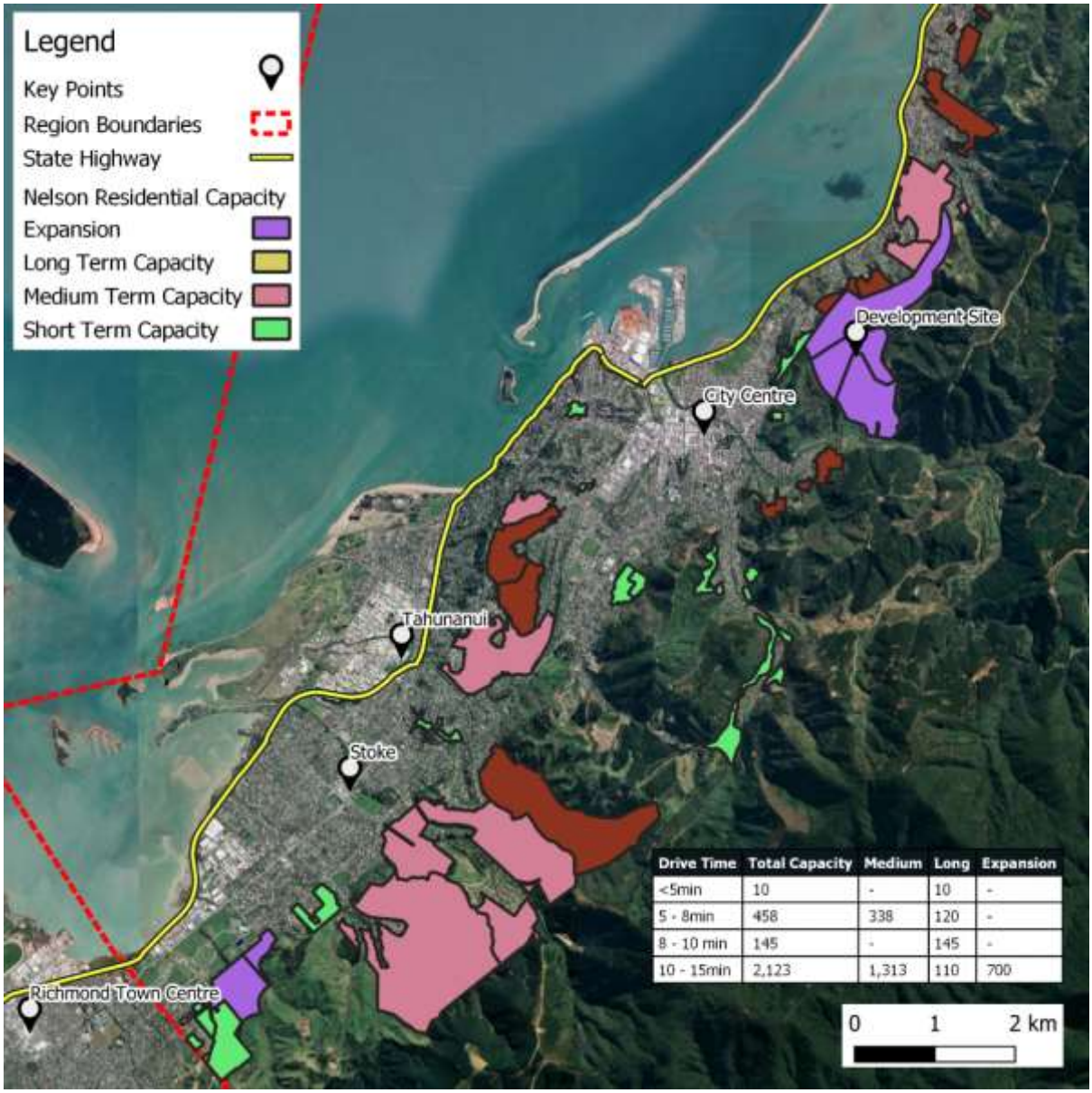
The map has an added table summarising the time it will take for these new residents to drive to the City Centre. This shows that the vast areas of the medium and long-term capacity are located between 10 – 15min drive away from the City Centre, most of which is closer to the latter side of this band.

In the context of the main urban centres in NZ, and other large cities around the world, that would be considered central to the CBD. However, in most provincial areas around New Zealand like Nelson, this distance puts them in the outer suburbs. Particularly in this case, much of the residential capacity and homes in question are at the southern end of Nelson and are comparatively closer to the Richmond Town Centre than Nelson's City Centre. This is problematic in that it is more likely for Tasman to attract spending and business from these suburbs. This issue will only be amplified in the future unless Nelson can provide additional residential capacity within closer proximity to the City Centre.

The proposed PPCR residential development is part of that solution for Nelson being only a 5min drive north of the City Centre as measured from the Maitai River Lodge. While drive time naturally increases for the properties on the hill, being northwards ensures that the City Centre remains the closest commercial centre. This is crucial in regard to the final two economic benefits, infrastructure efficiency and improving retail spend retention.

[2] *It is important to note that the timeline of capacity has been taken from the HBA which was published two years ago and some of the medium-term capacity areas are already under development.*

FIGURE 11: HBA IDENTIFIED GROWTH NODES MAP WITH COMPARITIVE DRIVE TIME



Source: Property Economics, openstreetmaps, Nelson City Council

The retention of spend in the City Centre benefits the entirety of Nelson by raising the viability and productivity of retailers through the promotion of consolidation. This agglomeration of commercial activity in the City Centre has two further key benefits which both go hand in hand, an increased profile created by a critical mass of activity (including increased market efficiencies), and the resulting environment which promotes amenities and diversity within the local area.

A fundamental factor in operating competitive vibrant business centres is the level and quality of services and amenity offered. Key to this is the level and choice of retail activity within a given area, ease of accessibility, quality of the shopping experience and quality of environment. To remain competitive and fulfil its role and function in the community it is crucial that a primary

business centre of the city provides an appropriate level of both retail and commercial (office) activity, among a wider range of land use activities and services. This can include higher density residential activity. International research has shown clear links between vibrancy, local amenity, skilled employment and business locational decisions.

This is a symbiotic relationship where one relies on the level of activity produced by the other. This relationship, primarily between commercial and retail activities, creates more vibrant community centres which translates to greater community wellbeing.

There are obvious 'flow-on' benefits to suppliers of locating within a vibrant and active centre along with the potential for some economies of scale. The agglomeration of commerce into centres provides an environment that will facilitate that agglomeration of other commercial activities and allow for the productivity gains. These gains in productivity can be broken down into:

- increased specialisation.
- knowledge spill overs, both between firms in the same sector and across sectors, leading to increased innovation.
- competition – the presence of lots of firms offering similar products spurs on competition, innovation and efficiency and there are lots of buyers to compete for.
- larger labour markets offer wide choices for employers and the opportunity to recruit staff with specialist skills.
- economies of scale are created by serving larger markets.

There are varying levels of these benefits given the overall size and role of a centre within an economy.

For these reasons, promoting and protecting the primary commercial centre is a fundamental objective to most district and regional plans. The CBD is the heart of any city, often the centre of major public transportation networks, key infrastructure, community facilities and a driving factor in attracting business and residents to the region.

The provision of community facilities and infrastructure is a social investment that provides social value to the community. There is a direct relationship between use of community facilities and other activity such as retail and commercial activity. Simply put the greater the level of activity and accessibility in a centre the greater the utilisation of such public assets. Not only is profile important for these types of facilities but they are located to make good use of multi-use trips.

While the provision of these facilities is sometimes seen as 'sunk costs', this fails to consider the return from the community investment that is lost if these assets are undermined. There are two potential effects of reduced usage of community facilities within centres. The first is that the marginal cost per patron increases thereby reducing efficiency and reducing the social benefits through its provision, and the second is that the infrastructure has to be duplicated (even on a small scale) elsewhere causing significant inefficiencies of community resources. The

costs involved in underutilisation of these resources or indeed their duplicate are relative obvious and must be considered when locating associated activities.

Residents of the proposed development are far more likely to utilise the City Centre than many of the other areas with identified capacity which improves patronage, lowering marginal costs and ensures the City Centre will remain competitively attractive to retailers and business.

In comparison, while the Stoke centre will certainly benefit from the designated future urban development in the south of Nelson, the Richmond Town Centre has greater potential to divert spending from the Nelson growth areas. Furthermore, residents who work in the Nelson City Centre will have to travel further, placing comparatively greater pressure on the transportation network infrastructure. This increases environmental costs and public costs for roading and transport infrastructure.

For these reasons, residential development on the subject site is desirable over alternative locations.

7. ECONOMIC COSTS

While there are multiple economic benefits that arise from this development as identified in the previous section, this needs to be balanced against some of the salient economic costs. In this instance, they include:

- Opportunity cost of the land,
- Financial investment of required infrastructure upgrades, and,
- Potential to undermine serviced capacity.

The following sections examine each of these potential costs in more detail.

Opportunity Cost of Land

An essential part of urban development economics is ensuring the efficient allocation of land to maximise the efficiency of the network and provide the greatest value. This can be explained with the concept of opportunity cost – i.e. the next best alternative. Where the net value of the opportunity cost exceeds the option being considered, one can conclude that a better alternative exists.

Given no alternatives have been proposed, the opportunity cost of the land is assumed to be 'as is' which in this case is grazing farmland. While this is a productive land use, it is of comparatively low value and neither is it in short supply. Given the proximity to the Nelson urban area and City Centre, the PPCR land will provide far greater value as residential activity than its current use.

Financial Investment

Additionally, there is an opportunity cost to the use of the requisite financial investment. Where the comparative profitability of this development to the developer is not in question, the focus remains on the potential opportunity costs from the Council's point of view. This investment is necessary to extend the current connections to required services and make upgrades where required.

It is important to recognise that some of the requisite infrastructure investment is required regardless of the PPCR such as protecting the Maitai River from erosion, increasing underground infrastructure capacity, connecting active transport links.

At the end of the day, additional residential capacity in Nelson is required to accommodate future growth and stabilising house price growth. As indicated by the HBA there is insufficient capacity currently in Nelson to support projected household growth over the long term. Therefore, if not on the subject land, the continued population growth will need to be serviced elsewhere, either within Nelson requiring a similar (or larger) financial investment on the Council's behalf, or in Richmond and thereby diverting population growth outside of Nelson.

As the subject site has already been assessed as a potential expansion node, the next best alternative is assumed to be the other growth node - Saxton area 26 and 26b. The extent of this area is indicated on Figure 11 as the growth areas close to the Tasman border. The HBA outlined

the Saxton area as having medium strategic significance, ability to provide a range of housing types and high efficiency to service. In comparison, the Kaka Valley (Area 25) was rated high on all accounts, while the Atawhai Hills (Area 27) was rated low.

While one could discuss the comparative value of these two areas beyond what has currently been assessed, this would ultimately be futile. Given the likely residential demand over the following forecast period, it is not a question as of if these areas will be needed, but when and the HBA indicated that development on this location was likely to occur before that on the subject site. The opportunity cost of the financial investment that needs to be taken into account against the aforementioned economic benefits is therefore a delay of 10+ years before this investment is likely to be absolutely necessary.

Potential to undermine zoned, serviced and feasible residential capacity.

In assessing a new residential development, the question of uniqueness arises. In a situation where sufficient residential capacity already exists, servicing unnecessary residential land results in an underutilisation of developed infrastructure and a commensurate increase in marginal costs. This can be offset if the development in question can justifiably generate its own demand that results in additional rates to Council rather than diverting the growth from currently zoned land.

As this development does not have qualities for which this would be the case, it is likely that many of the residents who choose to purchase a home in the proposed PPCR development, would not have located elsewhere in the Nelson Urban Area. While there are certainly advantages such as proximity to the City Centre and sea views for those on the hilltop, these are not attributes that do not otherwise exist or remain completely unavailable within Nelson already.

However, Nelson is not in a situation where excess residential capacity exists, which means this development is likely to result in an overall increase in residents to Nelson. While the development may certainly redirect potential residents from zoned capacity around Nelson, given the continued high growth it is unlikely to result in many (if any) of these zoned areas remaining vacant.

Furthermore, Nelson and Tasman have a very unique relationship given they form part of the same urban area, the nature of which puts them in direct competition with each other. For those living in Richmond, their rates go to the Tasman District Council and vice versa. Therefore, the redistribution of growth from one region to another is, from the perspective of the Council, additional residents paying additional rates.

While the homes in this location are likely to cater to residents that place a greater value on the City Centre proximity than the residents considering Richmond, it still has an impact in raising the overall supply in the region. This as previously mentioned, reduces the pressure on house prices with the additional supply enabling more residents to locate in Nelson than in absence of this PPCR.

For these reasons, the development will not have a significant effect that would undermine the current zoned, serviced and feasible residential capacity. While the additional market supply may offset some of their profitability which is trade competition, the delay in filling the zoned capacity is unlikely to be sufficient such that the overall efficiency of infrastructure is lost while ultimately providing a better outcome for the market.

While there are likely to be site specific (rather than just locational) benefits associated with the proposal Property Economics have assessed the total potential economic activity likely to be generated by the construction and operation of the residential development. While it is acknowledge that a proportion of this activity is likely to occur regardless within the District (given the availability of other residential development options especially over the short to medium terms) it is expected that a significant proportion of this development will compete for residential growth demand with product in the Tasman Region, therefore a material proportion of the assessed activity has the potential to be unique to the Nelson Region. This in turn provides for increased economic activity and well-being beyond those benefits associated with the proposed developments area proximity to the Nelson CBD.

This economic impact overview estimates the total additional gross injection into Nelson Region's business activity brought about by the proposed development. The proposed development for the purposes of this assessment includes:

- Total circa 750 built dwellings over 20 years (NB only a proportion of this activity and subsequent value is likely to be unique in terms of this development potential increasing the competitive advantage of nelson over Tasman;
- Development of homes on average 140sqm;
- Average build cost of $2,500sqm

The economic impacts likely to be experienced as a result of the anticipated development are broken down into two phases.

- First, the development phase which includes the construction costs of the development and the proportion of those costs that are retained within the Region.
- The second phase is the on-going operations of the anticipated development in terms of realistic spend generation.

Both these phases are measured in terms of their expected direct, indirect, and induced economic impacts upon the regional economy. The direct economic impacts are derived from the actual spending / expenses incurred through the operation of the anticipated development.

Indirect economic impacts are the increased spending brought about by those firms / households and their employees / occupants, who supply the development, while induced economic benefits are measured in terms of the additional income that will be spent in the area due to increased business activity.

Impacts are measured based on initial injections of capital into the Nelson Region due to the 'construction' costs of the development, and the on-going spending and saving associated with

the eventual operation of this development. This economic injection then gives rise to a chain of flow-on effects (multiplier effect) through indirect spending from suppliers and a general increase in economic activity.

7.1. TOTAL CONSTRUCTION ACTIVITY

This 'construction multiplier' was based on the national input-output tables produced by Statistics New Zealand, which were then assessed at a Regional level based on Nelson's economic activity, composition, imports and productivities. This estimates the 'leakage' from the regional economy (within specified sectors), and therefore the overall regional production (with a given business cycle) for each $1 injected.

This was performed for the general residential sectors. These multipliers are based on 'net' flows by broad sector type and are therefore approximations.

Total output impacts to the Nelson Region catchment for the proposed development include:

- Direct Construction Cost x 'Construction Multiplier' +
- Direct Development Cost x 'Development Multiplier' +
- Direct Increased Commercial Spending x 'Commercial Multiplier' +
- Indirect Business Spend x 'Commercial Multiplier' +
- Induced Retail Spending x 'Retail Multiplier'

Each identified multiplier relates simply to the economic sector from which the activity is generated.

ASSUMPTIONS

The following assumptions have been applied in order to assess the level of economic injection into the overall economy at this time. This has some (limited) impact on the distributional effects of the costs and benefits but can be quickly adjusted to accommodate more specific construction and on-going costs and injections.

1. For the proposes of this assessment it has been assumed that the construction costs will fall within the definition of the following categories (based on a standard 'special' commercial ratio); 'residential construction', 'non-building construction', 'other construction services'.
2. Not all economic impacts will be restricted to the Nelson Region, however the distribution of these wider impacts has not been assessed within this report.
3. The origin of labour has been assessed based on Regional labour movements furnished by Statistics NZ based on 2018 data. However, employment data has been updated as per the Business Frame data to March 2019[3].

[3] *Statistics NZ analysis of businesses and employees (ECs) by census areas*

4. This report deals with the economic impact of proposed development on Nelson Region. These are specifically the direct impacts related to the operation and construction of the proposed development.

5. For the purposes of this report an 8% discount rate has been applied.

6. Labour movements are based on average retention rates rather than specific construction company locations.

7. Specific construction assumptions include:

    - Private Civil Works: $106.5m
    - Offsite Infrastructure: $33m

Given these assumptions, Table 5 following estimates the initial economic impact from the construction phase of the proposed plan change area.

TABLE 5: ESTIMATED CONSTRUCTION ECONOMIC IMPACT ON NELSON REGION (NPV)

Initial construction Injection		Initial construction Injection	
Residential		***Residential***	
Number of Sites	750	Number of Sites	750
Estimated Cost Per Sqm	$2,500	Estimated Cost Per Sqm	$2,500
Total Construction Cost ($m)	$263	Total Construction Cost ($m)	$263
Direct Nelson Impact ($m)	$89	Direct Nelson Impact ($m)	$89
Nelson Impact ($m)	**$170**	**Nelson Impact ($m)**	**$170**
Other (Development Costs) $m		***Other (Development Costs) $m***	
Infrastructure (Public)	$33	Infrastructure (Offsite)	$33
Earth Works (Civil Construction) etc.	$92	Earth Works (Civil Construction) etc.	$92
Pre-construction services	$12	Pre-construction services	$12
Post-construction services	$11	Post-construction services	$11
Nelson Impact ($m)	**$89**	**Nelson Impact ($m)**	**$89**
Initial Economic Injection ($m2019)	**$259**	**Initial Economic Injection ($m2019)**	**$259**

The proceeding table quantifies that the total initial impact on business activity with Nelson Region as a result of development of the proposed plan change area is estimated to be in the order of $259 million.

This is based on completion of the entire development by 2038, given the appropriate discount rate.

7.2. ON-GOING ECONOMIC INJECTION

Once again, a key assumption of the economic activity generated through the proposal is that, although the location of this site is crucial, is not site specific.

The key assumptions regarding the on-going activity include:

- Development and occupation (at a Citywide rate) will be completed by 2038.
- The operation of households within this development will meet the City average.
- The retention of retail expenditure (through increased employment and household spend) is based on the current level of retail provision with an additional 20% of the commercial retail space proposed servicing the local population. NB once again the proposed provision of retail here does not necessarily result in entirely unique activity as it will some redirect existing and future growth from other Regional locations.
- The additional households accommodated here will exhibit average income.

TABLE 6: TOTAL ON-GOING ECONOMIC ACTIVITY GENERATED REGIONALLY AT CAPACITY ($2019)

Activity	Initial Direct Expenditure ($m)	Direct Value Added ($m)	Total Value Added ($m)
Retail	$16.88	$6.08	$17.56
Commercial	$3.93	$2.21	$6.90
Total Annual Ongoing Economic Impact	**$20.81**	**$8.28**	**$24.46**

Source: Property Economics

At capacity, the injection into the Nelson Regional economy is estimated at $24.5m per annum (in 2019 dollars).

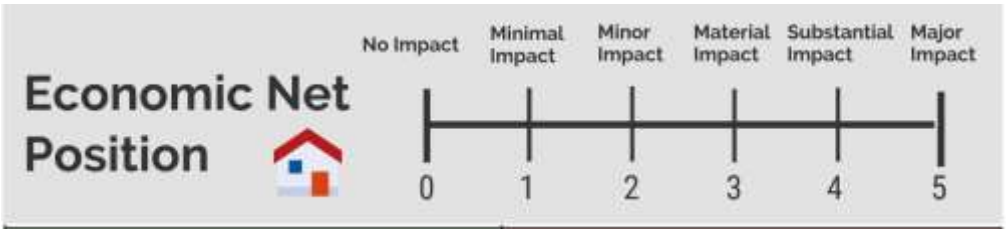
8. NET ECONOMIC POSITION

Table 7 shows the economic net position as assessed by Property Economics with a quantified score assigned to each impact as an indication of the weight that should be given. For the purposes of comparing each impact against the others, the baseline assumption is to assess the impacts over the short to medium term and is concerned with maximising the wellbeing of Nelson residents.

The baseline for this net position is assumed to be that that this development will occur as an expansion node in around 15 years. Alternatively, if it is assumed that the baseline position is this development not occurring at all, then the entire capacity of 750 homes would be unique additional growth over the long term.

As a result, this development would have greater benefits while many of the costs are likely to diminish, and in fact reach negligible levels of impact. It should be noted that many of the impacts on both sides of the equation are rated Minimal to Minor impacts in terms of the entire Region. This is reflective of the fact that ultimately, this development is 750 homes.

TABLE 7: ESTIMATED NET ECONOMIC POSITION



Economic Benefits		Economic Costs	
Housing Choice	2	1	Opportunity Cost of Land
Housing Price	2	1	Financial Investment
Infrastructure Efficiency	1	2	Potential to Redistribute Zoned and Serviced Capacity
Spend Retention and Consolidation	3		

Source: Property Economics

Overall, having examined all relevant economic costs and benefits, Property Economics considers the proposed PPCR is likely to result in a net economic benefit to Nelson. This is primarily driven by the comparative benefits of proximity and the need for additional residential capacity in Nelson over the forecast period.

The HBA has shown that additional residential land is required to service the anticipated population and associated household growth over the 30-year long-term period, and that insufficient capacity is expected to be made available by 2028 to achieve the high growth household projection.

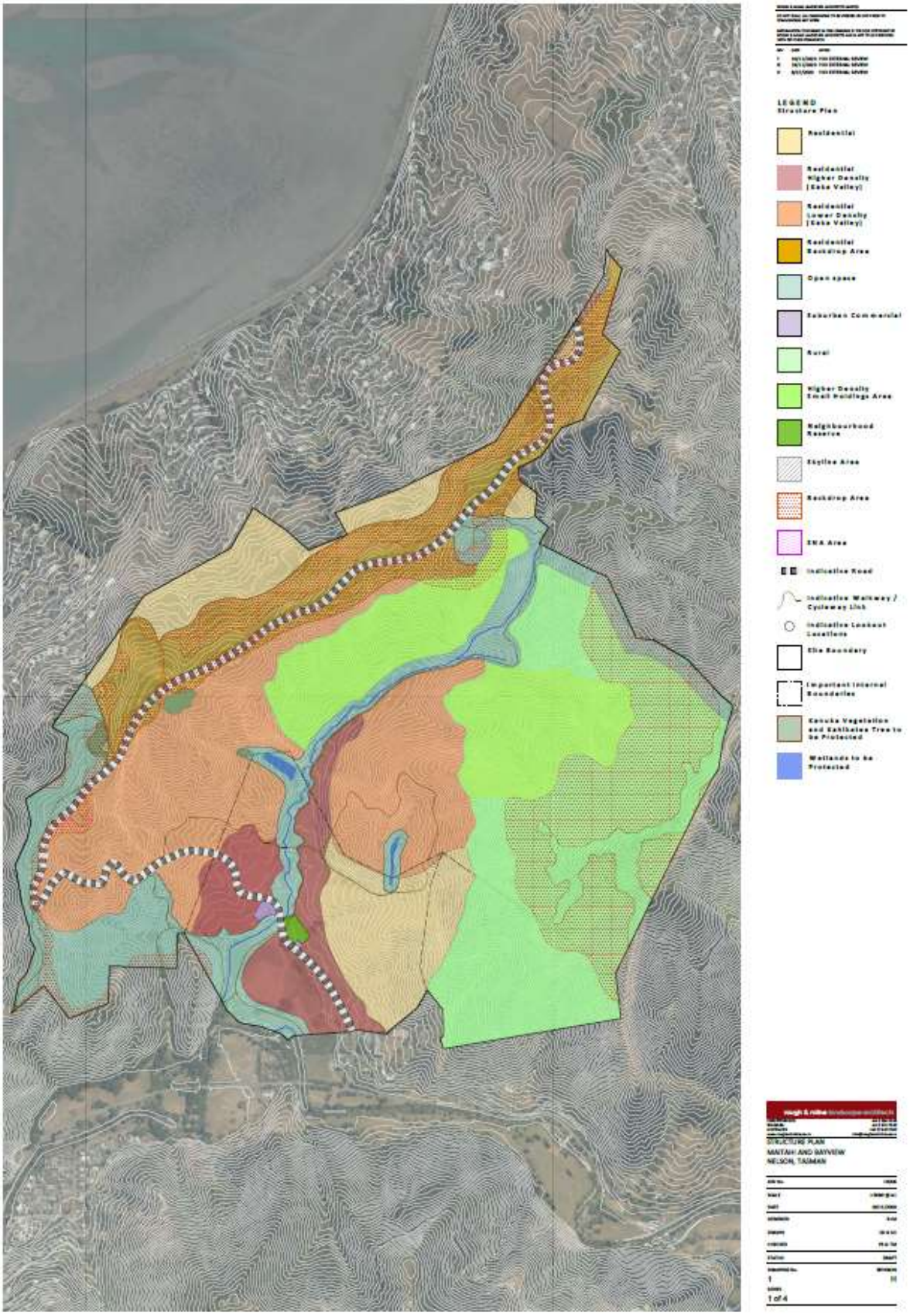
While it is entirely possible that Nelson does not reach this high growth projection, given recent growth in Richmond exceeds the high growth scenario, it has a strong potential as long as the Nelson residential market remains competitive. For this reason, the benefits to housing choice and price go a long way in enhancing community benefit and retaining population growth in Nelson.

Furthermore, the subject site is farmland that is 3km away from the Nelson City Centre which is of low productive value and therefore has a small opportunity cost of land compared to its value as a residential development. As discussed, the benefits of this consolidation of activity and improved spending retention can be broken down into several significant benefits including improved infrastructure efficiency both in regard to local amenities and transportation, performance, viability and productivity of the City Centre.

Conversely, while there is an opportunity cost to the requisite financial investment, it will ultimately be necessary to fund residential development in an alternative location. Due to the strategic advantages of housing on the subject site, it is unlikely that the benefits of alternative options would exceed this development.

Therefore, the primary economic cost of significance is the potential diversion of demand away from serviced and feasible residential capacity. While this development may redistribute growth away from other zoned and serviced land, it is also likely to bring additional residents into Nelson, particularly from the Richmond area. Having examined the capacity against expected demand in the HBA, it is expected that the delay in filling the zoned capacity is unlikely to be sufficient such that the overall efficiency of infrastructure is lost.

APPENDIX 1: PPCR SITE MAP AND DEVELOPMENT PLAN



APPENDIX 2: STATEMENT OF PURPOSE AND COMPLIANCE WITH THE CODE OF CONDUCT

Statement of Purpose and Compliance with the Code of Conduct for experts reports

This report has been prepared to be used as supporting material for an application for Private Plan Change to the Nelson Resource Management Plan under Schedule 1 of the Resource Management Act.

The purpose of this report is to support a planning analysis of the environmental risks and opportunities and costs and benefits of the Plan Change and where consideration of the design of planning provisions or the use of existing Plan provisions to avoid remedy or mitigate any effects appropriately.

I am satisfied that this report is sufficient for its intended purpose and will appropriately enable an analysis under the Resource Management Act, s 32.

I have read the Code of Conduct for Expert Witnesses issued as part of the Environment Court Practice Note 2014 (Part 7). I agree to comply with the Code of Conduct. I am satisfied the matters addressed in this report are within my expertise and that all relevant material facts have been placed in the report recognising the scale, character and intensity of effects that governs the extent of detail required in this report.

At the end of this report is a concluding analysis of the anticipated effects of the Plan Change in light of the Plan provisions that form part of the Plan Change application.

Assessment in light of draft planning provisions

The report author(s) have considered the planning analysis that will accompany the planning change application.

It is considered the planning analysis provides an accurate statement of the anticipated effects relevant to the environmental effects addressed in this report. It is recognised that some of the effects will be addressed at the stage of resource consent and the report authors consider that is the appropriate time and process by which those effects will be addressed.