s 9(2)(b)(ii)

1st May 2024

Tim Carter
Director
Carter Group Property Limited
s 9(2)(a)
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Dear Tim

Further to recent communication, this letter sets out a high-level estimate of the total economic impact of the proposed residential development of 298ha (approx.) of land adjoining the western edge of the Rolleston urban area (west of Dunns Crossing Road) in Selwyn District, Canterbury. While I understand that Carter Group (or its subsidiary) would (if approvals were received) undertake the land development stage up to, and including, the delivery of titled sections to the market, this assessment considers the impact of all development stages facilitated by consent approval as follows:

- Indicative design/planning/consenting stage
- Indicative land development stage(s)
- Indicative commercial development stage(s)
- Indicative dwelling construction stage(s)

## Assessment Methodology

Ideally, the economic impacts of the development would be quantified through the development of a comprehensive region-specific input-output based Economic Impact Assessment (EIA) model. While this is the most robust approach, there is insufficient time available for me to prepare one within the Fast Track application deadline. As such, I have estimated the economic impacts of the proposed residential development using a simpler technique called multiplier analysis which I consider to be appropriate for the purpose of your initial Fast Track application.

Multiplier analysis is still a commonly used modelling technique for measuring economic impacts. Direct, indirect and induced economic impacts can be estimated using multipliers

derived from regional or national input-output tables. Multipliers are summary measures of the economic interdependence between industries and final demand. The contribution of an industry to an economy is not limited to the value it creates directly. This is because an increase in final demand for an industry has repercussions throughout the whole economy, causing increases in output beyond the initial change in demand. This is known as the multiplier effect. The higher the multiplier the more far-reaching the local value added and employment impacts are likely to be from an increase in demand.

The most common limitations of all input-output based modelling (including multiplier analysis) is the historical and fixed nature of multipliers which are typically calculated from input-output tables from surveys undertaken several years earlier. Therefore, they may not accurately reflect the relationships between sectors in the current economy.[1] This assessment relies on the latest national input-output table prepared by StatisticsNZ[2] which reflects the economy in the year ending June 2020. While the construction sector has faced significant cost increases since 2020, it is considered that the supply chain structure of all industry sectors (including the construction sector) is still broadly relevant today.

This assessment includes the following types of economic impacts:

a) Direct effects – which capture onsite and offsite activities directly engaged by the proposed project;
b) Indirect effects – which arise when businesses working directly on the project stimulate the creation of further demand through the purchases that they make in other sectors of the economy; and
c) Induced effects – which arise from the increased demand for goods and services made by households who have received increased income as a result of the direct and indirect effects of the project.

These economic impacts have been measured in terms of:

a) Contributions to value-added (akin to GDP). Value added is the principal measure of economic activity, and is estimated as operating surplus, wages and salaries paid to staff and working proprietors, depreciation, taxes and subsidies.
b) The number of FTEs employed – which is measured in terms of full-time equivalent workers (FTEs) for a 12-month period.

[1] In the real world, technical relationships will change over time. These changes are driven by new technologies, relative price shifts, product substitutions and the emergence of new industries. For this reason, input-output analysis is generally regarded as suitable for short-run analysis, where economic systems are unlikely to change greatly from the initial snapshot of data used to generate the base input-output table.
[2] Accessed, with thanks, from Insight Economics Ltd.

c) Total wages and salaries paid to workers, which are often labelled 'gross household incomes'.

Assumptions and Modelling Inputs

For simplicity, I have adopted the multipliers from the following industry sectors contained in the national input-output table:

- Design/planning/consents – 100% to the 'Scientific, architectural and engineering services' sector.
- Land development – 100% to the 'Heavy and civil engineering construction' sector.
- Dwelling construction – 100% to the 'Residential building construction' sector.
- Commercial construction – 100% to the 'Non-residential building construction' sector.

Other key assumptions for the modelling are as follows:

- Anticipated expenditure is deflated to June 2020 prices prior to applying the June 2020 multipliers. This is done using the Producers Price Index.[3]
- Economic impacts are expressed in 2020 dollar and employment terms. It is not appropriate to re-inflate economic impacts to dollars of the day.
- Indicative development costs, lot yields, average dwelling sizes and development time periods have been provided by the applicant. Where costs have not been provided, national averages have been adopted (for example, average value/sqm costs for non-residential building consents, YE February 2024, applied for commercial developments within the proposal site).
- The cost of the planning, design and consents stage has indicatively been set at 1% of the cost of land development. This stage is limited to 1 year in duration.
- The national multipliers are assumed to represent the multipliers that applied in the Canterbury Region in June 2020. That is, it is assumed that industries in the Canterbury economy have the same interdependencies with other industries as they do nationally.
- All direct expenditure on the proposed development, including indirect and induced spending, is assumed to be with business located in Canterbury Region. That is, 100% of the impact is assumed to accrue to the Canterbury economy, with no leakage to other regions.

The key parameters of the proposed development are as follows:[4]

[3] As an indication of the scale of the deflation, the average business prices in the construction sector in June 2020 were 79% of the prices in September 2023.
[4] Not all inputs to the model are shown here.

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Economic Impact Results

The above input values and assumptions were deflated and then fed into my economic model to estimate the one-off economic impacts summarised below.

Table 1 shows that development and construction activities enabled by the proposal will have significant impacts over a period of approximately 17 years. Including direct and flow-on (indirect and induced) effects, I estimate that the proposal could:

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[5] *Based on one year assumed for planning, design and consenting followed by one year for the first stage of land development from which the dwelling construction period then follows.*

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*Table 1 – Direct, Indirect, Induced and Total Economic Impacts of the Proposed Residential Development on the Canterbury Region Economy ($2020)*

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- Overall, the proposal could:
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## Caveats

These regional economic impacts apply to the proposed development. It is important to acknowledge that these same or similar impacts would arise from a development of a similar scale and composition in another location in Selwyn District[6] and are not entirely unique to this proposal/site.

Furthermore, some of these impacts would be a result of expenditure that is transferred from other locations in the region or district itself. Specifically, if the proposal was not approved for development (via the Fast Track Act or other local planning processes), one would typically expect that the demand for housing would be satisfied in another location within the district or region. This means that at a regional level much of the economic value associated with the proposal may not be net additional or new, as this value would occur regardless of whether the proposed development occurs or not.

That said, to the extent that the proposal addresses a shortfall in housing capacity in the district (in a location of demand), that may not necessarily be addressed through other planning processes in a timely manner, then more of the economic impact can be considered net additional. This is because a shortfall of housing capacity may result in some household growth being directed elsewhere (or being suppressed). In this light, the proposed development can be seen as enabling projected growth.

Development is also contingent on available land in suitable locations for urban growth, landowners willing to develop that land, and landowners having the financial capability and experience to develop – such as the applicant. These combined attributes are rare in any district, and this means that more, rather than less, of the estimated economic impacts can be treated as net additional and specific to the proposal.

## Other Economic Benefits

While unquantified, other economic benefits of the proposed development include (but are not limited to):

a) Supporting integrated development within an existing urban area;
b) Providing a direct boost in housing market supply to help avoid potential capacity shortfalls in what is a high growth district;

[6] It is assumed that the costs provided by the applicant for the proposed development have taken into account the costs of developing in this district, which may not necessarily be the same as costs in other districts of Canterbury Region.

c) Supporting a competitive land market, which helps deliver new sections to the market quicker, using economies of scale, and at better average prices;
d) Providing a variety of housing options/typologies (in a location of high demand) to meet diverse needs and housing preferences.

## Conclusions

Given the scale of the proposed development (which is significant relative to most residential developments carried out in New Zealand), the various activities associated with preparing the subject land for development and then constructing approximately 4,200 new dwellings (plus supporting convenience commercial and recreational activity) will have significant economic impacts on the district and Canterbury Region over a prolonged period.

As stated above, those total direct, indirect and induced economic impacts can be summarised using the following metrics:

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To put the total scale of the development (4,200 dwelling yield) into context:

- It is equivalent to 17% of total urban housing demand projected between 2022-2032[7] in the three territorial authorities that cover Greater Christchurch (i.e. the sum of total Waimakariri District, Christchurch City and Selwyn District).[8]
- It is equivalent to 14% of total housing demand projected between 2022-2032 in that catchment.
- It is equivalent to 30% of total urban standalone housing demand projected between 2022-2032 in that catchment.

To put the indicative annual supply of dwellings (i.e., potentially 280 dwelling per annum[9]) into context:

[7] Medium-term housing demand projections taken from the Greater Christchurch Partnership Housing Development Capacity Assessment, March 2023.
[8] These three districts comprise the significant share of medium-term dwelling demand (2022-2032) within Canterbury Region. For context, the three districts combined account for 83% of the Canterbury Region's population in 2023 (StatsNZ Pop Estimates).
[9] Based on 15 stages and indicatively 1 year per stage.

- It is equivalent to 11% of total urban housing demand projected annually[10] between 2022-2032 in the three territorial authorities that cover Greater Christchurch.
- It is equivalent to 9% of total housing demand projected annually between 2022-2032 in that catchment.
- It is equivalent to 20% of total urban standalone housing demand projected annually between 2022-2032 in that catchment.

Given that the three territorial authorities that cover Greater Christchurch account for the majority of future housing demand in Canterbury Region in the medium-term, these percentages would still be significant if adjusted to a full regional comparison.

If you have questions about this high-level assessment, please get in touch. I wish you all the best for your upcoming Fast Track application.

Kind regards

Natalie Hampson
Director
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[10] Annual average over 10 years.