

Before an Independent Hearings Panel
Appointed by Waimakariri District Council

under: the Resource Management Act 1991

in the matter of: Submissions and further submissions on the Proposed
Waimakariri District Plan

and: Hearing Stream 12: Rezoning requests (larger scale)

and: **Carter Group Property Limited**
(Submitter 237)

and: **Rolleston Industrial Developments Limited**
(Submitter 160)

Statement of evidence of Gregory Michael Akehurst (Economics)
on behalf of Carter Group Limited and Rolleston Industrial
Developments Limited

Dated: 5 March 2024

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**STATEMENT OF EVIDENCE OF GREGORY MICHAEL AKEHURST ON
BEHALF OF CARTER GROUP LIMITED AND ROLLESTON INDUSTRIAL
DEVELOPMENTS LIMITED**

INTRODUCTION

- 1 My full name is Gregory Michael Akehurst. I am a founding director at Market Economics and have Bachelors Degrees in Geography and Economics from Auckland University. I have more than 25 years' experience in assessing the economic effects of growth and change in the New Zealand economy. I have particular experience in assessing the effects of growth on existing economics and on urban form. I have also carried out significant work in assessing requirements for housing and business land to assist Councils in setting development and growth strategies and to meet their obligations under national direction (NPS-UDC¹ and NPS-UD²). I am a member of the Resource Management Law Association.
- 2 I have worked on a number of land use and property development projects in the Greater Christchurch area – including establishing Labour models of the Canterbury Rebuild post the earthquakes in 2010 and 2011. This work included building a residential rebuild model of Canterbury to assess the economic and labour implications of alternative rebuild scenarios. In addition, I have worked on a number of economic and residential development projects across the Greater Christchurch area. I am very familiar with the economy and the issues faced by the districts.
- 3 I am also very conversant with the NPS-UDC and NPS-UD process. I was engaged by MBIE in 2017 to write the guidance manual for Councils looking to evaluate business land sufficiently under the NPS-UDC.
- 4 Specific to Waimakariri District, I have prepared reports and presented evidence over the years on a number of development issues, including in relation to supermarket development, Key Activity Centre development and change, as well as reviewing a number of Private Plan Changes to the District Plan. I have also peer-reviewed studies into centre assessments and contributed to the methodology of Housing and Business Development Capacity Assessments (*HBAs*) carried out by colleagues under the NPS-UDC and NPS-UD.
- 5 Market Economics were engaged to develop the original Waimakariri Capacity for Growth Model (*WCGM*) and have been engaged more recently to assist Waimakariri District Council (*WDC*) in updating its

¹ National Policy Statement – Urban Development Capacity 2016.

² National Policy Statement – Urban Development 2020.

economic development strategy. I have had input into the initial economic profile report prepared for WDC.

- 6 I am also familiar with other residential development issues in and around Christchurch having prepared and provided evidence in a number of hearings in Selwyn District addressing similar matters of growth and capacity.
- 7 I am familiar with the submitters' request to rezone land bound by Mill Road, Whites Road, Bradleys Road (the *Site*).
- 8 I was involved in private plan change 31 (*PC31*) to rezone this land under the operative District Plan.

CODE OF CONDUCT

- 9 Although this is not an Environment Court hearing, I note that in preparing my evidence I have reviewed the Code of Conduct for Expert Witnesses contained in Part 9 of the Environment Court Practice Note 2023. I have complied with it in preparing my evidence. I confirm that the issues addressed in this statement of evidence are within my area of expertise, except where relying on the opinion or evidence of other witnesses. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

SCOPE OF EVIDENCE

- 10 My evidence will address:
- 10.1 The relevant attributes of the relief (rezoning) sought by the submitter.
- 10.2 The relevant provisions in the National Policy Statement on Urban Development 2020 (*NPSUD*).
- 10.3 The sufficiency of housing capacity in the District accounting for:
- (a) The economic assessment "Waimakariri Residential Capacity and Demand Model – IPI 2023" prepared by Mr Rodney Yeoman of Formative Limited, dated 8 December 2023 (*the Formative Report*);
- (b) Our assessment of sufficiency using Statistics New Zealand projections SA2, recent building consent data (2019-2022) and the evidence of **Mr Chris Sexton** which 'ground truths' the housing supply estimates in the Formative Report. This provides a basis for understanding sufficiency within the Greater

Christchurch urban environment (*GCUE*)³ at a sub-district level (both within and outside the three main urban townships of Rangiora, Kaiapoi and Woodend/Pegasus).

- 10.4 The capacity delivered by the rezoning sought by the submitter, in the context of:
- (a) Its contribution (and significance) to sufficiency of housing capacity in the urban environment at a district and sub-district scale;
 - (b) The NPSUD; and
 - (c) Economic costs and benefits.
- 11 In preparing my evidence, I have reviewed:
- 11.1 The Proposed Waimakariri District Plan (*PWDP*);
 - 11.2 The NPSUD;
 - 11.3 The evidence of **Mr Chris Sexton, Ms Natalie Hampson, Mr Jeremy Phillips, and Mr Tim Walsh**;
 - 11.4 The Formative Report, and earlier evidence relevant to the report (but preceding its publication) relied upon by Mr Yeoman for PC31;
 - 11.5 The spreadsheet entitled "*WDC Population Projections Data – Output.xlsx*". This was provided by Council staff in response to a request for medium/long term population and household projections;
 - 11.6 Statistics New Zealand data from Census 2018 and projections for population by age and sex and for households and dwellings (2022); and
 - 11.7 The relevant documents from PC31.

SUMMARY OF EVIDENCE

- 12 The rezoning (relief) sought by the submitters proposes approximately 850 additional households in Ōhoka, which is within the GCUE but is outside the three identified townships within the Formative Report and model (being Rangiora, Kaiapoi and Woodend/Pegasus).

³ See evidence of Mr Jeremy Phillips regarding the extent of the urban environment.

- 13 The NPSUD requires local authorities to '*at all times, provide at least sufficient development capacity to meet expected demands... over the short term, medium term and long term*' (policy 2), and otherwise seeks competitive land and development markets (objective 2) and '*robust and frequently updated information... to inform planning decisions*' (objective 8).
- 14 As addressed in the evidence of Mr Phillips, 'the urban environment' constitutes more than just the urban zoned land in Rangiora, Kaiapoi and Woodend/Pegasus as asserted in the Formative Report. It includes those areas of the Waimakariri District within the GCUE, which includes the Ōhoka urban area and its surrounds.
- 15 Waimakariri District remains in deficit with respect to providing sufficient capacity within the Urban Area to meet its obligation under the NPSUD.
- 16 The Formative Report contains the same information/values relied upon by Mr Yeoman in his evidence in chief provided for PC31. Therefore, the report does not take into account Mr Yeoman's own corrections made during the course of the PC31 hearing – let alone any capacity related corrections made by **Mr Sexton**.
- 17 In addition, it does not take into account any of the findings of the Panel that heard PC31 who indicated that there were issues with the capacity modelling carried out by Formative in the development of the Waimakariri Capacity for Growth Model – in particular the realisability of identified capacity.
- 18 Analysis of Formative's Capacity for Growth Model prepared for Waimakariri District Council has highlighted a number of areas of concern. Notwithstanding that, by relying on Mr Yeoman's figures as outlined in the Formative Report, it is clear that there is a shortfall of capacity within the GCUE in areas outside the three identified townships within the Formative Report (Rangiora, Kaiapoi and Woodend/Pegasus).
- 19 By my estimation, and relying on the Formative numbers, the shortfall in the short to medium term for those areas within the GCUE that sit outside the three main townships is approximately 524 dwellings. This shortfall is expected to increase to over 1,541 dwellings in the long term – unless additional capacity is identified.
- 20 The rezoning sought by the submitters for Ōhoka provides an appropriate way to meet this shortfall in the medium term, and at least a portion in the longer term, noting:
- (a) Its contribution of approximately 850 households to the sufficiency of housing capacity in the urban environment at a district and sub-district scale is 'significant';

- (b) Its establishment adjacent to an existing urban area and economies of scale and other benefits realised through the provision of infrastructure and housing for approximately 850 households in a single location has urban form and economic benefits, consistent with that sought by the NPSUD; and
 - (c) The economic benefits of rezoning the land will outweigh any associated costs.
- 21 Accounting for the above, on economic grounds, the rezoning relief sought by the submitters is supported and is considered more appropriate than providing insufficient capacity and/or dispersing such capacity in an ad hoc manner elsewhere.

THE RELIEF SOUGHT BY THE SUBMITTER

- 22 **Mr Walsh's** planning evidence describes the particulars of the relief sought by the submitter in detail. However, for the purposes of this evidence I note that approximately 156ha of land at Ōhoka is proposed to be rezoned from Rural Lifestyle to a combination of Settlement Zone (*SETZ*), Large Lot Residential Zone (*LLRZ*), Local Centre Zone and Natural Open Space Zone. Overlays provide for a polo field and associated facilities and educational facilities. A retirement village is also provided for within the *SETZ*. Relevantly, the relief would provide for approximately 850 households (704 within the *SETZ* and 146 in the *LLRZ*) and a school. If a school is not established, approximately 42 additional households could be established increasing the total number to 892.

THE NPSUD

- 23 **Mr Walsh's** planning evidence addresses the relevant provisions of the NPSUD in detail. However, for the purposes of this evidence, I note in particular the requirement in policy 2 for local authorities to *'at all times, provide at least sufficient development capacity to meet expected demands... over the short term, medium term and long term'*; and the objectives for competitive land and development markets (objective 2) and *'robust and frequently updated information... to inform planning decisions'* (objective 8).
- 24 I also note the planning evidence of **Mr Phillips** in regards the relevant extent of the 'urban environment' in Waimakariri District and the 'urban areas' as identified in the Canterbury Regional Policy Statement (*CRPS*) and how this is relevant to the requirements in the NPSUD.
- 25 I account for the provisions of the NPSUD and the evidence of **Mr Walsh** and **Mr Phillips**, as relevant, in the evidence that follows.

SUFFICIENCY OF HOUSING CAPACITY IN THE DISTRICT

The Formative Report

- 26 Section 4 of the Formative Report summarises the results from the 2022 Waimakariri Residential Capacity and Demand Model. Section 4.1 summarises capacity for the District as a whole, whilst sections 4.2-4.4 provide breakdowns for the three main townships of Rangiora, Kaiapoi and Woodend/Pegasus respectively. Section 4.5 provides a conclusion in regards the 'urban environment' but as addressed in the evidence of **Mr Phillips**, this incorrectly states that *'the Urban Environment ...is the urban zoned land in Rangiora, Kaiapoi and Woodend/Pegasus'*.
- 27 The Formative Report sets out its assessment of dwelling demand (+ margin), feasible supply and sufficiency in Figures 4-3 to 4-7 for the entire District and for Rangiora, Kaiapoi, Woodend/Pegasus (which it incorrectly concludes constitutes the urban environment). These are reproduced below, and except for Woodend/Pegasus, these show sufficiency in the short-medium and long term:

Figure 4-3: Waimakariri District Urban Dwelling Demand (+Margin) and Feasible Supply

Waimakariri District Dwelling Demand	Demand +Margin	Feasible Supply	Sufficiency
Short-Medium	6,260	6,480	220
Long	14,727	15,348	621

Figure 4-4: Rangiora Residential Dwelling Demand (+Margin) and Feasible Supply

Rangiora Dwelling Situation	2023-2033 Short-Medium	2023-2053 Long
Demand +Margin	1,260	2,960
Feasible Supply	2,450	7,560
Sufficiency	1,190	4,600

Figure 4-5: Kaiapoi Residential Dwelling Demand (+Margin) and Feasible Supply

Kaipoi Dwelling Situation	2023-2033 Short-Medium	2023-2053 Long
Demand +Margin	1,230	2,900
Feasible Supply	1,290	4,100
Sufficiency	60	1,200

Figure 4-6: Woodend/Pegasus Residential Dwelling Demand (+Margin) and Feasible Supply

	2023-2033 Short- Medium	2023-2053 Long
Woodend-Pegasus Dwelling Situation		
Demand +Margin	2,480	5,840
Feasible Supply	2,200	2,790
Sufficiency	-280	-3,050

Figure 4-7: Urban Environment Residential Dwelling Demand (+Margin) and Feasible Supply

	2023-2033 Short- Medium	2023-2053 Long
Urban Environment Dwelling Situation		
Demand +Margin	4,970	11,700
Feasible Supply	5,940	14,450
Sufficiency	970	2,750

Feasible supply and Mr Sexton's evidence

- 28 **Mr Sexton's** evidence addresses the over-estimation of supply set out in Formative's summary tables above. In summary, **Mr Sexton** has 'ground truthed' the theoretical supply of housing assumed in the Formative Report and in doing so has highlighted several land parcels that are unable to contribute housing supply.
- 29 This was a key matter during the hearing of PC31, where **Mr Sexton's** evidence concluded that the Formative model (at that time) overstated available capacity in the medium term by some 1,573 dwellings⁴.
- 30 This had the effect of leaving WDC 1,239 dwellings short of meeting their sufficiency requirements in the short to medium term⁵. In failing to meet its obligations under the NPSUD, the Council is required to make provisions immediately to realise additional capacity.
- 31 The panel for PC31 accepted **Mr Sexton's** evidence and stated that there was a "very real likelihood that the model has overstated residential capacity"⁶. The panel went on to say, "that irrespective of the outcome of this application the Council take steps to review the calculations provided by Formative and review realisability of the

⁴ Note that since the PC31 evidence and hearing, further evaluation has concluded (per the evidence of **Mr Sexton** for these proceedings) that the Formative model overstates medium term capacity by 1,776 dwellings.

⁵ This is made up from the 5,934 capacity, as identified by Formative – 1,573 Mr Sexton's capacity adjustment = 4,361 remaining capacity, compared with 5,600 demand growth plus a competitiveness margin.

⁶ PC31 Decision, paragraph 81, page 35.

areas currently identified for future urban growth within the district.”⁷

32 However, this recommendation has been ignored. In fact, the Formative Report reverts to the position held prior to the PC31 hearing. This means that none of the changes or corrections Mr Yeoman made during the PC31 hearing have been included in the updated report and updated estimates of capacity. In addition, none of the revisions identified by **Mr Sexton** as being necessary to ensure accuracy, have made it into the estimates of capacity included in the Formative Report.

33 I set out the implications of this in my evidence below.

The urban environment and Mr Phillips’ evidence

34 **Mr Phillips’** evidence also sets out the appropriate extent of the urban environment and I agree with his conclusion that it encompasses those areas outside of the three main towns of Rangiora, Kaiapoi and Woodend/Pegasus, including the Ōhoka urban area and its surrounds. On that basis, the Formative Report does not appear to account for demand or supply associated with households wishing to live within that part of Waimakariri District within the GCUE, but not within the three main townships. Noting this, I have focused on understanding how the Formative model projects dwelling growth and whether the model is able to be used to understand how much growth is anticipated in different parts of Waimakariri District.

35 The rationale for this is that the NPSUD requires local authorities to assess and to provide for residential capacity within their defined urban environment. In this case, it is within the GCUE.

Formative Methodology

36 It is not clear from the Formative Report, how demand has been estimated for different areas within Waimakariri District – other than for the three defined townships of Rangiora, Kaiapoi and Woodend/Pegasus. The Formative Report does not contain estimates of dwelling growth for all areas of Waimakariri and the GCUE (including the Ōhoka urban area and its surrounds). Instead, it contains a description of the methodology used to generate estimates of dwelling growth and tables for the three identified townships only.

37 The report contains a description of the Capacity for Growth Model and methodology in Section 3 (page 17)⁸. Essentially the model generates estimates of future household numbers based on population projections (Cohort Component Projection method has

⁷ Ibid, paragraph 85, page 36.

⁸ Waimakariri Residential Capacity and Demand Model – IPI 2023 Economic Assessments, 8th December 2023, Formative

been adopted by Formative). This generates estimates of future population structure by aging a population structure (age in 5-year groups by sex) and applying mortality and fertility assumptions to each age cohort. To this is added net migration.

- 38 Formative rely on Statistics New Zealand's 2022 Estimated Residential Population as its base and apply assumptions for fertility, mortality and migration from the 2018 based projections. This means the medium projection for Waimakariri is higher than the Statistics NZ (2018 base) but the Formative high projection is slightly lower.
- 39 Population is converted into families, households and dwellings using Census 2018 derived household formation rates and living arrangements. To the resulting estimates of occupied dwellings are added an allowance for unoccupied dwellings – again drawn from the proportions identified in the 2018 Census.
- 40 Having established a revised district dwelling demand, the Formative model then allocates dwelling demand “to **locations** in the District using a midpoint between the demand shares in the Statistics New Zealand projections SA2 and recent building consents (2019 – 2022)”⁹ – emphasis added.
- 41 It is not clear from the description in the report why this methodology is adopted. Nor is it clear from the description the timeframe over which the influence of 4 years' worth of building consents has on future local projections.
- 42 Best practice would have the building consents influencing the allocation of growth for the next 5 -7 years at most, with projections beyond that time being based more closely on the underlying demographic structures, that is, using the cohort component based projections and household formation rates as the driver of dwelling projections.
- 43 Allocating future demand based on recent building consents conflates demand with supply and becomes circular if demand projections are then used to justify where capacity is required, having used building consents as part of the driver of demand location.
- Estimating Demand Outside of the Townships**
- 44 The aim of my evidence is to provide estimates of the amount of residential demand and capacity that sits within the GCUE, but outside the three identified townships (Rangiora, Kaiapoi and Woodend/Pegasus), to identify if there is demand and a capacity

⁹ Ibid, page 19

shortfall that the submitters' requested rezoning would be responsive to.

- 45 To do this, and notwithstanding the error I have identified above regarding household estimates used by Formative, I have relied (as much as possible) on the Formative demand projections at the District and SA2 level (notwithstanding the issues I identify above).
- 46 Step 1 is to adopt Formative's High Population Projections. This sees population increase from around 69,800 in 2023 to over 101,790 by 2053. Household numbers increase from just over 27,000 to 31,740 in the medium term (to 2033), then by another 7,660 to 39,400 in the long term (to 2053).

Figure 1: Waimakariri District Population and Household Projections, 2022 – 2053

	2022	2023	2028	2033	2038	2043	2048	2053
Population	67,930	69,789	76,015	81,742	87,055	92,178	97,209	101,791
Households	26,364	27,038	29,472	31,743	33,761	35,554	37,601	39,405
Pop/HH	2.58	2.58	2.58	2.58	2.58	2.59	2.59	2.58

Source: Formative, Statistics NZ

- 47 Step 2 was to adopt the Formative Dwelling projections. This shows Total dwellings increase from 28,860 in 2023 to 33,880 by 2033 (medium term) and to 42,060 by 2053 (long term).

Figure 2: Waimakariri Dwelling Projections, 2022 – 2053

	2022	2023	2028	2033	2038	2043	2048	2053
Occupied Dwellings	26,515	27,193	29,640	31,925	33,954	35,757	37,816	39,630
Unoccupied Dwellings	1,623	1,665	1,814	1,954	2,078	2,189	2,315	2,426
Total Dwellings	28,138	28,858	31,455	33,879	36,032	37,946	40,130	42,056
Time period		2022 - 2023	2023 - 2028	2028 - 2033	2033 - 2038	2038 - 2043	2043 - 2048	2048 - 2053
<i>Growth</i>		720	2,597	2,424	2,153	1,914	2,184	1,926

Source: Formative

- 48 Step 3 involved making allowance for the fact that the Formative projections appear to have omitted the Kaiapoi East SA2. The listing in the base Formative model received from Waimakariri Council did not have Kaiapoi East listed. The adjusted 2022 dwelling estimates for WDC are shown in **Appendix 1**.
- 49 For Step 4, while dwelling growth and growth share for Waimakariri SA2's (2022) can be calculated using Formative's result shown in **Appendix 2**, re-weighting is required to incorporate the missing data for Kaiapoi East (dwelling growth and pre re-weighting growth shares are shown in **Appendix 3**). According to methodologies provided in the latest Formative Report, demand was allocated to locations in the district using a midpoint between the demand shares in the Statistics New Zealand projections SA2 and recent building consents (2019-2022). For Kaiapoi East, the share of

building consent between 2019 and 2022 was 0.1% and the household growth in 2023 was 0.3% of the total growth in the district. As a result, growth shares of 0.2% have been adopted for Kaiapoi in 2023, 2028 and 2033. As Stats NZ's subnational household projection predicts zero growth for Kaiapoi East from 2038 onwards, no growth shares have been applied to remainder years.

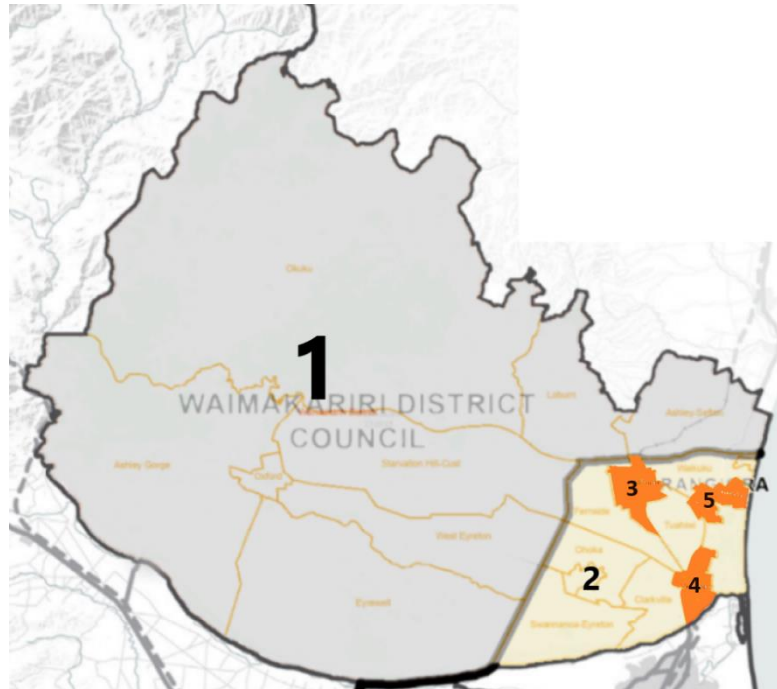
- 50 Stats NZ updates geographic boundaries every few years to incorporate new areas of development and three-yearly local electoral boundary changes. The latest significant update was released on 1 January 2023. Formative's report was based on the SA2 2022 boundaries. I consider the utilisation of this latest boundary SA2 2023 enables more accurate estimation of population/dwelling numbers and distribution.
- 51 The post re-weighting and boundary adjustments (based on building consent share) used by Formative to generate "localities" for each township have been made to produce final growth shares (2023 – 2053) for each SA2 (**Appendix 4**). This provides the information needed to understand total growth across the district and in particular growth generated within the GCUE, but outside the three townships (Rangiora, Kaiapoi, and Woodend/Pegasus).
- 52 Step 5 is to apply the growth shares in **Appendix 4** to the revised District High Growth demand generated above, to populate Waimakariri's 2023 SA2's (**Appendix 5**). Finally, growth in the short to medium term and in the long term (2033 – 2053) by SA2 is multiplied by the competitiveness margin to generate final dwelling demand totals that need to be met within the district in order to comply with the NPSUD (**Appendix 6**).
- 53 In total, Waimakariri dwelling numbers increase by 5,021 under the high growth projection (6,026 including the 20% margin) in the medium term to 2033. In the long term, the district can expect growth of a further 8,177 dwellings (to 2053). Once the competitiveness margin is added, Council can expect to provide total dwelling capacity to 2053 of 15,182 (**Appendix 6**).
- 54 It is appropriate for Councils to aggregate SA2s into logical sub-district areas that share common characteristics. These sub-markets represent choice sets that households will mostly operate within.
- 55 It is important that Council consider these sub-district areas in the context of providing dwelling capacity to meet demand.

Findings & Summary of Sufficiency

- 56 Sub-district dwelling markets have been defined as closely as possible to the Formative model. As shown in [Figure 3](#) below, this has the three large urban townships of Rangiora, Kaiapoi and

Woodend/Pegasus identified as areas 3, 4 and 5 respectively. The balance of the district has been divided between the area within the GCUE (Area 2) and Rural Waimakariri (Area 1).

Figure 3: Waimakariri District Housing Market Catchments



- 57 All SA2s within areas 1-5 (as shown in above) have been matched to sub-district housing markets in **Appendix 7**. This allows an estimation of sufficiency in areas not covered by the Formative Report¹⁰.
- 58 Drawing on the capacity estimates provided by Formative, it is clear that Waimakariri has insufficient capacity in the short to medium term (-1,330 dwellings district wide) accounting for **Mr Sexton's** capacity adjustment (**Appendix 8**). This increases to -1,849 dwellings in the long term. A comparison of different results, accounting for **Mr Sexton's** evaluation of supply is shown in the following tables.

¹⁰ Waimakariri Residential Capacity and Demand Model – IPI 2023 Economic Assessments, 8th December 2023, Formative for WDC.

Figure 4: Total District Dwelling Demand and Supply, 2023 - 2053

WDC District Wide (Area1, 2, 3, 4 &5)		WCGM2022 (Formative Report - Dec 8, 2023)	WCGM2022 (Formative Report demand)- adjusted supply per Sexton	Greg Akehurst Evidence March 2024 demand - adjusted supply per Sexton
Short- Medium 2023-2033	Demand + Margin	6260	6260	6026
	Feasible Supply	6480	4696	4696
	Sufficiency	220	-1564	-1330
Long term 2023-2053	Demand + Margin	14727	14727	15182
	Feasible Supply	15348	13333	13333
	Sufficiency	621	-1394	-1849

- 59 To determine the demand, supply and sufficiency for those parts of the District within the GCUE but outside of the three main towns (i.e. Area 2), the results from the relevant SA2s have been aggregated. The findings with regard to Area 2 are shown in [Figure 5](#) and [Figure 6](#) below, alongside the demand, supply and sufficiency for the main towns (i.e. Areas 3-5).

Figure 5: Dwelling demand, supply and sufficiency within GCUE, short-medium term (2023 – 2033)

Location:		WCGM2022 (Formative Report - Dec 8, 2023)	WCGM2022 (Formative Report demand)- adjusted supply per Sexton	Greg Akehurst Evidence March 2024 demand - adjusted supply per Sexton
Rangiora (Area 3)	Demand + Margin	1260	1260	1709
	Feasible Supply	2450	1931	1931
	Sufficiency	1190	671	222
Kaiapoi (Area 4)	Demand + Margin	1230	1230	921
	Feasible Supply	1290	863	863
	Sufficiency	60	-367	-58
Woodend/Pegasus (Area 5)	Demand + Margin	2480	2480	1515
	Feasible Supply	2200	1381	1381
	Sufficiency	-280	-1099	-134
In Main Towns (Area 3, 4 & 5)	Demand + Margin	4970	4970	4145
	Feasible Supply	5940	4175	4175
	Sufficiency	970	-795	30
Outside Main Towns within GCUE (Area 2)	Demand + Margin	Not stated	Not stated	748
	Feasible Supply	Not stated	Not stated	224
	Sufficiency	Not stated	Not stated	-524

Figure 6: Dwelling demand, supply and sufficiency within GCUE, long term (2023 – 2053)

Location:		WCGM2022 (Formative Report - Dec 8, 2023)	WCGM2022 (Formative Report demand)- adjusted supply per Sexton	Greg Akehurst Evidence March 2024 demand - adjusted supply per Sexton
Rangiora (Area 3)	Demand + Margin	2960	2960	4369
	Feasible Supply	7560	7018	6938
	Sufficiency	4600	4058	2569
Kaiapoi (Area 4)	Demand + Margin	2900	2900	2209
	Feasible Supply	4100	3679	3675
	Sufficiency	1200	779	1466
Woodend/Pegasus (Area 5)	Demand + Margin	5840	5840	4006
	Feasible Supply	2790	1968	1921
	Sufficiency	-3050	-3872	-2085
In Main Towns (Area 3, 4 & 5)	Demand + Margin	11700	11700	10584
	Feasible Supply	14450	12665	12534
	Sufficiency	2750	965	1950
Outside Main Towns within GCUE (Area 2)	Demand + Margin	Not stated	Not stated	1931
	Feasible Supply	Not stated	Not stated	390
	Sufficiency	Not stated	Not stated	-1541

- 60 As shown in Figure 5 and Figure 6 above, residential capacity within the three main towns collectively is expected to meet demand in the medium term (30 dwellings) and in the long term (1,950 dwellings). However, Kaiapoi and Woodend/Pegasus are expected to have a small insufficiency (i.e. -58 and -134 dwellings, respectively) in the medium term, while the shortfall in Woodend/Pegasus will increase to 2,085 dwellings in the long term.
- 61 For households wishing to live within that part of the District within the urban environment that is not within the three main townships. Based on my analysis above, I anticipate that demand arising in Area 2 (within GCUE but outside the three main townships) to be 748 in the medium term (including the competitiveness margin). This compares with feasible supply of 224 dwellings, leaving a **shortfall of 524 dwellings.**
- 62 In the long term, dwelling demand in this area (including the competitiveness margin) is 1,931 dwellings well ahead of identified capacity of 390 dwellings. This leaves a **shortfall of 1,541 dwellings.**

- 63 A detailed breakdown of the dwelling demand, supply and insufficiency has been provided in [Figure 7](#) with [Figures 8 and 9](#) illustrating the spatial location of dwelling (in)sufficiency (Larger maps can be found in [Appendix 9 and 10](#)). In both short-medium and long term, 83% of the dwelling demand (including the competitiveness margin) occurs within the Southwest quadrant of the GCUE, i.e. the area of Fernside, Mandeville, Ōhoka, Swannanoa-Eyreton and Clarkville. Due to the lack of the feasible supply, these areas represent 114% and 96% of the total insufficiency in Area 2 in the short-medium and long term, respectively.

Figure 7: Dwelling demand, supply and sufficiency within GCUE but outside main towns, by SA2 (2023 – 2053)

SA2 - Outside Main Towns within GCUE (Area 2)	Feasible Supply		Demand + Margin		Sufficiency			
	Short-medium	Long term	Short-medium	Long term	Short-medium	%	Long term	%
Fernside	0	2	113	262	-113	22%	-260	17%
Mandeville	0	15	202	551	-202	39%	-536	35%
Ohoka	21	110	143	388	-122	23%	-278	18%
Swannanoa-Eyreton	0	1	81	212	-81	15%	-211	14%
Clarkville	0	0	79	187	-79	15%	-187	12%
Waikuku	0	52	15	41	-15	3%	11	-1%
Waikuku Beach	69	69	46	127	23	-4%	-58	4%
Tuahiwī	134	134	56	130	78	-15%	4	0%
Pegasus Bay	0	7	13	33	-13	2%	-26	2%
Total	224	390	748	1931	-524	100%	-1541	100%

Figure 8: Dwelling (in)sufficiency by SA2 (2023) area (short-medium term 2023 - 2033)

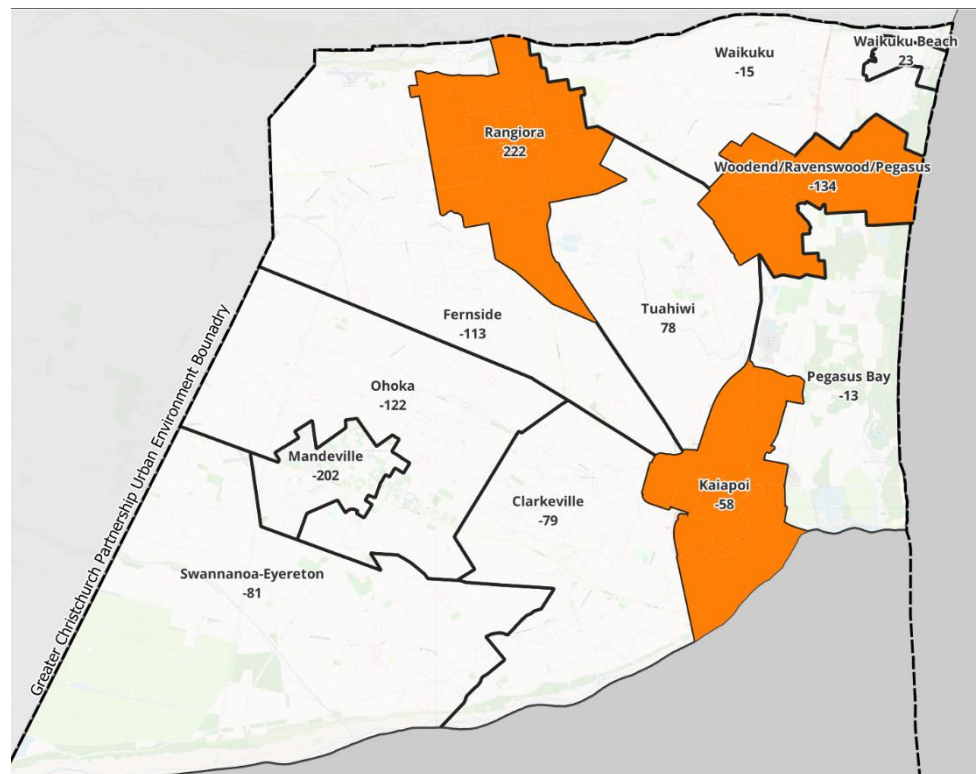
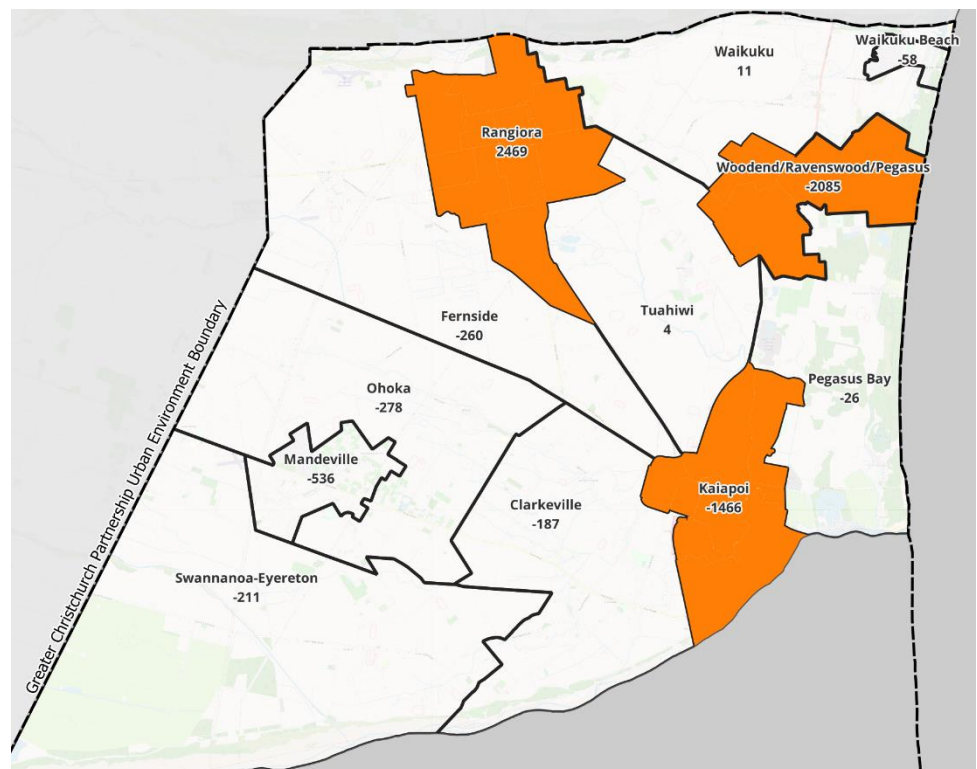


Figure 9: Dwelling (in)sufficiency by SA2 (2023) area (long term 2023 - 2053)



- 64 In summary, this high level of insufficiency within the GCUE outside the townships would leave WDC failing to meet its obligations under the NPSUD and requiring it to make provisions immediately to realise additional capacity.

THE CAPACITY DELIVERED BY THE SUBMITTER'S PROPOSAL

Contribution & significance at district & sub-district scale

- 65 The capacity of approximately 850 dwellings provided for by the proposed rezoning is anticipated to be staged over a 10-year period from 2028 to 2038. The final yield and dwelling mix are dependent on a range of factors – including market acceptability (and the inclusion of a retirement village and or a school).
- 66 The proposed rezoning capacity is well located with respect to market growth (Figure 8 and 9) and is likely to attract existing and new households from within Waimakariri and potentially some households that may have chosen to build in Christchurch or Selwyn District.
- 67 Total dwelling growth during the development timeline (between 2028-2038) for Waimakariri District is anticipated to be around 5,640 dwellings¹¹. That is an increase of around 564 dwellings per year. Therefore, if the land is developed in line with growth, it will represent approximately 15% of district dwelling growth over the same period.
- 68 While 15% represents the total share of growth captured over 10 years, this will vary year to year, depending on build out schedules and market movements. Whilst it is not reliant on attracting outside interest to be viable, the degree to which the development attracts new households into Waimakariri (not otherwise anticipated in the growth projections) reduces the share of Waimakariri growth required.
- 69 Accounting for the above and noting that Waimakariri has significant capacity constraints in the short, medium and long term that the rezoning would help to address, I consider the capacity delivered by the submitters' requested relief would be significant at a district and sub-district scale.
- NPSUD objectives**
- 70 It is important that developments such as that proposed are consistent with the intent of the NPSUD and help to meet its objectives.
- 71 The NPSUD contains 8 key objectives supported by 11 policies. It is important to note that the capacity requirements in the NPSUD are

¹¹ This is based on applying the Stats NZ population per household ratios to the high population projections.

minimums, not targets to be met by local authorities. Councils must achieve at least the minimums in the NPSUD for the policy to be achieved.

- 72 This means that proposals such as this should not be dismissed simply on the basis that a particular housing sufficiency assessment has indicated that the minimum has been achieved. It is important to assess how the proposed development contributes to the overall well-functioning urban environment.
- 73 The objectives of the NPSUD are set out in detail in the evidence of Mr Walsh. In summary, the objectives require:
- 73.1 Well-functioning urban environments;
 - 73.2 Improvements to housing affordability with competitive land and housing markets;
 - 73.3 Capacity in areas of high demand or close to existing centres, employment nodes and/or public transport routes;
 - 73.4 Recognition of change in amenity values over time;
 - 73.5 Decisions to take into account principles of Te Tiriti o Waitangi;
 - 73.6 Decisions that are integrated with infrastructure planning and funding, are strategic and are responsive – especially when significant development capacity is added (even if that capacity is unanticipated by planning documents or out of sequence with planned land release);
 - 73.7 A robust and frequently updated urban environmental data set; and
 - 73.8 An urban environment that supports reductions in greenhouse gases and is resilient to the effects of climate change.
- 74 In my opinion and based on my assessment, the requested relief helps Council achieve several of the objectives outlined in the NPSUD.
- 75 **Objective 2** (supported by Policy 1 and 2 – mainly) says that planning decisions are to improve housing affordability by supporting a competitive land market. The submitters seek to rezone approximately 156 ha of land from rural to residential. Adding this significant amount of land to the market improves competition as house buyers have more choice. This has the effect of keeping residential land price at a competitive level ensuring housing affordability is improved. I discuss the effects of improved competition in the Economic Costs and Benefits Section below.

- 76 **Objective 3** states that Councils need to provide capacity where there is high demand for housing and/or the area is well serviced by public transport (existing or planned) and/or is near a centre zone or employment area. The requested rezoning achieves the first of these objectives (which is within my area of expertise to comment on), while the rest of these objectives are covered by other expert evidence.
- 77 As shown previously, the subject land is in the middle of the high growth areas of Waimakariri and is in the southwest quadrant of the District's urban environment where a high level of medium term housing insufficiency is anticipated (see [Figures 7, 8 and 9](#)). It sits closer to the Christchurch urban edge than Rangiora or Woodend/Pegasus, and is proximate to Mandeville and the existing Ōhoka residential areas.
- 78 It has the potential, through the inclusion of a retail and service centre on its northeastern edge, to offer employment opportunities to a portion of residents. In addition, it sits 24km from the Christchurch CBD, 9.2km from central Kaiapoi and a similar distance to Rangiora 9.5km. This means that residents located in the development have good access to employment opportunities.
- 79 **Objective 6** states that decisions Council make with respect to urban growth and change are (among other things) strategic over the medium and long term and are responsive to proposals that would supply significant development capacity.
- 80 Ōhoka is a strategically important location for growth in the short to long term. As Christchurch continues to grow, opportunities for well-planned proximate residential developments offering standalone dwellings within commuting distance will become scarce.
- 81 Finally, with respect to **Objective 1**, councils must ensure that decisions they make on providing for residential and business capacity help ensure that New Zealand has well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing now and into the future.
- 82 This objective embodies all the following objectives because, if met, objectives 2 – 8 ensure that Council will have achieved Objective 1. To that end, based on the assessment above, I consider that from an economic perspective, the requested rezoning assists Waimakariri District to achieve Objective 1 of the NPSUD.
- NPSUD policies**
- 83 The NPSUD requires (Policy 2) that Tier 1, 2, and 3 local authorities (Waimakariri District is a Tier 1 local authority), at all times, provide at least sufficient development capacity to meet expected demand for housing over the short term, medium term and long term.

- 84 In addition to this, the NPSUD has recognised that providing significant additional development capacity has benefits assuming it contributes to a well-functioning urban environment – regardless of whether the additional capacity is anticipated (by way of an existing growth strategy or future land zoning) or not. Policy 8 clearly encourages local authorities to be *"responsive to plan changes that would add significantly to development capacity and contribute to well-functioning urban environments, even if the capacity is: a) Unanticipated by RMA planning documents, or b) Out-of-sequence with planned land release."*
- 85 In this case, the development capacity is not anticipated. However, it could potentially approximately 850 dwellings to Ōhoka. This is a significant addition of capacity in the local vicinity and the Waimakariri District level. Therefore, it is incumbent on Council to be responsive to this proposal.
- 86 The minimum attributes of 'well-functioning' urban environments are contained in Policy 1 of the NPSUD. It states that they (with respect to housing and economic matters):
- a) Have or enable a variety of homes that meet the needs in terms of type, price and location of households*
-
- c) Have good accessibility for all people between housing, jobs, community services, natural spaces and open spaces including by way of public or active transport, and*
- d) Support, and limit as much as possible adverse impacts on the competitive operation of land and development markets...*
- 87 It is clear that the additional residential capacity as proposed, with a range of lot sizes, will help facilitate a variety of dwelling typologies and dwelling options.
- 88 Ōhoka is an appropriate location based on its accessibility to places of employment, services, and natural and open spaces. It is located proximate to Kaiapoi and Rangiora with associated easy commutes. It is 24km from Christchurch's central business district and a similar distance from the International Airport.
- 89 Finally, by adding approximately 850 residential lots to the market, the proposed rezoning supports the competitive operation of residential land and development markets, I discuss this further below.

ECONOMIC COSTS AND BENEFITS

- 90 Rezoning proposals generate a range of costs and benefits. In respect of the proposed rezoning, the majority of costs/benefits are associated with the degree to which the proposal helps WDC achieve a well-functioning urban environment by assisting in addressing an emerging residential capacity shortfall.
- 91 As I have outlined above, WDC is not meeting its obligations to provide sufficient capacity to cater for growth in the short, medium and long term.
- 92 A portion of the economic benefits are effectively the avoided costs associated with lack of housing supply (price rises, sub optimal decision making, etc).

Economic Benefits

Housing Supply Increase

- 93 The proposal is expected to deliver approximately 850 dwellings indicatively over 10 years. This will mostly eliminate the gap between the reduced capacity identified above and anticipated demand.
- 94 The increase in housing supply helps the market respond to growth more efficiently – reducing the housing price increases associated with supply shortages in a growing market as discussed in detail in the evidence of **Mr Sellars**.
- 95 This is important in Waimakariri where the median sale price increased between December 2021 and December 2022 from \$609,000 to \$725,000 (a 19% increase in one year). This was a significantly greater shift than in Christchurch City where the increase year on year was 9.4% and even higher than Selwyn District (the fastest growing district in New Zealand excluding Queenstown Lakes) where the median sale price rose around 14%¹².
- 96 The Ministry of Housing and Urban Development use CoreLogic data to compare the median sale price with median incomes to highlight the ability of an average household to afford an average dwelling. In Waimakariri's case it takes 9 median incomes to afford the median house price. This compares with the accepted standard measure of affordability (3 x median incomes). This highlights the existing issues of affordability in Waimakariri that additional housing supply can help alleviate.
- 97 In the context of the Housing Development Capacity Assessment (HDCA), councils are asked to consider proposals that look to deliver a significant increase in capacity. While there is no standard

¹² Source: HUD Local Housing Statistics Dashboard, <https://www.hud.govt.nz/stats-and-insights/local-housing-statistics/key-data/#tabset>

measure of 'significant' in the NPSUD, I consider the proposed rezoning represents a significant capacity addition. It provides approximately 850 dwellings or the equivalent of 15% of the medium-term growth projected in urban Waimakariri in the HDCA (5,600, including the competitiveness margin).

- 98 Currently, I estimate that the Waimakariri medium-term urban residential capacity sits around 6,026. This means that the addition of approximately 850 dwellings is equivalent to adding approximately 15% capacity.

Land Market Competition

- 99 The proposal would make an additional 156ha of mostly residential land available to the market. This increase in competition has the effect of causing other landowners in the district to bring their land to market as efficiently and in as timely a manner as possible.
- 100 This is because, if competition does not exist, other landowners experience a higher degree of market power, relating to the partial monopoly they hold over supply of residential land.
- 101 Monopoly of supply means landowners become price setters (in a profit maximising world, at a price defined by where their marginal revenue from bringing a new section to market matches the marginal cost of doing so). The price that is set is always higher than the price that would result in a fully competitive market. This means that the landowner captures 'super profits' (basically the difference in price between what is set and the free-market price times the volume of sales made). In addition, there is an amount of dead weight welfare loss to the district overall. This arises because a sub-optimal number of sections come to market thereby reducing buyer welfare and overall developer welfare (excluding the single monopolist).
- 102 Avoiding or minimising the effects of monopolistic competition with respect to residential land is a significant economic benefit from the proposal.

Retail and Household Service Demand Increases

- 103 Associated with the residential development is an area of business land that will accommodate a retail and service centre at the north-eastern edge (adjacent to the Ōhoka Domain and close to existing residents).
- 104 This will be mostly sustained by the increased retail demands arising from the residential development on the land. The centre's effects are covered in the evidence of **Ms Natalie Hampson**. However, there are wider benefits to the district that arise from its presence, including additional employment opportunities and an ability to meet a portion of household needs slightly closer to home than currently for existing nearby residents.

105 In addition, approximately 850 new households will spend money across a variety of centres within Waimakariri. On average the new households will spend around \$72,000 annually on a wide range of goods and services. Approximately \$33,000 of this spend is directed to retail outlets. This means that total retail demand in Waimakariri arising from the proposal once fully developed will be between \$28m and \$29.4m annually.

106 Not all of this spend will be directed to Waimakariri retail outlets, but a significant portion will be, sustaining jobs and centre vitality. Added to this are the services and people activity generated by an additional 2,000 – 2,200 people (approximately). They will help support the provision of a range of services and help sustain or improve the viability of public transport initiatives.

Construction and Development Economic Effects

107 The final key area of economic effects arise from the process of developing the land, bringing it to market and the resulting civil works and construction activity to build the houses and associated infrastructure as well as the proposed centres.

108 At this early stage, details of the type and nature of buildings to be developed are not known, therefore I have relied on average dwelling sizes for the proposed lot sizes and the latest information from Quotable Value (QV's) Cost Builder software to generate estimates of build costs for the land.

109 I have also generated estimates of the civil construction and infrastructure costs the developer will need to pay to convert the land from rural to urban.

110 Finally, I have generated estimates of costs associated with developing 2,500sqm of commercial centre space (this is conservative as I understand from the evidence of **Ms Natalie Hampson** that the commercial centre analysis is based on a supportable range between 2,500 and 3,000sqm total GFA).

111 The land development, civil infrastructure and subdivision costs equate to between \$90,000 and \$100,000 per lot. This covers all provision for ground improvements, services and roading for the proposed development. To be conservative, I have adopted the lower range.

112 Multiplying this through the development process injects around \$76.5m into the civil construction sector over the duration of the build out. It is likely that these works are skewed to the short term with the build out stretching over the full 10 years.

113 In terms of residential construction costs, I have adopted QV residential build costs for Christchurch and applied them to an average dwelling size of 180 sqm for the SETZ land. The

approximately 700 dwellings there would therefore cost \$360m to build over the development timeline.

- 114 In addition, the 146 dwellings built on the LLRZ land are expected to be larger and have a higher cost per square meter to develop. I have assumed 250sqm dwelling at \$5,500/m². This adds \$200m to the construction sector.
- 115 The proposed local centre near the north-eastern corner of the land is recommended to contain no-less than 2,500sqm GFA. Average construction costs for this amount of floorspace add a further \$6m to the estimated construction sector output shock over the short term.
- 116 This expenditure sustains employment in the construction sector, supports business owners and business supply chains. Residential construction has strong local supply chains which means that additional house building sustains significantly more jobs in total than simply the builders on site.

Figure 10 Estimated construction sector economic effects

New Residential Dwellings	850
Commercial GFA (sqm)	2,500
Construction Sector Effects	
Total Gross Output Shock (\$m)	\$ 647.8
Value Added Component (\$m)	\$ 161.5
Direct Employment (equivalent job years)	1,643
Multiplier Effects	
Total Gross Output (\$m)	\$ 1,028.6
Total Value Add (\$m)	\$ 324.3
Total Employment (equivalent job years)	2,997

- 117 [Figure 10](#) above summarises the construction effects on the economy in total and are likely conservative as I have not included the build cost of a primary school (or the equivalent dwellings if not supplied). These effects will be distributed across the 10 years or so of development, giving approximately \$65m construction sector input each year, sustaining some 164 jobs directly (each year).
- 118 Value added captures profits, taxes, depreciation and wages and salaries. This is estimated to be on average \$16m annually over the build timeline - \$161.5m in total.
- 119 The flow on effects, or multiplier effects capture both the supplier businesses to the construction sector and the retail and service sectors supporting directly and indirectly impacted workers. The flow-on-effects increase total value added to \$324m and sustain the employment equivalent of almost 3,000 job years.

- 120 It is likely that this employment and the benefits that flow from it will be distributed between businesses in Waimakariri and Christchurch City, given the scale of development.
- 121 While these can be viewed as 'one-off' impacts, the construction sector relies on a constant stream of "one-off" impacts such as the proposed development to remain sustainable. By providing a degree of certainty for at least part of the sector over a ten-year horizon means this is a significant positive effect.

Economic Costs

- 122 The largest economic cost is likely to be the opportunity costs associated with utilising the land for residential purposes as opposed to agricultural purposes. The majority of the land is classified as LUC3, which means it is considered highly productive – albeit at the lower end of the productive range. Maanaki Whenua Landcare Research describe LUC3 as: "*Arable. Moderate limitations, restricting crop types and intensity of cultivation, suitable for cropping, viticulture, berry fruit, pastoralism, tree crops and forestry.*"
- 123 I understand that a report prepared by Mr Mark Everest, and attached to **Mr Walsh's** evidence, considers the economic viability of potential productive uses of the Site. I separately provide some broad estimates of the levels of return the land could generate if it was used for arable farming (as the LUC indicates).
- 124 New Zealand arable farming is close to the most productive in the world due to climate, soils, high yield crops, use of irrigation and skilled farmers. Gross margins for the key grain crops range between \$1,500 and \$2,000 per ha and for key seed crops between \$2,000 and \$4,000 per ha.
- 125 This results in the loss of gross returns from the 156ha proposed to be rezoned of between \$234,000 and \$624,000 annually. My upper limit is proximate to Mr Everest's assessment (attached to **Mr Walsh's** evidence) for irrigated horticulture (refer Figure 1 of that report, EBITR Achieved). While these numbers are robust, Mr Everest points out that it would be unlikely to meet the accepted 'Return on Capital' threshold of 4% once capital costs are accounted for. Hence, it is his conclusion that such land use would not be economic viable over the long term.
- 126 Even if a landowner was willing to accept a return rate lower than the accepted threshold, the potential returns from arable crops on the Site are a fraction of both the overall agricultural output from Waimakariri and are an extremely small portion of the additional economic activity that approximately 850 new households would bring to the district.

- 127 The loss of primary production output from the 156ha will in no way compromise the agricultural economy in Waimakariri – even if the loss of agricultural production of this piece of land is permanent.

Impact on Established Centres

- 128 Finally, I acknowledge that there will be some impact on established retail centres arising from the development of a new centre that mainly supports the residential land. These impacts are covered in **Ms Hampson's** evidence in some detail, and I adopt her findings here. Given the overall scale of growth experienced in this part of Waimakariri and the small-scale nature of the proposed gross floor area in that centre, the resulting impacts will be both minor and short lived.

CONCLUSION

- 129 By focusing solely on the townships of Rangiora, Kaiapoi and Woodend/Pegasus within the GCUE, and not considering demands that arise outside these locations, Waimakariri District Council have failed to identify a significant market segment whose housing needs are not being met.
- 130 The analysis I have carried out above, based as much as possible on the Formative Report, has quantified both the demand arising in these sub-district markets and the capacity enabled to cater for it.
- 131 An identified shortfall in the medium term in these sub-district markets of over 500 dwellings means that Waimakariri District Council is not meeting its obligations under the NPSUD to provide at all times at least the amount of demand plus a margin in the short to medium term. I also note that the medium term shortfall within the Southwest quadrant of the GCUE is nearly 600 dwellings (i.e. 114% of the insufficiency).
- 132 The rezoning sought by the submitters will address this shortfall in capacity. The approximately 850 dwellings envisaged in the rezoning request will cater for a significant proportion of the medium- and long-term shortfall in the District, in an efficient manner.
- 133 The rezoning will otherwise deliver a number of economic benefits and outcomes that, in my view, are consistent with the thrust of the NPSUD.

134 On this basis, I support the submitters' requested relief on economic grounds.

Dated: 5 March 2024

A handwritten signature in blue ink, appearing to read "Greg Akehurst". The signature is fluid and cursive, with the first name "Greg" being more prominent than the last name "Akehurst".

Gregory Michael Akehurst

**APPENDIX 1: WAIMAKARIRI DISTRICT DWELLING
ESTIMATES 2022**

SA2_2023	Dwellings	Share
Okuku	324	1.2%
Ashley Gorge	569	2.0%
Oxford	1,006	3.6%
Starvation Hill-Cust	952	3.4%
Loburn	919	3.3%
Eyrewell	751	2.7%
West Eyreton	562	2.0%
Ashley-Sefton	945	3.4%
Fernside	579	2.1%
Rangiora North West	1,360	4.8%
Kingsbury	1,135	4.0%
Ashgrove	622	2.2%
Rangiora North East	852	3.0%
Oxford Estate	477	1.7%
Rangiora Central	30	0.1%
Rangiora South West	1,046	3.7%
Lilybrook	1,267	4.5%
Waikuku	288	1.0%
Rangiora South East	1,206	4.3%
Southbrook	309	1.1%
Swannanoa-Eyreton	372	1.3%
Tuahiwi	370	1.3%
Woodend	1,405	5.0%
Pegasus	1,801	6.4%
Clarkville	612	2.2%
Pegasus Bay	454	1.6%
Kaiapoi North West	899	3.2%
Silverstream	908	3.2%
Sovereign Palms	1,663	5.9%
Kaiapoi West	495	1.8%
Kaiapoi Central	994	3.5%
Kaiapoi South	736	2.6%
Kaiapoi East	113	0.4%
Ravenswood	245	0.9%
Waikuku Beach	559	2.0%
Mandeville	682	2.4%
Ohoka	628	2.2%
Waimakariri Total	28,135	100.0%

**APPENDIX 2: FORMATIVE HIGH PROJECTION RESULTS –
DWELLINGS BY SA2, 2022 BOUNDARY**

Sub Areas (Statistical Area 2)	2022	2023	2028	2033	2038	2043	2048	2053
Okuku	324	327	353	378	401	423	449	471
Ashley Gorge	569	580	623	660	691	717	738	757
Oxford	1,006	1,016	1,081	1,139	1,190	1,240	1,305	1,362
Starvation Hill-Cust	952	966	1,031	1,093	1,147	1,191	1,234	1,272
Loburn	919	933	1,007	1,077	1,139	1,186	1,229	1,267
Eyrewell	751	761	843	918	983	1,038	1,098	1,151
West Eyreton	562	567	619	665	703	736	770	801
Ashley-Sefton	945	964	1,051	1,130	1,195	1,250	1,306	1,355
Fernside	652	678	929	1,145	1,323	1,464	1,614	1,747
Rangiora North West	1,360	1,433	1,519	1,598	1,672	1,748	1,847	1,934
Kingsbury	1,135	1,140	1,174	1,212	1,247	1,279	1,305	1,328
Ashgrove	622	624	654	687	722	755	789	819
Rangiora North East	852	857	982	1,103	1,211	1,309	1,425	1,527
Oxford Estate	477	478	509	534	553	567	585	600
Rangiora Central	30	32	32	32	32	32	32	32
Rangiora South West	977	986	1,047	1,105	1,155	1,210	1,274	1,331
Lilybrook	1,267	1,269	1,313	1,354	1,397	1,433	1,480	1,522
Waikuku	1,389	1,489	1,865	2,230	2,575	2,893	3,272	3,605
Mandeville-Ohoka	1,311	1,344	1,487	1,632	1,768	1,894	2,036	2,161
Rangiora South East	1,206	1,254	1,366	1,466	1,559	1,642	1,750	1,844
Southbrook	309	312	329	350	365	376	394	409
Swannanoa-Eyreton	372	374	405	442	473	502	532	559
Tuahiwi	370	376	402	423	442	456	474	489
Woodend	1,280	1,324	1,458	1,583	1,687	1,785	1,897	1,995
Pegasus	1,801	1,935	2,060	2,172	2,277	2,378	2,494	2,597
Clarkville	612	630	665	694	721	739	752	763
Pegasus Bay	537	543	582	615	646	675	710	740
Kaiapoi North West	899	908	942	980	1,015	1,047	1,082	1,112
Silverstream (Waimakariri District)	908	978	1,116	1,241	1,345	1,436	1,552	1,654
Sovereign Palms	1,517	1,547	1,685	1,814	1,923	2,013	2,108	2,191
Kaiapoi West	495	496	522	543	558	573	594	613
Kaiapoi Central	994	997	1,045	1,086	1,121	1,154	1,197	1,235
Kaiapoi South	736	737	758	779	795	805	810	814
Waimakariri district	28,138	28,858	31,455	33,879	36,032	37,946	40,131	42,056

Source: Formative WDC Populations Projections – supplied by Waimakariri District Council

APPENDIX 3: - DWELLING GROWTH AND GROWTH SHARES BY SA2 2022 BOUNDARY – PRE-REWEIGHTING RESULTS

SA2_2022	Dwelling growth							Growth % by SA2						
	2022-23	2023-28	2028-33	2033-38	2038-43	2043-48	2048-53	2022-23	2023-28	2028-33	2033-38	2038-43	2043-48	2048-53
Okuku	3	26	25	23	22	26	23	0.5%	1.0%	1.0%	1.1%	1.1%	1.2%	1.2%
Ashley Gorge	11	43	37	31	25	22	19	1.5%	1.7%	1.5%	1.4%	1.3%	1.0%	1.0%
Oxford	11	65	58	50	51	65	57	1.5%	2.5%	2.4%	2.3%	2.6%	3.0%	3.0%
Starvation Hill-Cust	15	65	62	54	43	43	38	2.0%	2.5%	2.6%	2.5%	2.3%	2.0%	2.0%
Loburn	15	73	71	62	47	43	38	2.0%	2.8%	2.9%	2.9%	2.5%	2.0%	2.0%
Eyrewell	10	82	75	66	54	60	53	1.4%	3.2%	3.1%	3.1%	2.8%	2.8%	2.8%
West Eyreton	5	52	46	39	33	34	30	0.7%	2.0%	1.9%	1.8%	1.7%	1.6%	1.6%
Ashley-Sefton	19	86	79	66	54	56	49	2.6%	3.3%	3.3%	3.1%	2.8%	2.6%	2.6%
Fernside	26	251	216	178	141	151	133	3.6%	9.7%	8.9%	8.3%	7.4%	6.9%	6.9%
Rangiora North West	73	86	79	74	76	99	87	10.1%	3.3%	3.3%	3.4%	4.0%	4.5%	4.5%
Kingsbury	5	35	37	35	33	26	23	0.6%	1.3%	1.5%	1.6%	1.7%	1.2%	1.2%
Ashgrove	2	30	33	35	33	34	30	0.2%	1.2%	1.4%	1.6%	1.7%	1.6%	1.6%
Rangiora North East	5	125	120	108	98	116	102	0.7%	4.8%	5.0%	5.0%	5.1%	5.3%	5.3%
Oxford Estate	2	30	25	19	14	17	15	0.2%	1.2%	1.0%	0.9%	0.8%	0.8%	0.8%
Rangiora Central	2	0	0	0	0	0	0	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rangiora South West	9	60	58	50	54	65	57	1.3%	2.3%	2.4%	2.3%	2.8%	3.0%	3.0%
Lilybrook	2	43	42	43	36	47	42	0.3%	1.7%	1.7%	2.0%	1.9%	2.2%	2.2%
Waikuku	100	376	365	345	318	378	334	13.9%	14.5%	15.1%	16.0%	16.6%	17.3%	17.3%
Mandeville-Ohoka	34	143	145	136	127	142	125	4.7%	5.5%	6.0%	6.3%	6.6%	6.5%	6.5%
Rangiora South East	48	112	100	93	83	108	95	6.7%	4.3%	4.1%	4.3%	4.3%	4.9%	4.9%
Southbrook	3	17	21	15	11	17	15	0.4%	0.7%	0.9%	0.7%	0.6%	0.8%	0.8%
Swannanoa-Eyreton	3	30	37	31	29	30	27	0.4%	1.2%	1.5%	1.4%	1.5%	1.4%	1.4%
Tuahiwi	6	26	21	19	14	17	15	0.8%	1.0%	0.9%	0.9%	0.8%	0.8%	0.8%
Woodend	44	134	125	105	98	112	99	6.2%	5.2%	5.1%	4.9%	5.1%	5.1%	5.1%
Pegasus	134	125	112	105	101	116	102	18.6%	4.8%	4.6%	4.9%	5.3%	5.3%	5.3%
Clarkville	18	35	29	27	18	13	11	2.4%	1.3%	1.2%	1.3%	0.9%	0.6%	0.6%
Pegasus Bay	7	39	33	31	29	34	30	0.9%	1.5%	1.4%	1.4%	1.5%	1.6%	1.6%
Kaiapoi North West	8	35	37	35	33	34	30	1.2%	1.3%	1.5%	1.6%	1.7%	1.6%	1.6%
Silverstream	69	138	125	105	90	116	102	9.7%	5.3%	5.1%	4.9%	4.7%	5.3%	5.3%
Sovereign Palms	30	138	129	108	90	95	83	4.2%	5.3%	5.3%	5.0%	4.7%	4.3%	4.3%
Kaiapoi West	1	26	21	15	14	22	19	0.1%	1.0%	0.9%	0.7%	0.8%	1.0%	1.0%
Kaiapoi Central	3	48	42	35	33	43	38	0.4%	1.8%	1.7%	1.6%	1.7%	2.0%	2.0%
Kaiapoi South	0	22	21	15	11	4	4	0.0%	0.8%	0.9%	0.7%	0.6%	0.2%	0.2%
District Total	720	2597	2424	2153	1914	2184	1926	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

APPENDIX 4: WDC SA2 (2023) FINAL GROWTH SHARES 2023 – 2053

SA2_2023	2023	2028	2033	2038	2043	2048	2053
Okuku	0.5%	1.0%	1.0%	1.1%	1.1%	1.2%	1.2%
Ashley Gorge	1.5%	1.7%	1.5%	1.4%	1.3%	1.0%	1.0%
Oxford	1.5%	2.5%	2.4%	2.3%	2.6%	3.0%	3.0%
Starvation Hill-Cust	2.0%	2.5%	2.6%	2.5%	2.3%	2.0%	2.0%
Loburn	2.0%	2.8%	2.9%	2.9%	2.5%	2.0%	2.0%
Eyrewell	1.4%	3.2%	3.1%	3.1%	2.8%	2.8%	2.8%
West Eyreton	0.7%	2.0%	1.9%	1.8%	1.7%	1.6%	1.6%
Ashley-Sefton	2.6%	3.3%	3.2%	3.1%	2.8%	2.6%	2.6%
Fernside	0.8%	1.9%	1.8%	1.7%	1.6%	1.6%	1.6%
Rangiora North West	10.1%	3.3%	3.2%	3.4%	4.0%	4.5%	4.5%
Kingsbury	0.6%	1.3%	1.5%	1.6%	1.7%	1.2%	1.2%
Ashgrove	0.2%	1.2%	1.4%	1.6%	1.7%	1.6%	1.6%
Rangiora North East	0.7%	4.8%	5.0%	5.0%	5.1%	5.3%	5.3%
Oxford Estate	0.2%	1.2%	1.0%	0.9%	0.8%	0.8%	0.8%
Rangiora Central	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rangiora South West	4.0%	10.0%	9.5%	8.9%	8.6%	8.3%	8.3%
Lilybrook	0.3%	1.7%	1.7%	2.0%	1.9%	2.2%	2.2%
Waikuku	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%
Ravenswood	13.0%	13.5%	14.0%	14.9%	15.5%	16.1%	16.1%
Waikuku Beach	0.7%	0.8%	0.8%	0.8%	0.9%	0.9%	0.9%
Mandeville	2.7%	3.2%	3.5%	3.7%	3.9%	3.8%	3.8%
Ohoka	1.9%	2.3%	2.5%	2.6%	2.7%	2.7%	2.7%
Rangiora South East	6.7%	4.3%	4.1%	4.3%	4.3%	4.9%	4.9%
Southbrook	0.4%	0.7%	0.9%	0.7%	0.6%	0.8%	0.8%
Swannanoa-Eyreton	0.4%	1.2%	1.5%	1.4%	1.5%	1.4%	1.4%
Tuahiwi	0.8%	1.0%	0.9%	0.9%	0.8%	0.8%	0.8%
Woodend	6.4%	6.8%	6.7%	6.4%	6.4%	6.2%	6.2%
Pegasus	18.6%	4.8%	4.6%	4.9%	5.3%	5.3%	5.3%
Clarkville	2.4%	1.3%	1.3%	1.2%	1.1%	1.2%	1.2%
Pegasus Bay	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Kaiapoi North West	1.2%	1.3%	1.5%	1.6%	1.7%	1.6%	1.6%
Silverstream	9.6%	5.3%	5.0%	4.9%	4.5%	4.7%	4.7%
Sovereign Palms	4.7%	5.0%	4.9%	4.7%	4.7%	4.6%	4.6%
Kaiapoi West	0.1%	1.0%	0.9%	0.7%	0.8%	1.0%	1.0%
Kaiapoi Central	0.4%	1.8%	1.7%	1.6%	1.7%	2.0%	2.0%
Kaiapoi South	0.0%	0.8%	0.9%	0.7%	0.6%	0.2%	0.2%
Kaiapoi East	0.2%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%

APPENDIX 5: WAIMAKARIRI SA2 DWELLING GROWTH – 2022 – 2053

SA2_2023	2022	2023	2028	2033	2038	2043	2048	2053
Okuku	324	327	353	378	401	423	449	471
Ashley Gorge	569	580	623	660	691	717	738	757
Oxford	1,006	1,016	1,081	1,139	1,189	1,240	1,305	1,362
Starvation Hill-Cust	952	966	1,031	1,093	1,147	1,191	1,234	1,271
Loburn	919	933	1,006	1,077	1,139	1,186	1,229	1,267
Eyrewell	751	761	843	917	983	1,037	1,098	1,151
West Eyreton	562	567	619	664	703	736	770	800
Ashley-Sefton	945	964	1,050	1,129	1,195	1,249	1,305	1,354
Fernside	579	585	635	679	716	747	782	813
Rangiora North West	1,360	1,433	1,519	1,598	1,671	1,747	1,846	1,933
Kingsbury	1,135	1,140	1,174	1,212	1,247	1,279	1,305	1,328
Ashgrove	622	624	654	687	722	755	789	819
Rangiora North East	852	857	982	1,102	1,211	1,308	1,424	1,527
Oxford Estate	477	478	509	534	553	567	585	600
Rangiora Central	30	32	32	32	32	32	32	32
Rangiora South West	1,046	1,075	1,336	1,565	1,757	1,921	2,101	2,260
Lilybrook	1,267	1,269	1,313	1,354	1,397	1,433	1,480	1,522
Waikuku	288	289	296	302	307	313	319	325
Ravenswood	245	338	688	1,027	1,348	1,644	1,997	2,307
Waikuku Beach	559	564	583	602	620	637	657	674
Mandeville	682	702	785	870	950	1,024	1,107	1,181
Ohoka	628	642	701	761	817	870	928	980
Rangiora South East	1,206	1,254	1,366	1,466	1,559	1,642	1,749	1,844
Southbrook	309	312	329	350	365	376	393	409
Swannanoa-Eyreton	372	374	405	442	473	502	532	558
Tuahiwi	370	376	402	422	442	456	473	489
Woodend	1,405	1,451	1,626	1,787	1,925	2,048	2,183	2,303
Pegasus	1,801	1,935	2,060	2,172	2,276	2,378	2,494	2,596
Clarkville	612	630	665	696	722	744	770	793
Pegasus Bay	454	456	462	467	472	476	480	484
Kaiapoi North West	899	908	942	980	1,014	1,047	1,081	1,112
Silverstream	908	978	1,116	1,238	1,343	1,430	1,533	1,624
Sovereign Palms	1,663	1,697	1,826	1,946	2,047	2,138	2,238	2,326
Kaiapoi West	495	496	522	543	558	573	594	613
Kaiapoi Central	994	997	1,045	1,086	1,121	1,153	1,196	1,234
Kaiapoi South	736	737	758	779	795	805	810	813
Kaiapoi East	113	114	119	123	123	123	123	123
Waimakariri Total	28,138	28,858	31,455	33,879	36,032	37,946	40,130	42,056

**APPENDIX 6: WAIMAKARIRI SA2 GROWTH PLUS COMPETITIVENESS MARGIN
- MEDIUM AND LONG TERM**

SA2_2023	2023 - 2033	2033 - 2053	2023 - 2033	2023 - 2053
			+20% margin	+15% margin
Okuku	51	93	61	166
Ashley Gorge	80	97	97	204
Oxford	123	222	147	397
Starvation Hill-Cust	127	179	152	351
Loburn	144	190	173	384
Eyrewell	157	233	188	448
West Eyreton	97	136	117	268
Ashley-Sefton	165	225	198	449
Fernside	94	133	113	262
Rangiora North West	165	336	198	576
Kingsbury	72	116	86	216
Ashgrove	63	132	76	225
Rangiora North East	245	425	294	770
Oxford Estate	55	66	66	139
Rangiora Central	0	0	0	0
Rangiora South West	490	695	588	1,363
Lilybrook	85	168	101	290
Waikuku	12	23	15	41
Ravenswood	689	1,280	827	2,265
Waikuku Beach	39	72	46	127
Mandeville	169	310	202	551
Ohoka	119	219	143	388
Rangiora South East	212	378	254	679
Southbrook	38	59	46	111
Swannanoa-Eyreton	67	117	81	212
Tuahiwi	47	66	56	130
Woodend	337	516	404	981
Pegasus	237	424	284	760
Clarkville	66	97	79	187
Pegasus Bay	11	17	13	33
Kaiapoi North West	72	132	86	235
Silverstream	260	386	312	743
Sovereign Palms	249	381	298	724
Kaiapoi West	47	70	56	135
Kaiapoi Central	89	148	107	273
Kaiapoi South	42	34	51	88
Kaiapoi East	9	0	11	11
Waimakariri Total	5,021	8,177	6,026	15,182

APPENDIX 7: SA2 DEFINITION OF SUB-DISTRICT HOUSING MARKETS

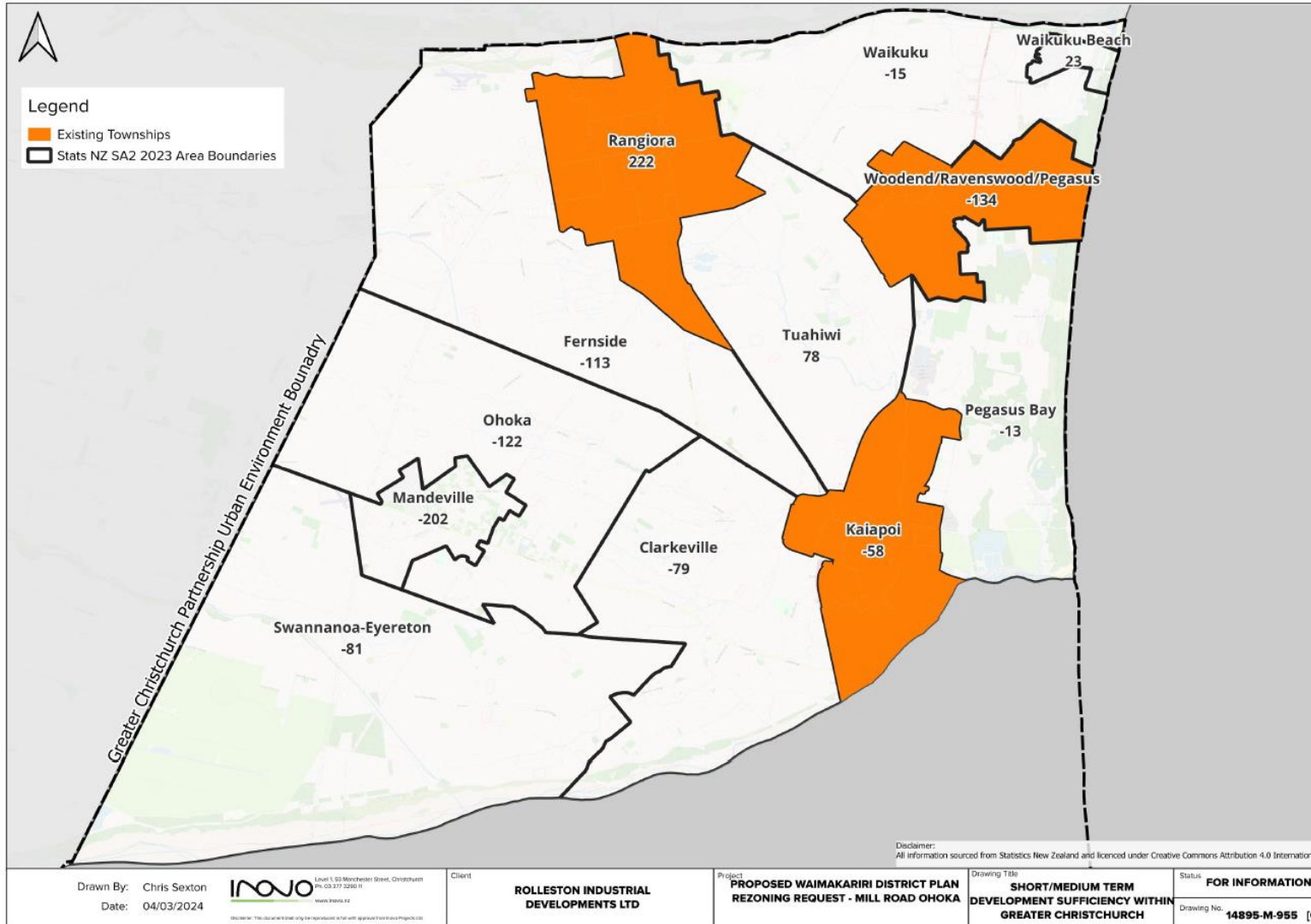
Area indicator	SA2 Name
1	Okuku
1	Ashley Gorge
1	Oxford
1	Starvation Hill-Cust
1	Loburn
1	Eyrewell
1	West Eyreton
1	Ashley-Sefton
2	Fernside
2	Waikuku
2	Waikuku Beach
2	Mandeville
2	Ōhoka
2	Swannanoa-Eyreton
2	Tuahiwi
2	Clarkville
2	Pegasus Bay
3	Rangiora North West
3	Kingsbury
3	Ashgrove
3	Rangiora North East
3	Oxford Estate
3	Rangiora Central
3	Rangiora South West
3	Lilybrook
3	Rangiora South East
3	Southbrook
4	Kaiapoi North West
4	Silverstream
4	Sovereign Palms
4	Kaiapoi West
4	Kaiapoi Central
4	Kaiapoi South
4	Kaiapoi East
5	Ravenswood
5	Woodend
5	Pegasus

APPENDIX 8: BY SA2_2023 DEFINITION OF SUB-DISTRICT

SA2_2023	Revised Capacity - Chris Sexton		Demand -Greg Akehurst		Sufficiency/Insufficiency	
	2023-2033 (Medium Term)	2023-2053 (Long Term)	2023-2033 (Medium Term) (incl. 20% margin)	2023-2053 (Long Term) (incl. 20% margin)	2023-2033 (Medium Term)	2023-2053 (Long Term)
Okuku	0	0	61	166	-61	-166
Ashley Gorge	0	0	97	204	-97	-204
Oxford	242	278	147	397	95	-119
Starvation Hill-Cust	43	43	152	351	-109	-308
Loburn	0	0	173	384	-173	-384
Eyrewell	0	0	188	448	-188	-448
West Eyreton	0	8	117	268	-117	-260
Ashley-Sefton	12	80	198	449	-186	-369
Fernside	0	2	113	262	-113	-260
Rangiora North West	42	300	198	576	-156	-276
Kingsbury	192	495	86	216	106	279
Ashgrove	21	196	76	225	-55	-29
Rangiora North East	849	1618	294	770	555	848
Oxford Estate	12	692	66	139	-54	553
Rangiora Central	0	6	0	0	0	6
Rangiora South West	455	1309	588	1363	-133	-54
Lilybrook	40	283	101	290	-61	-7
Waikuku	0	52	15	41	-15	11
Ravenswood	880	880	827	2265	53	-1385
Waikuku Beach	69	69	46	127	23	-58
Mandeville	0	15	202	551	-202	-536
Ohoka	21	110	143	388	-122	-278
Rangiora South East	106	1649	254	679	-148	970
Southbrook	214	390	46	111	168	279
Swannanoa-Eyreton	0	1	81	212	-81	-211
Tuahiwi	134	134	56	130	78	4
Woodend	378	891	404	981	-26	-90
Pegasus	123	150	284	760	-161	-610
Clarkville	0	0	79	187	-79	-187
Pegasus Bay	0	7	13	33	-13	-26
Kaiapoi North West	19	196	86	235	-67	-39
Silverstream	263	271	312	743	-49	-472
Sovereign Palms	381	2357	298	724	83	1633
Kaiapoi West	14	144	56	135	-42	9
Kaiapoi Central	183	390	107	273	76	117
Kaiapoi South	3	317	51	88	-48	229
Kaiapoi East	0	0	11	11	-11	-11
Waimakariri District	4696	13333	6026	15182	-1330	-1849

HOUSING MARKETS

APPENDIX 9: DWELLING (IN)SUFFICIENCY BY AREA (SHORT-MEDIUM TERM 2023 – 2033)



APPENDIX 10: DWELLING (IN)SUFFICIENCY BY AREA (LONG TERM 2023 – 2053)

