GREENFIELD PLAN ENABLED CAPACITY ASSESSMENT

1 This memorandum has been prepared to supplement the Joint Witness Statement on LUMS issued under Hearing Stream 12D of the Waimakariri District Plan Review.

2 This memo has been prepared by:

Mr Chris Sexton for Carter Group Property Limited and Rolleston Industrial Developments Limited; and

Mr Peter Wilson for Waimakariri District Council.

3 As discussed within the Joint Witness Statement this memo provides an update on Table 4 of Mr Wilson's memo submitted to the Commissioners as part of Mr Willis's S42A.

4 This memo outlines the exercise of estimating the remaining greenfield development yield available within a number of monitored areas within the Waimakariri District and provides an estimate on the plan enabled housing capacity within these areas.

5 Both Mr Wilson and Mr Sexton wish to clarify that the capacity presented in this memo does not state if development is economically feasible, and this exercise should only be used as a means to cross check any feasibility studies to provide a sense check. As the methodology outlined in this memo uses past performance to determine capacity in areas with unknown master plans, the experts note while they are not economists, past performance may be a factor used in measuring future supply.

6 Confidence intervals have been provided to help clarify the yield projections for the various monitoring areas. This has been done through applying the following scoring:

Master Plan Area – High (3)

Superlot Areas divided by expected lot size – Medium (2)

Determining future land use based off surrounding development – Low (1)

7 Where a monitoring area features a combination of all three methods, the remaining capacity will be multiplied by the score to establish an overall score and confidence interval for that monitoring area. Scores are then assessed as follows:

2.5 to 3.0: High Confidence

1.5 to 2.4: Medium Confidence

1.0 to 1.4: Low Confidence

8 Mr Wilson has provided a spatial representation of building consents within the monitoring areas that has been relied upon to check if a Code of Compliance certificate has been issued to determine capacity realisation, as well as using existing building footprints to check for buildings that existed prior to the survey beginning. Mr Wilson states that this is the same approach as used in LUMS.

9 Mr Wilson has provided maps as attached in Appendix 1 that show the monitoring areas and classifies land in terms of its development potential. It is noted that the Table as

shown in this memo overrides any of the statistics provided on the Maps attached from Mr Wilson, as where there are differences in predictions, the experts have agreed on a single figure to represent remaining capacity.

10 Table 1 below outlines the total development yield and vacant capacity remaining (as at 31/07/2024)

Table 1 - Greenfield Capacity

Zone/Development	Total Development Yield	Remaining Capacity	Confidence
Rangiora			
Ryman (LURP)	246	3	High
Farmlands Development Trust	97	14	High
East Rangiora	450	76	Low
West Park	145	6	High
East Rangiora South (LURP)	46	0	High
Doncaster (LURP)	199	2	High
North Rangiora Ashley St	80	44	Low
North Rangiora Ballarat Rd	149	64	Low
South West Rangiora	489	363	Medium
Bellgrove	726	703[1]	High
Summerset	260	260	High
Kaiapoi			
Silverstream (LURP)	1070	379	Medium
Sovereign (LURP)	903	4	High
Beach Grove (LURP)	661	300	Medium
Woodend/Pegasus			
Pegasus	1452	85	High

[1] Noted that there are currently 115 dwellings under construction within this monitoring area

Zone/Development	Total Development Yield	Remaining Capacity	Confidence
Ravenswood (LURP)	1525	660[2]	High
East Woodend (LURP)	310	138	Medium
Freeman	208	157	High
Total	**8770**	**3258**	**Medium**

1 RANGIORA

Ryman (LURP)

11 The Ryman development area has been fully developed with a majority of the dwellings completed.

Monitored Area = 16.97 ha

48 residential dwellings have been completed; none are awaiting construction.

There is no land remaining for development

Remaining Development Capacity (vacant residential lots) = 3

12 As this development is fully master planned, the confidence level is High.

Farmlands Development Trust

13 This area has been fully subdivided into residential, recreation and utility reserve allotments. There is not realistically expected to be any further development within this area.

Monitored Area = 6.27 ha

Number of Residential Units Developed = 77

Remaining Development Capacity = 14

14 As this development is fully master planned, the confidence level is High.

East Rangiora

15 A majority of this monitored area has been fully subdivided into residential, recreation and utility reserve allotments. Further development potential lies within balance land on the south eastern end of this monitored area.

Monitored Area = 39.7 ha

Residential Sections Developed to date =374

[2] Noted that there are currently 50 retirement village units under construction within this monitoring area

Capacity Uptake to date = 366

Remaining Vacant Lots = 8

Balance Land Available = 6.19 ha

16 As no master plan is available to calculate the remaining yield from the Balance Land, the land usage from the remainder of the monitored area is used to determine the amount of land available for residential allotments. The currently developed area within the monitored area is as follows:

Roads = 22.1%

Stormwater = 7.1%

Reserve = 3.5%

Infrastructure = 0.1%

17 This then leaves 67.2% available for residential allotments. When applied to the Balance Land, this results in a remaining area of 4.16 ha available for residential allotments. The Median residential lot size within the developed part of the monitored area is 609m².

18 This results in an expected yield of 68 lots from the Balance Land.

19 Total remaining development capacity within this monitored area is 76 allotments.

20 The confidence level associated with the Freeman monitoring area has been determined using the following calculation:

$$\frac{8 \times 3.0 + 68 \times 1.0}{76} = 1.21 \rightarrow Low\ Confidence$$

West Park

21 The West Park development area has been fully subdivided into residential allotments, there are currently 6 vacant allotments remaining. As this area is all master planned this is considered to be a high confidence.

East Rangiora South (LURP)

22 The East Rangiora South development area has been fully realised and there is no further capacity available with 46 dwellings completed. As this development is complete there is considered to be a high confidence.

Doncaster (LURP)

23 The Doncaster development area has been fully subdivided into residential allotments, there are currently 2 vacant allotments remaining with there being a total of 199 dwellings at completion.

North Rangiora Ashley Street

24 The North Rangiora – Ashley Street monitoring area features a combination of developed land and balance lots to be considered for future development.

Total monitored area = 5.95ha

Realised yield to date = 36 dwellings

Vacant Developed Lots = 0

Remaining balance land = 3.21ha

25 As no master plan is available to calculate the remaining yield from the Balance Land, the land usage from the remainder of the monitored area is used to determine the amount of land available for residential allotments. The currently developed area within the monitored area is as follows:

Roads = 12%

Stormwater = 2%

26 This then leaves 86% available for residential allotments. When applied to the Balance Land, this results in a remaining area of 2.77 ha available for residential allotments. The Median residential lot size within the developed part of the monitored area is 628m².

27 This results in an expected yield of 44 dwellings.

28 The confidence level associated with the North Rangiora – Ashley Street monitoring area has been determined using the following calculation:

$$\frac{44 \times 1.0}{44} = 1.00 \rightarrow Low\ Confidence$$

North Rangiora Ballarat Road

29 The North Rangiora – Ballarat Road monitoring area features a combination of developed land and balance lots to be considered for future development.

Total monitored area = 15.54 ha

Realised yield to date = 85 dwellings

Vacant Developed Lots = 2

Remaining balance land = 5.66 ha

30 As no master plan is available to calculate the remaining yield from the Balance Land, the land usage from the remainder of the monitored area is used to determine the amount of land available for residential allotments. The currently developed area within the monitored area is as follows:

Roads = 13.5%

Stormwater = 5.4%

Reserve = 1.7%

31 This then leaves 79.4% available for residential allotments. When applied to the Balance Land, this results in a remaining area of 4.49 ha available for residential

allotments. The Median residential lot size within the developed part of the monitored area is 700m².

32 This results in an expected yield of 64 dwellings.

33 The confidence level associated with the North Rangiora – Ballarat Road monitoring area has been determined using the following calculation:

$$\frac{2 \times 3.0 + 64 \times 1.0}{66} = 1.06 \rightarrow Low\ Confidence$$

South West Rangiora

34 The south west Rangiora monitoring area covers land that has been developed as part of the Townsend Fields development, along with a retirement village site and a large amount of land categorised as balance parcel.

35 No master plan is currently available for a majority of the balance area. A master plan is available for the lifestyle/retirement village being developed on Pentecost Road.

Monitoring Area =

Developed residential parcels = 146

Dwellings constructed to date = 126

Vacant Residential Parcels = 20

Retirement Village Master Plan Yield = 126

Superlot Area = 0.611ha

Balance Area = 28.644 ha

Median Lot area = 700m²

Superlot yield = 8

36 From the balance area, the typical land use areas from within the development have been extrapolated to provide a baseline for future land use.

Roads = 38%

Reserve = 8%

Stormwater/Esplanade = 2%

37 From this there is a remainder of 51% available for residential allotments (14.69ha).

Balance Area Yield = 209

38 This results in a total expected yield of 489 dwellings. This leaves a capacity of 363 dwellings.

39 The confidence level associated with the South West Rangiora monitoring area has been determined using the following calculation:

$$\frac{126 \times 3.0 + 20 \times 3.0 + 8 \times 2.0 + 209 \times 1.0}{363} = 1.82 \rightarrow Medium\ Confidence$$

Bellgrove

40 A subdivision master plan is available from the Developer that covers the entire monitoring area.

Master Plan Yield = 726

Dwellings Constructed to date = 23

Remaining Capacity = 703

41 It should be noted that this development is experiencing a significant amount of construction with a total of 115 dwellings currently under construction where Code of Compliance yet to be issued. It can reasonably be expected that this capacity will be realised within the next 12 months.

42 As this monitoring area is fully master planned, there is a high level of confidence.

Summerset

43 The developer of the Summerset Retirement Village has indicated that the village will cater for 260 individual units that will contribute towards residential capacity. It should be noted that hospital beds do not count towards residential capacity. The development has no units completed at this point in time.

44 As this monitoring area is fully master planned, there is a high level of confidence.

2 KAIAPOI

Silverstream (LURP)

45 The Silverstream monitoring area features a combination of developed land, balance lots and a retirement village.

Monitored Area = 77.97 ha

Developed Lots = 783

Vacant Sections = 32

Balance Parcels = 9.825 ha

Super Lots = 1.759 ha

46 The Retirement Village (The Stirling) has the following capacity:

Site Area = 6.89 ha

Number of residential units = 184

Currently Developed units = 34

Remaining Capacity = 150

47 It should be noted that hospital beds are not considered as residential capacity.

Median Lot Size = 364m²

Expected Superlot yield = 48

48 For calculating the balance lot yield, the following parameters were used from the existing developed area. Note commercial areas and retirement villages were excluded from this analysis as these are not expected to be developed within the remaining balance parcels.

Road = 35.8%

Reserve = 6.0%

Stormwater Management = 2.9%

49 This leaves 55.3% available for residential allotments or 5.44 ha.

Expected yield from balance parcels = 149

50 The confidence level associated with the Beach Grove monitoring area has been determined using the following calculation:

$$\frac{32 \times 3.0 + 150 \times 3.0 + 48 \times 2.0 + 149 \times 1.0}{379} = 2.09 \rightarrow Medium\ Confidence$$

Sovereign (LURP)

51 The Sovereign monitoring area has been fully subdivided and developed into residential allotments. There is only 4 vacant allotments remaining to provide residential capacity within this monitoring area. The total yield from this monitoring area is 903 dwellings.

52 As the entire Sovereign monitoring area is already developed, there is a High level of confidence in the remaining capacity calculation.

Beach Grove (LURP)

53 A majority of the Beach Grove development has been subdivided and developed. A master plan is available that shows the residential allotment layout for the future stages as superlots with no definition on actual lot yield. This area can be used along with the median lot area to determine the expected yield from the remainder of the development.

Master Planned Residential Lots = 400

Residential Allotments Developed to date = 321

Remaining Residential Capacity = 79

Future Superlot Area = 7.51 ha

Median Lot Size achieved to date = 340m²

Expected Superlot Yield = 221

Remaining Capacity = 300

54 The confidence level associated with the Beach Grove monitoring area has been determined using the following calculation:

$$\frac{79 \times 3.0 + 221 \times 2.0}{300} = 2.26 \rightarrow Medium\ Confidence$$

3 WOODEND/PEGASUS

Pegasus

55 Pegasus Township is fully subdivided with no further subdivision expected to take place. Any remaining capacity within this monitoring area is vacant parcels. There are covenants on the titles of a majority of the properties within Pegasus preventing further subdivision or establishing multiple dwellings so further intensification is not anticipated.

Total monitored area = 167.6 ha

Realised yield to date = 1452 dwellings

Remaining capacity = 85 dwellings

56 As the entire Pegasus monitoring area is developed, there is a High level of confidence in the remaining capacity calculation.

Ravenswood (LURP)

57 For the Ravenswood development a full master plan of the development is available. This provides confidence in the likely actual outcome of the remaining balance land to be subdivided.

Total Master Planned Residential Allotments = 1288

Residential Allotments Developed to date = 815

Remaining Residential Capacity = 473

58 It is noted that the retirement/lifestyle village that is being established within the Ravenswood Development is manually counted.

Total Retirement Village Units = 237

Units Developed to date = 50

Remaining Retirement Village Capacity = 187

59 Total remaining capacity within Ravenswood = 660

60 As the entire Ravenswood monitoring area is master planned, there is a High level of confidence in the remaining capacity calculation.

East Woodend (LURP)

61 This area consists of lots that have already been developed and areas of undeveloped balance land.

Developed Residential Parcels = 174

Vacant Developed Parcels = 4

Balance Land = 13.19 ha

62 As no master plan is available to calculate the remaining yield from the Balance Land, the land usage from the remainder of the monitored area is used to determine the amount of land available for residential allotments. The currently developed area within the monitored area is as follows:

Roads = 18%

Stormwater = 7.7%

Reserve = 2.2%

63 This then leaves 72.1% available for residential allotments. When applied to the Balance Land, this results in a remaining area of 9.51 ha available for residential allotments. The Median residential lot size within the developed part of the monitored area is 700m².

64 This results in a yield of 136 residential lots. This brings the total remaining capacity of this monitoring area to 140.

65 The confidence level associated with the East Woodend monitoring area has been determined using the following calculation:

$$\frac{4 \times 3.0 + 136 \times 1.0}{140} = 1.05 \rightarrow Low\ Confidence$$

Freeman

66 The Freeman monitoring area features already developed residential allotments, master planned areas, superlots and balance parcels.

Residential Allotments Created= 103

Residential Allotments Developed =75

Vacant Residential Allotments = 28

Master Planned Allotments = 98

Super Lot Area = 4357m²

Balance Land =2.08 ha

67 The balance land yield is calculated based off what has been achieved to date within the existing developed area.

Roads =25.07%

Reserves = 1.3%

Residential Land = 74.8%

68 It has been assumed that the constructed Stormwater Management area within the monitoring area has been sized to service the entire development.

69 The median lot size within the developed area is 648m². When applied over the balance area available for residential development of 1.55 ha this results in a yield of 24 dwellings.

70 For the Super Lot the median lot size within the development has been applied. This results in a capacity of 7 dwellings.

71 This brings the total expected yield for the development to 208 dwellings.

72 The confidence level associated with the Freeman monitoring area has been determined using the following calculation:

$$\frac{28 \times 3.0 + 98 \times 3.0 + 7 \times 2.0 + 24 \times 1.0}{157} = 2.65 \rightarrow High\ Confidence$$

4 OVERALL CONFIDENCE

73 A weighted calculation has been carried out on all remaining capacity throughout the district to gain an insight into how accurate the reported capacity is. The overall score for the entire district was 2.28 which aligns with the medium confidence interval.

OVERALL CONCLUSION

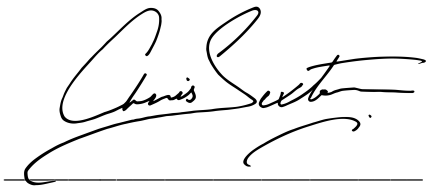
74 Mr Wilson's methodology, as reproduced in Appendix 1, produces a calculation that was 77 dwellings higher than Mr Sexton's. Given some of the uncertainties and assumptions inherent to this work, the experts consider that this is a high level of congruence.

75 Mr Wilson notes that the overall remaining capacity is slightly higher than his "high side" scenario as set out in his memorandum on capacity at Appendix H of Mr Willis's s42A in hearing stream 12D. This is because the overall density achieved by existing developments is slightly higher than 15 houses per ha[3].

76 As stated above, the experts have conferred on any differences and agreed on a figure for remaining greenfields capacity as set out in Table 1.

Dated: 30 August 2024

When using a traditional density methodology



Chris Sexton

Peter Wilson

Appendix 1 – Land Use Uptake Survey (Peter Wilson / Waimakariri District Council)

Please note that as stated above, where there is a difference between a calculation in this survey and the experts' recommendations in Table 1 of this memorandum, the Table 1 figures should be used.