

**BEFORE AN INDEPENDENT HEARINGS COMMISSIONER  
ON BEHALF OF SELWYN DISTRICT COUNCIL**

**UNDER**

the Resource  
Management Act 1991

**IN THE MATTER**

a request by Hughes  
Development Limited for a  
private plan change to  
the Selwyn District Plan to  
rezone 163 Halkett Road  
and 1066 West Coast  
Road in West Melton for  
the development of  
approximately 124 lots

**AND**

**Hughes Development  
Limited** (Applicant)

---

**EVIDENCE OF LAUREN WHITE ON BEHALF OF HUGHES DEVELOPMENT LIMITED**

Urban Design

13 March 2023

---

---

**Counsel acting:**

I M Gordon Barrister  
Stout Street Chambers PO Box 117  
Wellington  
P: 04 4729026  
Email: [ian.gordon@stoutstreet.co.nz](mailto:ian.gordon@stoutstreet.co.nz)

## Introduction

1. My name is Lauren White.
2. I am an urban designer and hold a Bachelor of Architectural Studies and a Master of City Planning and Urban Design from the University of Cape Town South Africa.
3. I am currently the owner and Director of Urban Acumen Limited, a company I established in 2020 and through which I provide urban design services to a variety of clients. I have been in this role for two and a half years and was previously employed as an urban designer by GHD for two years and Harrison Grierson Consultants for 13 years. Prior to this, and before immigrating to New Zealand, I worked overseas for nearly 5 years.
4. I have over 20 years' urban design experience across a wide range of projects in both the public and private sector. I have extensive experience in designing and delivering housing developments in green and brownfield locations across New Zealand, and participating in private plan changes, and resource consenting and design review processes. Relevant examples include:
  - a) Urban design inputs to support the Fast Track consent application for Faringdon South East and South West (Plan Change 64).
  - b) Urban design inputs to support the Fast Track consent application for Faringdon Oval (Plan Change 70).
  - c) Wallaceville Plan Change in Hutt Valley and ongoing design and consenting for numerous development stages.
  - d) Plimmerton Farm Plan Change in Porirua and subsequent Fast Track Resource Consent application for Stage 1.
  - e) Pokeno Plan Change in Waikato and subsequent subdivision design and design review.
  - f) Riverhead Plan Change in Auckland (soon to be notified by Auckland Council).

5. I hold a position as chair on the Auckland Urban Design Panel, provide advice to a number of district councils during the processing of resource consents and also teach at the University of Auckland in the Masters of Urban Design programme.

### **Background**

6. In 2020, I was engaged by Hughes Developments Limited (**HDL**) to provide urban design services in relation to its proposed residential development of the subject site (being 163 Halkett Road and 1066 West Coast Road) in West Melton (the **Site**). Working within the multi-disciplinary consultant team, I explored potential development scenarios or masterplans which informed the preparation of an Outline Development Plan (**ODP**).
7. As set out in the evidence of Mr Brown, that ODP forms the basis of this private plan change request (being **PC74**) to the Operative Selwyn District Plan (**Operative Plan**). In late 2020, I prepared a design statement in support of PC74 and in early 2021, I provided further commentary in response to a Section 92 request from Selwyn District Council (the **Council**) in relation to context, interfaces, and revisions to the ODP.
8. Since that time, I have not been directly involved in the updates to the ODP or its associated provisions, described in the evidence of Mr Brown. I have however reviewed these for the purposes of preparing this evidence. I have also visited the Site again recently to familiarise myself with the current context and to assist with preparing my evidence.

### **Scope of evidence**

9. My evidence is presented on behalf of HDL. It addresses urban design matters relating to PC74 within the wider context of West Melton. It also responds to urban design matters raised in the Council's section 42A report and in the evidence of Mr Hugh Nicholson, and in submissions received on PC74.
10. In preparing this evidence, I have reviewed:
  - (a) PC74 application and supporting documents;

- (b) the National Policy Statement on Urban Development 2020 (**NPS-UD**);
  - (c) the provisions of the Canterbury Regional Policy Statement 2013 that are relevant to urban design matters;
  - (d) the relevant submissions on PC74;
  - (e) the Council Officer's Section 42A Report (**Section 42A Report**) and in particular the evidence of Mr. Hugh Nicholson on behalf of the Council; and
  - (f) the revised ODP and associated provisions.
11. I have also read the statements of evidence prepared by Nicole Lauenstein for Plan Changes 67 and 77 which speak to matters related to the urban form of West Melton.
12. Lastly, I prepared Rebuttal Evidence<sup>1</sup> on behalf of Hughes Development Limited as part of their submission on the Proposed Selwyn District Plan.

### **Code of conduct**

13. I have read the Environment Court's Code of Conduct for Expert Witnesses, contained in Part 9 of the Environment Court Te Kōti Taiao o Aotearoa Practice Note 2023, and agree to comply with it. My qualifications as an expert are set out above. Other than where I state that I am relying on the advice of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

---

<sup>1</sup>

[https://extranet.selwyn.govt.nz/sites/consultation/DPR/Shared%20Documents/Hearing%2030.3%20Rezone%20-%20West%20Melton/Submitters%20rebuttal%20evidence/DPR-0411%20Hughes%20Developments%20Limited/DPR-0411%20HDL%20-%20Lauren%20White%20\(Urban%20Design\).pdf](https://extranet.selwyn.govt.nz/sites/consultation/DPR/Shared%20Documents/Hearing%2030.3%20Rezone%20-%20West%20Melton/Submitters%20rebuttal%20evidence/DPR-0411%20Hughes%20Developments%20Limited/DPR-0411%20HDL%20-%20Lauren%20White%20(Urban%20Design).pdf)



## **Executive summary**

14. West Melton is a small rural township with an existing urban form capable of accommodating growth which would contribute to a logical and well functioning environment.
15. The HDL proposal is to rezone land at the Site and guide its development with an ODP, associated text and rules of the Living West Melton Medium Density Zone. The proposal recognises the Sites' specific location, ensures its integration and responds to West Melton's specific character.
16. The Section 42A Report recommends granting the plan change request without any amendments to the ODP. The current ODP has evolved since its original development in 2020 in relation to consultation with Selwyn District Council, submissions and in response to the Proposed District Plan Review process.
17. The Expert Evidence of Council's urban designer, Mr Hugh Nicholson is also supportive of the plan change request subject to the following amendments to the ODP:
  - 'Future connections' to the east are identified.
  - Post and rail fencing along the southern and northern boundaries of the Site are established and maintained.
  - A footpath along SH73 from the site to the pedestrian crossing facility is provided.
  - A minimum net density of 12hh/ha is specified.
18. With respect to potential future connection to the east, I agree with this recommendation, and this is now included in the revised ODP. I also agree with the recommendations for fencing along the northern and southern boundaries and provisions to that effect are also included.
19. Whilst I agree with Mr Nicholson that a footpath along SH73 would provide additional choice for pedestrians and cyclists, I understand that there is insufficient berm width for this to be safely

accommodated. I also consider the provision of such a connection along Rossington Drive and through an existing link sufficient to the existing crossing facility adequate.

20. The key issue/point of difference is the requirement for the ODP to specify a minimum net density of 12hh/ha to align more closely with the objectives of the Operative Plan. In the light of further information provided during the Proposed District Plan process, Mr Nicholson moved to a minimum density of 10hh/ha be adopted, as indicated in the Joint Witness Statement (JWS) – Urban Design dated 23 February 2023<sup>2</sup>.
21. I note that a significant number of submitters oppose the plan change on the basis that the proposed minimum and average lots sizes are either inconsistent with other neighbourhoods in West Melton and/or would compromise the amenity and character of the township.
22. The ODP seeks to provide for a low residential density by restricting the number and location of lots between 600m<sup>2</sup> and 1,000m<sup>2</sup>, requiring an average lot size of 1,500m<sup>2</sup> for the remainder of the Site and achieving a minimum lot size of 1,500m<sup>2</sup> along the urban rural interface.
23. In combination, these provisions aim to establish a pattern of density across the Site which reflects (to some extent) the existing low density character of the town and maintains a low density edge to the town while also recognising the need to accommodate growth, provide for a range of site/housing options and making efficient use of the land resource and existing infrastructure.

This outcome is supported by the Section 42A Report as follows “I consider that the lot size range detailed in the ODP (in Appendix 3) meets the most appropriate balance between the large lot character and amenity that is being sought by the submitters and optimising the subdivision and development of residential ‘greenfield’ land.”<sup>3</sup>

---

<sup>2</sup> [https://www.selwyn.govt.nz/\\_data/assets/pdf\\_file/0007/1656628/PC74-Officer-s42A-Report-Appendix-2-DPR-0411-HDL-JWS-Urban-Design.PDF](https://www.selwyn.govt.nz/_data/assets/pdf_file/0007/1656628/PC74-Officer-s42A-Report-Appendix-2-DPR-0411-HDL-JWS-Urban-Design.PDF)

<sup>3</sup> Section 42A Report, at [7.32].

24. Based on a detailed analysis of the context, the application of best practice urban design principles and design scenario testing, I have come to the conclusion that a minimum density requirement of 12hh/ha or even 10hh/ha would be inappropriate for the Site.
25. Such densities would not provide the ability for development to respond to West Melton's low-density character or maintain a low density rural interface. Achieving a density such as this would require a significant proportion of lots to be within the 500 to 600m<sup>2</sup> size range which in turn, would result in streetscapes and dwelling typologies on the Site which are inconsistent with West Melton's character and preclude the low density rural interface.
26. Whilst recognising the benefits of higher density, best practice urban design promotes a specific response to "place" and celebrates difference and variety in urban environments. As described in 'People, Places and Spaces – A Design Guide for New Zealand' **'People, Places and Spaces'** (Ministry for the Environment, 2002), there is a need to *"reflect the appropriate degree of urban intensity ....adjust to the degree of intensity of the place under consideration. This does not mean rigidly zoning or categorising the urban environment."*
27. Furthermore, as part of the Proposed Plan Rezoning hearings, the two Planning Witnesses, Mr Brown and Mr Friedel<sup>4</sup>, agreed through a Joint Witness Statement that it was not necessary for a minimum density requirement.
28. Given the above, I do not consider the insertion of a minimum density requirement is necessary. I consider the ODP an appropriate tool to manage the potential conflicting intentions of maintaining low density and character and reducing potential negative effects on interfaces while providing for a greater range and choice of housing and promoting the efficient use of land and infrastructure.
29. However, should the decision makers be of a mind to impose a minimum density, I consider that 8hh/ha would be appropriate.

---

<sup>4</sup> [https://www.selwyn.govt.nz/\\_data/assets/pdf\\_file/0010/1656613/PC74-Officer-s42A-Report-Appendix-2-DPR-0411-HDL-JWS-Planning.pdf](https://www.selwyn.govt.nz/_data/assets/pdf_file/0010/1656613/PC74-Officer-s42A-Report-Appendix-2-DPR-0411-HDL-JWS-Planning.pdf)

30. In my opinion, this would strike the best balance between competing drivers by:
- benefitting from a greater overall density than that typical of West Melton but still being *relatively* consistent with its overall character and successfully managing external interfaces; and
  - promoting/encouraging a greater range of housing typologies but allowing some flexibility now and in the future with respect to market trends/preferences.
31. In response to submissions, I also recommend the ODP is amended to include a provision to restrict potential density along the boundary with the existing urban area.

#### **Existing environment – Urban form**

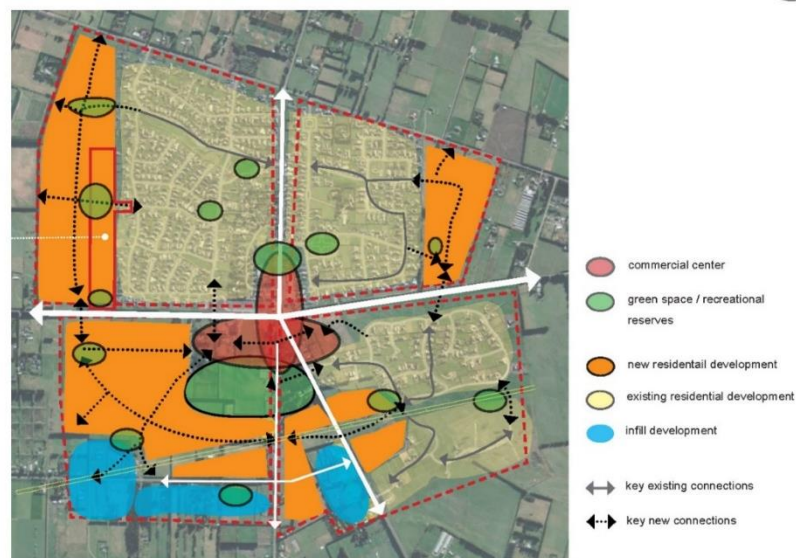
32. West Melton is a small township focused around the intersection of West Coast Road (SH73) and West Melton Road. Both roads connect it to its wider region.
33. The urban area of West Melton is generally compact and contained within a 1.5km (as the crow flies) distance from this intersection (**Attachment A**, Figure 1). The centre of the town is established primarily by the shops and primary school to the north of SH73 but also supported by the community centre and the Domain located to the south.
34. In my opinion, as at today, West Melton provides a moderate level of community facilities and services. The Domain provides the opportunity for organised sport; there is a primary school, and a small range of stores which enable residents to meet some of their daily needs without the use of a car. Bus services are however limited (one bus a day to/from Christchurch, plus a school bus service providing transport to a range of schools), and employment opportunities within the town itself are reasonably restricted although increased opportunities exist within the wider District.
35. Historically, growth of the township has located north of SH73 (up to Halkett Road); however, in more recent years, new development in Wilfield (including Plan Change 67 (**PC 67**) to the south and south east

of SH73 is “balancing” development more radially around the existing commercial/retail centre north of SH73, and the West Melton Domain and Community Centre to the south.

36. In her statement of evidence on behalf of GW Wilfield Limited for PC 67, Ms Nicole Lauenstein goes into some detail about the history and development of West Melton and describes its urban form as comprising four identifiable “quarters” around the centre.<sup>5</sup> I agree with this analysis and find Ms Lauenstein's depiction of the anticipated future growth of the town (replicated as Figure 2 below) to be particularly helpful in understanding its potential urban form. Specifically, I agree that a more balanced, radial urban form will, over time, encourage the town centre to integrate in its central

**Figure 2**  
Potential Future Urban Form as illustrated by Nicole Lauenstein (PC67)

Figure  
2



### Anticipated Growth Pattern

To complete the urban form all quadrants can be expected to develop further and provide residential infill and new residential development. To support this cohesive urban form the current commercial and community facilities and green spaces will also gradually expand primarily into the South West quadrant around the existing domain and commercial hub.

#### North East Quadrant

- West Melton East PC 74 - refer to appendix A

#### South East Quadrant

- residential infill and some commercial expansion in proximity to the centre
- West Melton PC 67 - refer to appendix A

#### South West Quadrant

- primarily expansion of community and commercial areas in proximity to the centre
- extension of the domain and possibility for a second primary school and associated sports fields
- new residential development on rural farm land in particular on larger rural lots along SH 73 as they are in single ownership and will be easiest to develop
- residential infill development of existing lifestyle blocks

#### North West Quadrant

- new residential development on rural farm land with direct linkages to east and south
- selected residential infill development of existing large lots
- open space and recreation areas to support residential development

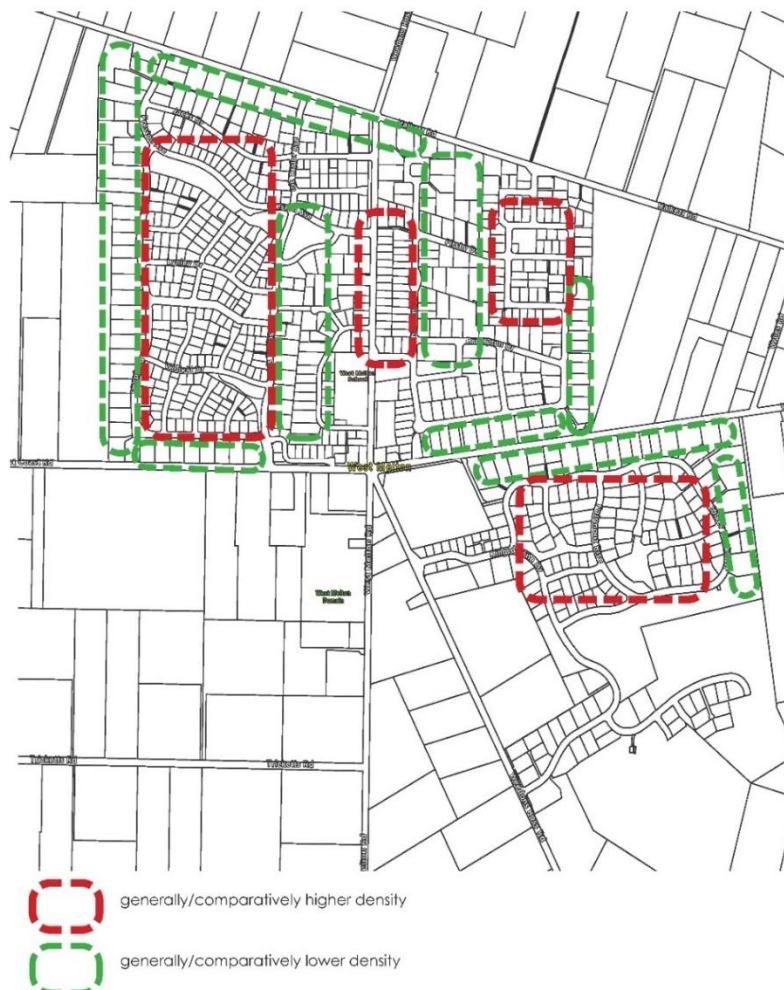
<sup>5</sup> Evidence of Ms Lauenstein, at [10].

location, with SH73 functioning as a more urban “main road” in the town rather than a highway which bisects it.

37. It is my opinion that Ms Lauensteins’ depiction (see Figure 2 above) illustrates clearly the potential for West Melton to grow and consolidate around its town centre, with good internal connectivity and a relatively compact and continuous urban form at typically low residential density.
38. With respect to the question of density I note that (as shown in Figure 3 below) variations in density have occurred through the piecemeal growth of the town. Staged development has typically provided a transition to the surrounding rural land by way of larger lots and as a result, there is a variation of lot sizes across the township, and a precedence of internal pockets of smaller lots within recognised neighbourhoods.

**Figure 3**  
Varied Residential lot size/density across the Township

Figure  
3



39. This outcome is also reflected in the Proposed District Plan zoning patterns, particularly in Wilfield and Preston Downs where larger lots adjoin the rural boundary and SH73 while the internal areas have smaller lots.

#### **Existing Environment – Character and Amenity**

40. In my opinion, West Melton has a different character and feel to other towns in the Selwyn District. It's character stems from its small size, rural location, long distance views to rural landform and vegetation, town centre "vibe", low residential density, relatively high quality housing, spacious landscaped streets and many open spaces/pocket parks.
41. Of these features and qualities, it is my view, that the low residential density is of particular significance. Characterised by low density residential development, West Melton has a relatively narrow range of residential section types. From my review, I estimate that the vast majority of sections are over 1,000m<sup>2</sup> and the typical dwelling is large and single storey, often set back from the road with high quality landscaping. There are few sections between 600m<sup>2</sup> and 1,000m<sup>2</sup> and, as far as I can ascertain from the Council GIS online maps, none below 600m<sup>2</sup>. While there are a few examples of sections being subdivided to create "infill" or "rear" lots, the size of these new lots is still relatively consistent with the typical lot size in West Melton, namely larger than 1,000m<sup>2</sup>.
42. This typical size of the sections (over 1,000m<sup>2</sup>) enables generous front yards which often accommodate substantial planting and which, in turn contribute to the leafy green streets. The deep front yards (typically with low or no front boundary fencing as the separation distance is sufficient to retain internal privacy) also result in a very spacious streetscape (**Attachment A**, Figure 4).
43. Lot frontages (typically over 20m wide) further contribute to the perception of low density, providing for generous gaps between dwellings and between driveway crossings with good opportunities for street tree planting.
44. These typically large lot sizes also result in a predominantly single storey environment with little shading or overlooking of neighbours

which again contributes to overall residential amenity.

#### **PC74**

45. As shown in Figure 2, the Site sits to the north of West Coast Road (SH73) and adjoins the existing urban area of West Melton. In terms of Ms Lauenstein's "quadrant" analysis, the Site sits in the upper right quadrant within close proximity of the town centre (within the average walking trip as defined by the New Zealand Household Travel Survey) and immediately adjacent to the existing residential developments of Gainsborough and Halkett Grove.
46. In preparing an ODP to guide potential development of the Site, my view was informed by a number of urban design drivers including:
  - Promoting a compact urban form and supporting the existing town centre.
  - Providing good all-mode linkages with adjacent existing and future neighbourhoods.
  - Establishing a "heart" or central open space amenity focus for the neighbourhood.
  - Providing for a range of residential lifestyle options on sites of between 500 and 3000m<sup>2</sup> which provide choice and opportunity in the wider housing market.
  - Providing appropriate interface responses with adjacent rural land and roads.
47. Since PC74 was lodged (with development directed by the ODP), several amendments have been made to that ODP, partly in response to community feedback through the submissions process. As such the ODP now includes the following key additions:
  - providing for a low residential density by restricting the number and location of lots between 600m<sup>2</sup> and 1,000m<sup>2</sup> and requiring an average lots size of 1,500m<sup>2</sup> for the remainder; and
  - requiring a minimum lot size of 1,500m<sup>2</sup>, a 10m building setback and landscaping strip along the rural-urban interface.



- Provision of pedestrian and cycle connections along Halkett Road
  - Increased size and location of central recreation reserve
48. Overall, the ODP (which is based on a preliminary subdivision concept) directs a site-specific density in response to the design intentions to:
- provide larger lots (generally 1,200m<sup>2</sup> to 1,500m<sup>2</sup> and with typical frontage widths of 30 – 35m) along the western boundary adjacent to existing lots which have similar frontage widths in order to limit potential adverse effects on those residents;
  - provide larger lots (generally 1,500m<sup>2</sup> to 2,000m<sup>2</sup> and with typical frontage widths of 35 – 40m) along the eastern/rural boundary to provide a visual perception of density similar to what exists along the Gainsborough and Preston Downs boundaries (the Wilfied development has even larger lots and frontages);
  - provide large lots and wide frontages along SH73 and Halkett road which also contribute to the overall perception of density and character for people moving in, out and through the town as well as limiting the number of dwellings and driveways adjacent to this busy route;
  - respond to feedback from the community, through submissions on PC74, which indicates a desire to maintain low density and character;
  - respond to established and predicted market demand for lots of this (as indicated in the evidence of Mr Fraser Colegrave, Mr Jake Hughes and Mr Christopher Jones); and
  - include a small number of smaller lots to extend the lifestyle/housing choice in the subdivision, located away from external boundaries and where they can increase the opportunity for passive surveillance and use of the public reserve space.
49. In combination, the ODP and related provisions aim to establish a pattern of development and density across the Site which reflects (to

some extent) the existing low-density character of the town while providing for a wider range of lifestyle choice.

50. To that end, the draft subdivision plan which informed these provisions (**Attachment A, Figure 9**) indicates a net density of approximately 6.9hh/ha which is marginally higher than the typical density in West Melton.
51. In addition to the above, the proposed movement network of the ODP ensures public connections will be made to Halkett Road (which carries the current bus route), SH73 and Rossington Drive. This provides a good level of overall connectivity between the Site and the rest of the West Melton urban area.
52. The proposed vehicle and pedestrian connection to Gainsborough/ Halkett Grove (to Rossington Drive) will also provide residents with safe and attractive pedestrian access to reserve spaces and the town centre within approximately 1km. The proposed upgrade of SH73 to include a shared path (along the southern side, which is connected to the pedestrian link from Rossington Drive via a pedestrian refuge) provides another pedestrian route choice to access the town centre and facilities to the south (the Domain and Community Centre) within the same approximate distance.
53. In summary, the current ODP represents a site specific design tool which responds to the Sites' location, its interfaces and the wider West Melton context. It will achieve good internal accessibility for all transport modes (including pedestrians and cyclists) as well as connectivity with the existing Gainsborough neighbourhood and thereafter, the primary school, local shops and other community facilities and services.
54. The provisions for minimum lot size and minimum average lot size seek to provide for a greater range of housing/lifestyle choices which are *relatively* consistent with the existing low-density character of West Melton and consistent with the current Living West Melton Medium Density Rule framework. They also provide for a low-density boundary with the adjacent rural land which comprises a landscaped strip and building setback, both of which will soften the transition from urban to rural.

55. The provision for smaller lots, together with the proposed multi-purpose public reserve, serve to reinforce a recognisable heart for the development which is located on a pedestrian and cycle desire line.
56. In summary, the ODP will deliver a development which is consistent with the SDC Subdivision Design Guide (2009) which describes a good subdivision as one which:
- Is a special place with its own identity yet fits in with the character of the township
  - Has a strong sense of community and opportunity for recreation and for people to socialise
  - Is attractive with a variety of lot sizes and landscaped streets
  - Is sustainable, resource efficient and manages stormwater
  - Provides housing and facilities that people want and meet market demand
  - Is convenient and accessible and provides opportunity for walking cycling and public transport
  - Is free from crime, feels safe and has clear ownership of land
57. In my opinion, the proposed ODP meets the above objectives by:
- Respecting the existing low-density character of West Melton while including opportunities for a wider range of housing choice, greater affordability and good land utilisation
  - Including a multi-purpose public reserve (includes stormwater management function) in a central and accessible location that provides for recreation and socialising
  - Locating smaller lots away from external interfaces and in a central location where they can utilise and overlook the reserve and contribute to real and perceived public safety
  - Providing for active transport modes and a density that allows for generous landscaping in front yards and along streets

#### **Response to Section 42A report**

58. I have read the relevant sections of the Section 42A Report which has been prepared by Craig Friedel (6th March 2023). The Section 42A Report recommends accepting HDL's plan change request and the revised ODP.

59. The revised ODP has incorporated the advice of Council's urban designer, Mr Nicholson in his statement of evidence which recommended:
- 'Future connections' to the east are identified.
  - Post and rail fencing along the southern and western boundaries of the Site are established and maintained.
60. With respect to a potential future connection to the east, I agree with this recommendation and two indicative connections have been included in the revised ODP. Whilst the adjacent land is held in several titles and further from the town centre, its future urban development would create an urban form consistent with the extent of the urban boundary to the south of SH73 and therefore could be argued to be consistent with the objectives of well-functioning environments under the NPS-UD and rezoned in future. Providing a connection to this area would therefore enable local connectivity and integrated neighbourhoods to be achieved in the future.
61. I also agree with the requirement to provide post and rail fencing (in addition to the landscaping requirement) along the southern/SH73 boundary. This will contribute to a consistent image/character that is established upon entry to the township.
62. Recommendations for ODP amendment by Mr Nicholson which have not been adopted by the S42A report include:
- A footpath along SH73 from the site to the pedestrian crossing facility is provided.
  - A minimum net density of 12hh/ha is specified. (This was subsequently revised to 10hh/ha through a Joint Witness Statement as part of the Proposed District Plan Hearing).

#### Footpath Along SH73

63. Whilst I agree with Mr Nicholson that a footpath along SH73 would provide more choice for pedestrians, I understand that there is insufficient width within the berm for such a path to be safely provided. I also consider the current footpath from the Site along

Rossington Drive and through a pedestrian linkage space to the existing crossing provides a sufficient connectivity between the Site and the rest of West Melton.

#### The Recommendation for 12hh/ha

64. In the light of the NPS:UD and submissions, Mr Nicholson recommended a minimum density of 12hh/ha be included in the ODP. He recommends a balanced approach to density and considers *"a lower density would have adverse effects on options for the provision of public transport and reductions in greenhouse gas emissions, as well as the efficient use of land and infrastructure"* but also that *"true medium density housing (terrace housing or apartments) would be required to reach 15hh/ha.....and it may be more appropriate to site medium density housing in larger urban centres with better access to community facilities and commercial activities"*.<sup>6</sup>
65. As part of the Proposed District Plan process, during which further information/illustration of potential outcomes associated with various densities was provided, Mr Nicholson revised his recommendation to adopt a minimum density of 10hh/ha. This recommendation was included in the Joint Witness Statement between me, and Mr Nicholson dated 23 February 2023.

#### **Establishing an Appropriate Density for the Site**

66. In light of the above recommendation, I have reviewed potential density in the context of the Site, taking account of directions for well-functioning urban environments, the current ODP, and best practice urban design guidance.
67. To this end, I have undertaken four tasks, namely:
- analysed the existing neighbourhoods in West Melton to illustrate the current typical density;

---

<sup>6</sup> Evidence of Mr Nicholson, at [9.5].

- tested the Site to illustrate what *maximum* density could be achieved while complying with the development standards of the proposed zoning;
- given thought to the relationship between density, lot size and residential character; and
- recognising the potential tension between objectives and desired outcomes (e.g. maintaining character vs efficient use of land and delivery of housing), tested two subdivision scenarios to inform the most appropriate minimum density for the Site (if required).

#### General comment

68. Prior to commencing a discussion on density, I would first like to clarify how density is calculated in this exercise.
69. The Selwyn District Plan has a definition as follows:

*Net Density: is the number of lots of household units per hectare (whichever is the greater). The area (ha) includes land for:*

- *Residential purposes, including all open space and on-site parking associated with residential development;*
- *Local roads and roading corridors, including pedestrian and cycle ways, but excluding State Highways and major arterial roads;*
- *Local (neighbourhood) reserves.*  
*The area (ha) that excludes land that is:*
  - *Stormwater retention and treatment areas;*
  - *Geotechnically constrained (such as land subject to subsidence or inundation);*
  - *Setting aside to protect significant ecological, cultural, heritage, or landscape values;*
  - *Setting aside for esplanade reserves or access strips that form part of a larger regional or sub-regional reserve network;*

- *Local community services and retail facilities, or for schools, hospitals or other district, regional or sub-regional facilities.*

70. Whilst I consider this definition unusual and not strictly a true net residential density, I confirm I have used this definition in calculating potential density scenarios. As such, land excluded from the total site area includes the water infrastructure lot, and stormwater management areas (the reserve and swales within local roads). (**Attachment A**, Figure 10).
71. There is obviously a relationship between density (as a household per hectare) and lot sizes when considering conventional residential subdivision. In this exercise, I have assumed one lot = 1 household.
72. In my opinion, aspects of residential character that are influenced by residential density include:
- Lot frontage width (both the resultant perception of density along a street as well as the gaps between houses)
  - Front yard setback (and corresponding landscaping and front boundary definition)
  - Building height (the number of single storeys vs double storeys)

#### Existing Density in West Melton

73. I have undertaken three “desk top” case studies to determine the existing density in West Melton, using the Council's GIS information system (**Attachment A**, Figures 5 – 8).
74. The existing net density of three different areas are shown to be:

Gainsborough	4.2hh/ha
Preston Downs	6.2hh/ha
Wilfield	4.2hh/ha

(Note: no swales have been excluded from the calculation as per the Council definition, but I do not consider this to make any significant difference to the conclusions).

75. These surrounding densities are significantly lower than those recommended by the Section 42A Report (12hh/ha) and the Canterbury Regional Policy Statement (10du/ha).

#### Density and Overall Urban Form

76. As previously described, the township of West Melton is relatively small and compact and focussed around the shops, school and community centre. PC 67 (and if approved, PC74 and PC 77) would extend the urban area at the periphery but it would remain relatively connected and walkable.
77. On this basis, it can be argued that the intended residential density for the Site should recognise this proximity and accessibility and, in the context of policy direction, seek to maximise land and infrastructure utilisation in addition to supporting existing and future services and active and public transport options.
78. 'People, Places and Spaces' applies the principle of "consolidation and dispersal" which addresses development patterns and intensity with the purpose of promoting *"higher-intensity development around existing or new nodes and lower density on the periphery. This allows local communities, businesses and public transport to be strengthened and resource efficiencies achieved, while reducing environmental impacts on peripheral areas"*.<sup>7</sup>
79. However, it is also important to recognise the overall logic and legibility of the township with respect to existing density patterns.
80. Higher densities logically locate closer to the town centre where the greater number of people can easy access facilities and services, whilst lower densities typically locate further from the centre. I believe this pattern assists with overall legibility of urban areas, and particularly small towns, where the urban edge/extent of the town can be more readily perceived.
81. While recognising the logic and benefit of higher density located closer to the town centre, I am of the opinion that small pockets or

---

<sup>7</sup> 'People, Places and Spaces – A Design Guide for New Zealand' Ministry for the Environment 2002, p.30.



clusters of higher density development (for example single storey duplexes) could be successfully integrated into West Melton without significant change to overall character, particularly adjacent to reserve spaces where they could provide benefit of additional spatial enclosure, overlooking and inhabitation.

#### Scenario 1 – Implications of Achieving 12hh/ha

82. Given the restriction to lot sizes in the Living West Melton North Medium Density Zone of the Operative District Plan (min 500m<sup>2</sup>), the second exercise was to test and illustrate:
  - whether or not the Site could achieve 12hh/ha while complying with all relevant development standards of the proposed zoning, and if so;
  - the potential implications for character and amenity relative to that existing in West Melton.
83. This exercise assumes all dwelling units would be delivered as permitted development on “vacant lots” and no comprehensive development is included.
84. Figure 11 (**Attachment A**) includes a plan which illustrates a potential subdivision plan which delivers 223 lots and a net density of 12.3hh/ha.
85. In order to achieve this density, the following outcomes are required:
  - Lots along the rural interface (eastern boundary) are still relatively deep (43m) to allow for a greater rear yard and landscaping but have a variety of frontage widths (generally between 15 and 18m) and a typical area of approximately 750m<sup>2</sup>.
  - Lots along the western boundary are generally 800m<sup>2</sup> in size, with frontages of approximately 20m.
  - Lots along SH73 are generally about 700m<sup>2</sup> in area with frontages between 20 - 30m.
  - Lots along Halkett Road are generally 20m wide and 800m<sup>2</sup> in area.

- Over half of internal lots are between 500 and 550m<sup>2</sup> with a typical frontage of 17m.
- Almost all lots (99%) are below 1000m<sup>2</sup>.

86. In my opinion, this density and lot size would not be consistent with the existing low-density character and streetscapes of West Melton for the following reasons:

- The front yards would be much smaller due to the desire to maximise limited outdoor space at the rear, generating a perceptible difference in spatial dimension of streets and scale of landscaping to that typical in the town.
- A perception of higher density than that typical of the town as dwellings would be closer together due to generally narrower lots and the desire to maximise outdoor space at the rear.
- A change in typical street scale and dimension through a greater proportion of two storey houses in order to maximise potential for private outdoor space.
- Less street trees due to the greater number of driveway crossings.
- A higher perceived density along SH73 and Halkett Road and an inconsistency with other frontage widths and landscaping along these roads.
- A higher perceived density for existing residents along the western boundary due to proximity of dwellings to the boundary and to each other.
- A narrower range of sites (almost all sites are below 1,000m<sup>2</sup>).

87. Overall, I am of the opinion that this subdivision plan would result in typical street environments that are inconsistent with those of the existing township. The streetscapes and overall suburban residential environment would be more akin with Rolleston, for example new residential subdivision in parts of Faringdon which consists of lots typically 500m<sup>2</sup> in area. Please refer to Figure 13 (in **Attachment A**) which illustrates typical streetscapes in Chandler Way and

Hungerford Drive which show the dwellings located closer to the street and closer to each other and an overall perception of higher density.

Scenario 2 – Applying best practice urban design in pursuit of appropriate density

88. In this scenario, the following urban design principles have been applied:

- Lots around the external interfaces with size and frontage width that are more consistent with existing edges of Gainsborough, SH73, Halkett Road and present a similar perception of density to the rural boundary (albeit more dense than Wilfield);
- Lots along the “through road” which will be key in establishing the overall character of the development are generally larger to promote a greater sense of spaciousness and greenery to people moving into, out of and through the Site;
- Smaller lots are located internally, with higher densities in close proximity of the public reserve; and
- Smaller lots are located with a northerly or westerly orientation for private outdoor spaces to ensure good solar gain for internal and external living spaces.

89. As a result, the following urban design advantages accrue:

- a greater variety of lot sizes and lifestyle choices;
- a more sensitive response to existing residential and rural interfaces;
- a potential overall perception of consistent character while including some higher density options;
- greater activation and surveillance of the park; and
- more efficient use of land within walking distance of the town centre and a greater number of households who can meet some of their daily convenience needs without the use of a car.

90. In this design scenario, a density of 8hh/ha is achieved, based on providing vacant lots upon which a dwelling is a permitted activity (subject to meeting development standards).

#### Density – Summary and Conclusion

91. It is generally agreed that retaining character in West Melton is a shared objective, as indicated by:
- the explanation of Objectives B4.1.1 and B4.1.2 of the Operative District Plan which states “ *Overall, larger section sizes than those found in Christchurch need to dominate townships, to maintain spaciousness thus reflecting something of the rural character by a sense of open space, panoramic views and rural outlook that attract residents to these townships*” and “*New residential areas are pleasant places to live and add to the character and amenity values of townships*”.
  - Objective B4.3.2 also states “For townships outside the Greater Christchurch area, new residential or business development adjoins existing townships at compatible urban densities or at a low density around townships to achieve a compact township shape which is consistent with the preferred growth direction for townships and other provisions in the Plan”.
  - New Zealand Urban Design Protocol which identifies the importance of recognising context and promoting identity and variety across urban areas.
  - ‘People, Places and Spaces’: “*Emphasise the visual and functional character differences between different nodes and different communities.*”<sup>8</sup>
  - Selwyn 2031: District Development Strategy – key outcome is the “*protection of our existing character – retaining the district’s sense of rural identity by adopting a consolidated approach to urban growth and reinforcing and enhancing the character of each*

---

<sup>8</sup> ‘People, Places and Spaces – A Design Guide for New Zealand’ Ministry for the Environment 2002, p.48.

*township by requiring outline development plans and the use of good urban design principles within new development areas".*

- *Its exclusion in the PDP as appropriate for application of the Medium Density Residential Standards.*

92. In addition, the Section 42A Report generally agrees that HDL's subdivision concept and "PC74 lot size range and densities will optimise the use of the land while maintaining the character and amenity of West Melton".<sup>9</sup>
93. The density scenarios illustrate that achieving a density of 12hh/ha would result in a development which would be significantly and noticeably different from other neighbourhoods in West Melton.
94. Whilst I acknowledge the potential benefits of achieving a density of 12hh/ha, I consider a lower density is more appropriate given the Sites' location on the periphery of the township's urban area, its' distance from the town centre and the densities of adjacent neighbourhoods or those in similar locations relative to the centre and overall form.
95. It's a fine balance between respecting existing character and adopting a future focussed approach in the context of national policy direction and the well-recognised benefits of density. I do however believe that a minimum density requirement is a crude tool and the approach should be "the right density in the right place" rather than mandate a minimum density across a whole region.
96. I am also concerned that adopting a minimum density requirement could result in the loss of some good design outcomes, namely the lower density interfaces, the inclusion of open space and/or the reduction or removal of roads.
97. The ODP density as illustrated on Figure 9 is a result of accommodating **some** more intensive development (on lots of between 600m<sup>2</sup> and 1,000m<sup>2</sup> while the majority of lots are generally more consistent with the current residential density and character of the township.

---

<sup>9</sup> Section 42A Report, at [7.32].

98. I support this approach which provides the ability to tailor a bespoke outcome for the Site recognising its unique location and context and responding to community preferences and predicted market demands (as described in evidence of Mr Hughes<sup>10</sup> and Mr Jones<sup>11</sup>).
99. Best practice urban design requires the recognition of “place” and celebrates difference and variety in urban environments. As described in ‘People, Places and Spaces’, there is a need to *“reflect the appropriate degree of urban intensity - urban design approaches have to adjust to the degree of intensity of the place under consideration. This does not mean rigidly zoning or categorising the urban environment. It means bringing about an awareness of the context in which the principles have to be applied.”*<sup>12</sup>
100. ‘People, Places and Spaces’ also indicates the need to:<sup>13</sup>
- *understand the urban context*
  - *ensure there is a community-led definition of vision and values*
  - *bring together different sectors, such as the public and professional groups involved in place-making*
  - *take a place-based analysis of options and solutions*
  - *develop plans that reflect urban design, planning, urban economics and community values*
  - *combine public and private endeavours*
101. To me, this clearly indicates that good urban design practice does not apply a “one size fits all” approach, but responds to each unique location, physical and visual context, community input and the wider development context (e.g., economics, market demand etc.) I am satisfied that this has been done with the ODP and provisions proposed for the Site and that the prescription of a minimum density is not required.
102. Given the above and based on a detailed analysis of the context and the application of best practice urban design principles, I have

---

<sup>10</sup> Evidence of Mr Hughes, at [31]-[33].

<sup>11</sup> Evidence of Mr Jones, at [14]-[17].

<sup>12</sup> ‘People, Places and Spaces – A Design Guide for New Zealand’ *Ministry for the Environment* 2002, p.33.

<sup>13</sup> Above, p.16.

also come to the conclusion that if a minimum density is to be prescribed, 12hh/ha would be inappropriate.

103. With respect to housing variety, I consider the proposed zoning of Living WM North Medium Density in accordance with the Operative District Plan would provide for an adequate variety of lot size (min 500m<sup>2</sup> with a maximum average of 3,000m<sup>2</sup>). As noted above, the typical existing development in West Melton is of a lower density than that which could eventuate with development under this zoning but I note that the Living WM Medium Density Zone does not preclude the delivery of comparable density as it provides for lots up to 3,000m<sup>2</sup>. The proposed ODP seeks to narrow the potential density that can eventuate, such that it is more consistent with existing character in West Melton.
104. In summary, I consider the proposed rezoning and supporting ODP Map and provisions would contribute to a well-functioning urban environment in West Melton, primarily due to.
- the location and connectivity of the Site to West Melton and the resultant ability for future residents to access services and transport options, including active modes and public transport (which in turn support reduction in greenhouse emissions); and
  - the potential to deliver a variety of dwellings and lifestyle choices that are appropriate for the location and contribute to West Melton's character and amenity.

### **Response to Submissions**

105. I have read the relevant submissions received in response to the notified plan change request and group them into the following key issues relevant to urban design:
- overall form of growth<sup>14</sup>
  - Lots sizes<sup>15</sup>

---

<sup>14</sup> J. O'Connor (PC74-009), C Byers (PC74-0022), T Standfield (PC74-0025), West Melton Residents Association Inc. (PC74-0026), Canterbury Regional Council (PC74-0061), K & P Bowman (PC74-0063), O. Wiegiersma (PC74-0066), Waka Kotahi NZ Transport Agency (PC74-0069)

<sup>15</sup> S. Ellis (PC74-0002), J. Neal (PC74-003), H. Helm (PC74-005), M. Slater (PC74-0010), C. McLachlan (PC74-0015), A. Wilson (PC74-0020), F. Bayly (PC74-0024), West Melton Residents

- The urban-rural interface<sup>16</sup>
- The interface with Gainsborough/Halkett Grove<sup>17</sup>

### **Overall Form of Growth**

106. A number of submitters have opposed the plan change on the basis that it would result in an inappropriate and unsustainable urban form for West Melton.
107. I have addressed the issue of urban form earlier in this statement of evidence and confirm that I support the rezoning request on the basis that it will accommodate growth and contribute to a logical and compact urban environment in West Melton. The Site is contiguous with the existing urban area, can connect to existing infrastructure (including transport infrastructure) and is within walking distance of the town centre. In summary, it is a logical location for growth given the shape and extent of the existing urban area.

### **Proposed Lot Sizes**

108. With the desire to protect existing residential amenity and character, a significant number of submitters request larger minimum lot sizes are included in the plan change provisions, typically 1000 to 1500m<sup>2</sup>.
109. The current proposed ODP provisions direct a minimum average lot size of 1500m<sup>2</sup> for lots other than those along the rural interface or around the reserve. It allows for a small proportion (maximum of 10%) of lots smaller than 1000m<sup>2</sup>, but the requirement for a minimum average of 1500m<sup>2</sup> provides for an overall density that is higher but still relatively consistent with existing neighbourhoods in West Melton and that sought by the submitters on this issue.

### **The Urban-rural Interface**

110. A small number of submitters request a larger minimum lot size (3000m<sup>2</sup>) be applied to lots adjoining the rural (western) boundary. The ODP proposes a minimum lot size of 1500m<sup>2</sup> along this boundary and the draft subdivision plan illustrates the outcome of this provision.

---

Association Inc. (PC74-0026), GW Wilfield Ltd (PC74-0030), C & J, Hey (PC74-0035), S & S. Eden (PC74-0052), O. Wiegiersma (PC74-0066)

<sup>16</sup> C. McLachlan (PC74-0015), GW Wilfield Ltd (PC74-0030)

<sup>17</sup> West Melton Residents Association Inc. (PC74-0026), C & J, Hey (PC74-0035), D. Turner (PC74-0056), K & P Bowman (PC74-0063), O. Wiegiersma (PC74-0066),



111. These submitters do not elaborate on their potential concerns with smaller lots on the urban-rural boundary other than to state that they are inconsistent with current zoning and existing lot sizes along the existing boundary.
112. I consider lots of 3000m<sup>2</sup> or more within the urban boundary of West Melton an inefficient use of the land resource and lots of 1500m<sup>2</sup> or greater are capable of providing an adequate transition. Lots of this size provide for large single storey dwellings, a reasonable separation distance between dwellings and between dwellings and the urban boundary as well as the opportunity for substantial planting. These conditions will combine to provide a "softer" or less abrupt visual transition from rural to urban.
113. The ODP requires a planting strip (should the shelterbelt be removed) and building setback from the rural boundary and I consider this a sufficient and appropriate requirement on those lots.
114. I do not consider a requirement for post and rail fencing appropriate for the eastern boundary. It is practical and likely that residents will seek to fully secure their properties, and limit potential effects associated with rural activity. The existing boundary with Gainsborough illustrates this outcome through its combination of the original post and rail fencing and significant lengths of "infill" solid fencing.

### **The Gainsborough Interface**

115. A number of submitters request that the ODP provide greater direction/comfort with respect to potential negative effects on residents along the Gainsborough/Halkett Grove boundary.
116. The proposed ODP narrative proposes an average lot size of 1500m<sup>2</sup> for lots other than those around the reserve or along the urban-rural boundary and the draft subdivision plan indicates lots typically between 1200m<sup>2</sup> and 1400m<sup>2</sup> along this boundary. The intention (as illustrated in Figure 9) is to provide lots along this boundary of greater than 1,200m<sup>2</sup> and a general lot depth of 40m and this is retained in Scenario 2). This provides for a lower density interface, perceived both as wider frontages/greater distance between houses and the

opportunity for a greater separation distance between new houses and the boundary. It is worth noting too, that the orientation of these lots (facing east) is likely to result in private open space being provided at the rear (west) where afternoon sun can be enjoyed, which in turn results in greater separation distance to the boundary.

117. Whilst acknowledging that Policy 6 of the NPSUD states that significant change (e.g. loss of residential amenity) is not in itself an adverse effect, I am of the opinion that additional direction in the DP and/or its narrative could be provided.
118. One intention of the ODP is to provide for a variety of lot sizes, including larger lots in the range of 1000 to 2000m<sup>2</sup>. The ODP restricts lot size along this boundary to a minimum of 1000m<sup>2</sup> and a minimum average of 1500m<sup>2</sup> which will limit the potential negative effects of development on adjacent properties.
119. Directing the location of larger lots (in line with the draft subdivision plan) to the external interfaces is consistent with the overall intentions of the ODP, good urban design practice and general "good neighbour" behaviour.
120. Larger lots along this boundary encourage the development of single storey dwellings which would limit potential effects of shading and overlooking of dwellings across the boundary. The introduction of a greater rear yard setback (minimum yard setback for a single storey building is 2m under the Living West Melton Medium Density Zone) would also limit the potential extent of overlooking and shading without unduly restricting future development flexibility.
121. As such, I would support an additional requirement in the ODP as follows:
  - Any lot adjoining the existing urban boundary shall have a minimum rear yard building setback of 10m
122. I believe that the ODP has the opportunity/ability to manage the Site's interfaces to limit any potential negative effects on existing neighbours and direct the location of some smaller lots such that they would not unduly alter the overall character of West Melton.

## **Conclusion**

123. The rezoning of the Site for residential use contributes to the logical growth and overall form of West Melton which will remain relatively compact and walkable. It can be adequately connected to existing adjacent and future residential areas and the town centre and offer a variety of living choices.
124. The proposed ODP directs the overall structure of roads and other pedestrian/cycle connections, the location of open space and the sensitive management of road and rural interfaces.
125. It seeks to restrict potential density on the Site in order to reflect and maintain the existing low-density character of the town, community preferences and likely market demand.
126. This density restriction is anticipated to deliver a density which is close to, but higher than, the density of surrounding neighbourhoods (estimated to be approximately 4 -5hh/ha on average). It is however, also significantly lower than the density originally recommended by Council (12hh/ha and then 10hh/ha).
127. An analysis of the potential urban design outcomes of a density of 12hh/ha illustrates that this would result in streetscapes that are inconsistent with those typical in West Melton and preclude the ability to transition to adjacent existing residential properties or the urban/rural boundary.
128. I consider a minimum density requirement a blunt tool and that the ODP provisions provide a more appropriate and site-specific design tool to balance the response to existing “place” and recognised character and amenity. I consider this approach to be supported by both the Council and best practice urban design.
129. I also consider the ODP provisions which direct the location of smaller lots (600 to 1000m<sup>2</sup>) and larger lots (1500m<sup>2</sup> +) appropriate and capable of managing external interfaces and submitter concerns. The minimum average lot size also restricts the potential maximum density that could be achieved on the site which ensures relative consistency with the existing character of West Melton while also

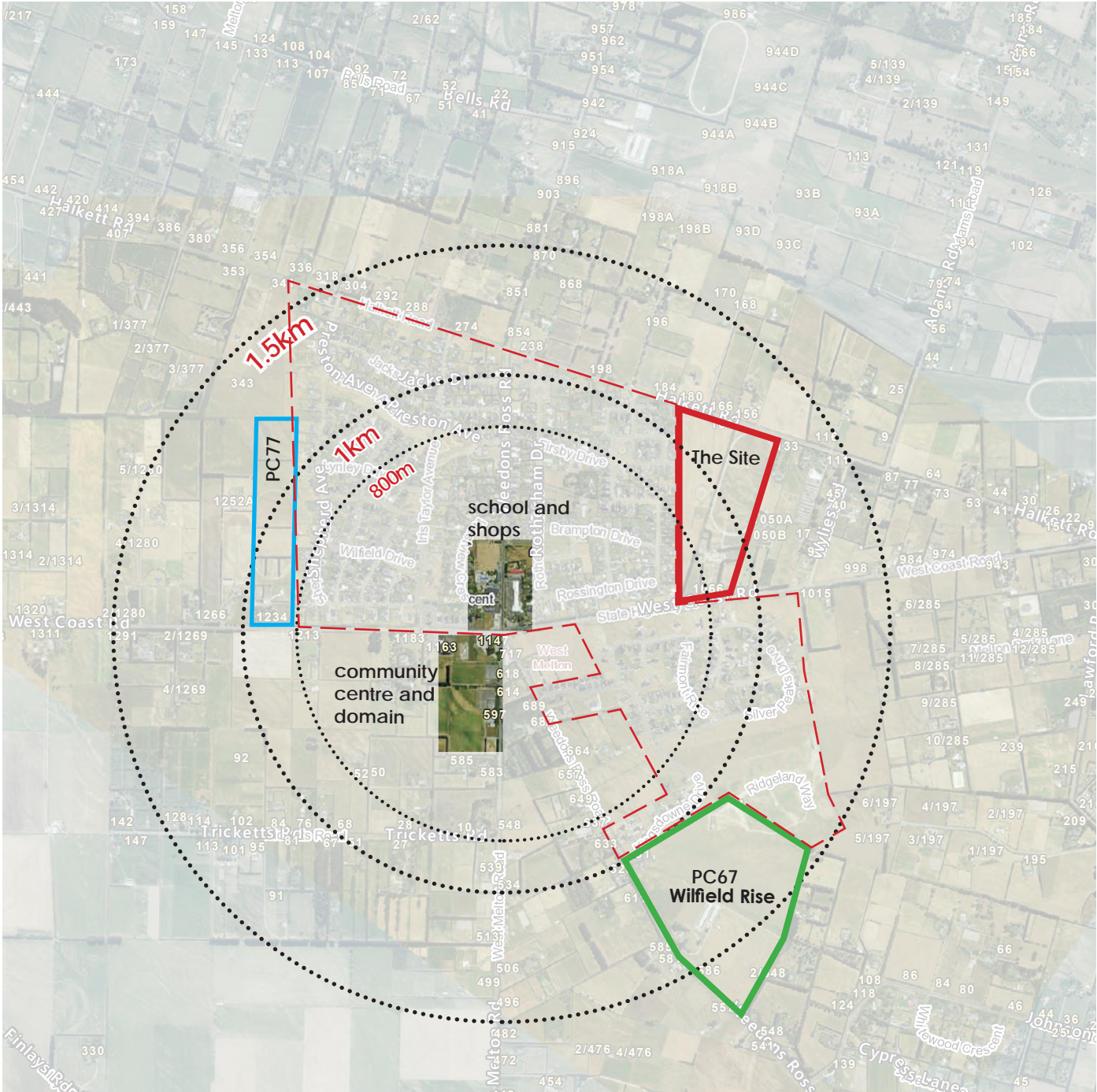
providing for a greater range of lot sizes and living choices.

A handwritten signature in black ink, appearing to read 'Lauren White', with a stylized, cursive script.

Lauren White  
13 March 2023

## ATTACHMENT A

Figure 1  
Location and Proximity of Site Relative to Existing and Future Urban Form




 indicative extent of urban area (aligns with Proposed Selwyn District Plan)





Figure 2  
Potential Future Urban Form as illustrated by Nicole Lauenstein (PC67)



## Anticipated Growth Pattern

To complete the urban form all quadrants can be expected to develop further and provide residential infill and new residential development. To support this cohesive urban form the current commercial and community facilities and green spaces will also gradually expand primarily into the South West quadrant around the existing domain and commercial hub.

### North East Quadrant

- West Melton East PC 74 - refer to appendix A

### South East Quadrant

- residential infill and some commercial expansion in proximity to the centre
- West Melton PC 67 - refer to appendix A

### South West Quadrant

- primarily expansion of community and commercial areas in proximity to the centre
- extension of the domain and possibility for a second primary school and associated sports fields
- new residential development on rural farm land in particular on larger rural lots along SH 73 as they are in single ownership and will be easiest to develop
- residential infill development of existing lifestyle blocks

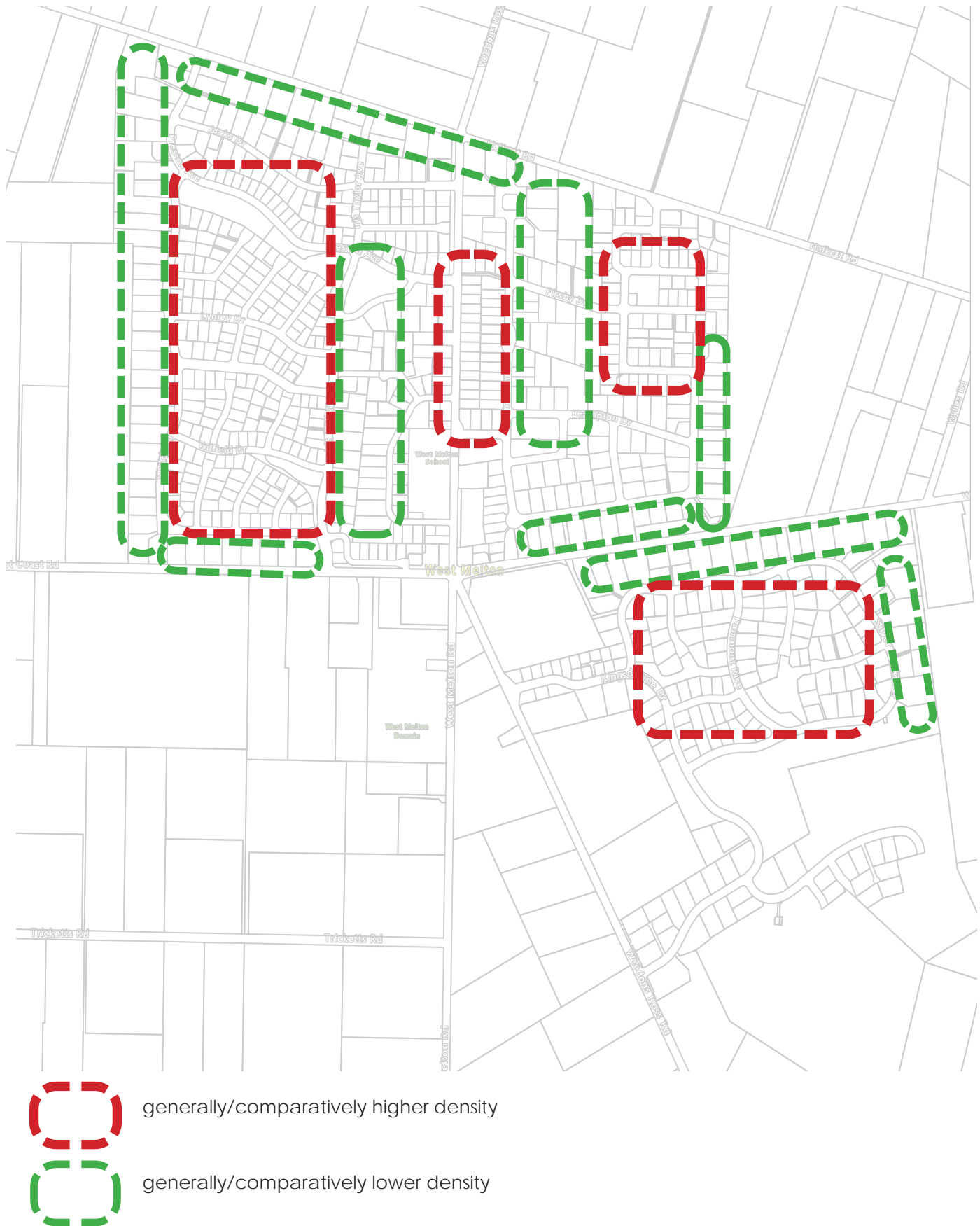
### North West Quadrant

- new residential development on rural farm land with direct linkages to east and south
- selected residential infill development of existing large lots
- open space and recreation areas to support residential development

Figures supporting

STATEMENT OF EVIDENCE OF LAUREN WHITE, ON BEHALF OF HUGHES DEVELOPMENT LIMITED  
in the matter of a private plan change request (PC74) to the Selwyn District Plan  
13 March 2023

Figure 3  
Varied Residential lot size/density across the Township





**Figure 4**  
**Photographs of typical dwellings and streets in West Melton (taken January**



6 Royston Common, Gainsborough



looking south on Rotherham Drive



Rossington Drive, Gainsborough



24 Rotherham Drive



Iris Taylor Drive, Preston Downs



Preston Downs



Wilfield



Wilfield



Figure 5  
Location of Density Case Study Areas

0 0.15 0.3 0.45 0.6  
Kilometres





Figure 6  
Density Case Study 1 - Gainsborough

38 dwellings in 9ha

4.2  
du/ha

Figure  
6

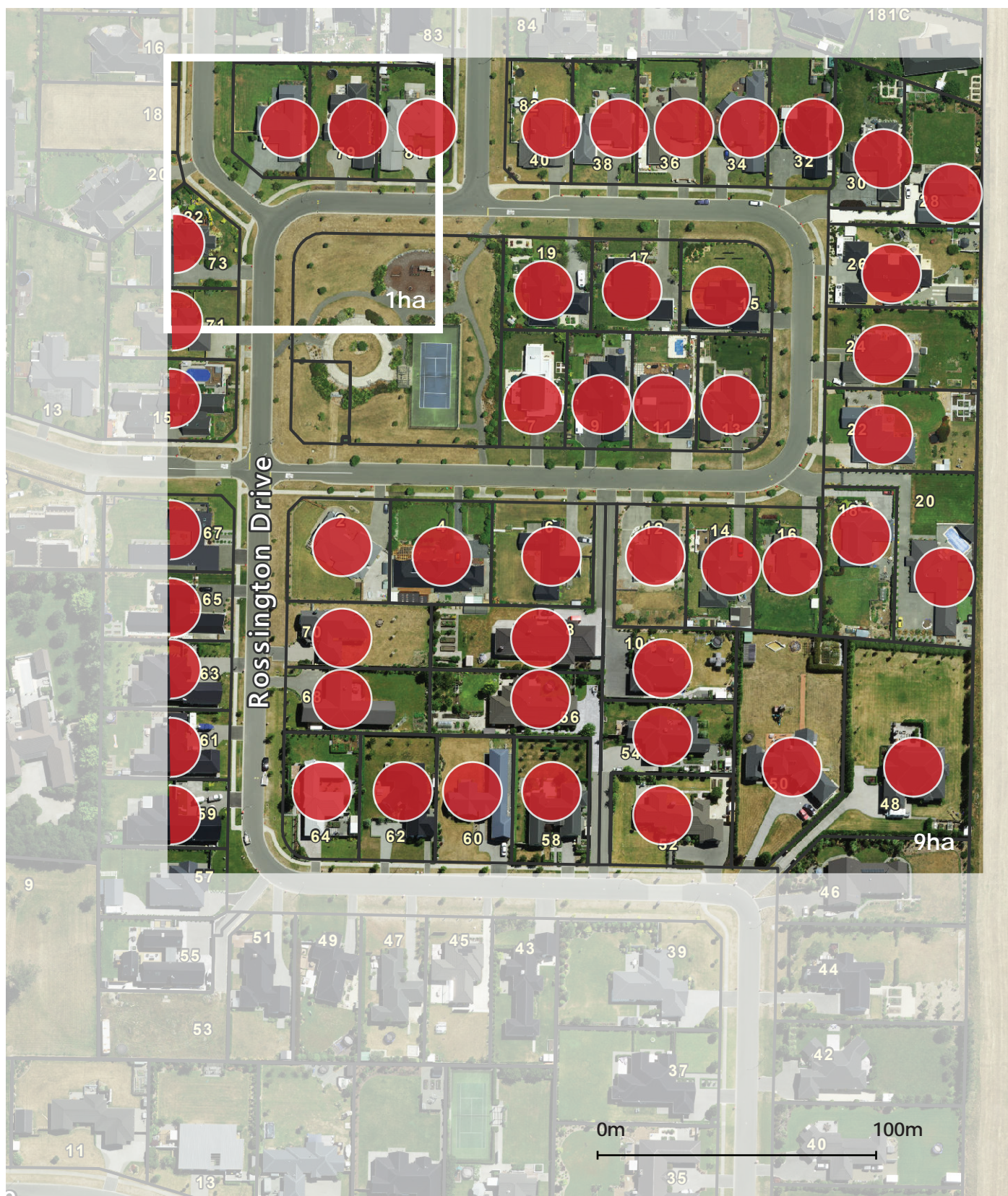




Figure 7  
Density Case Study 2 - Preston Downs

56 dwellings in 9ha

6.2  
du/ha

Figure  
7

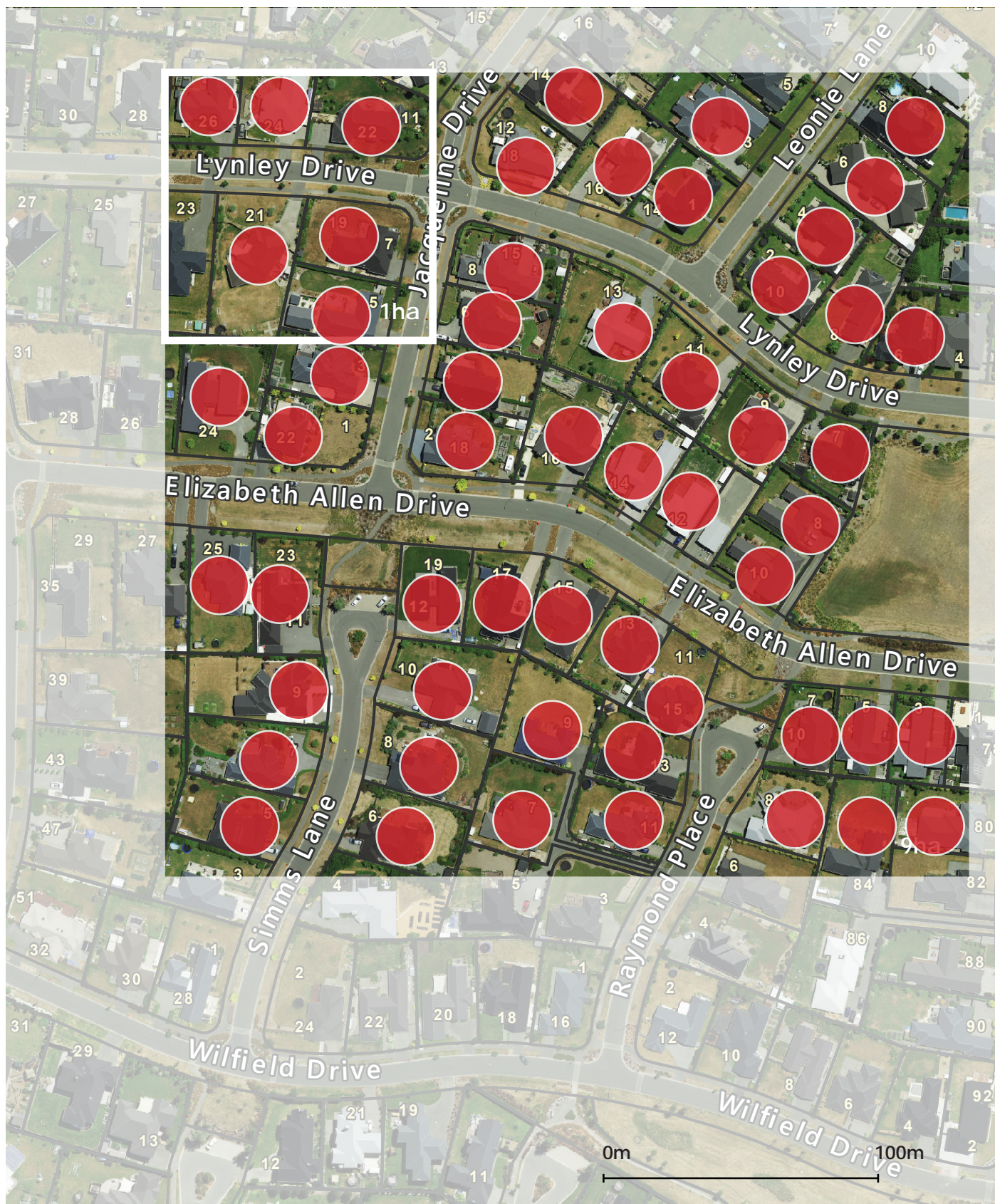




Figure 8  
Density Case Study 3 - Wilfield

4.2  
du/ha

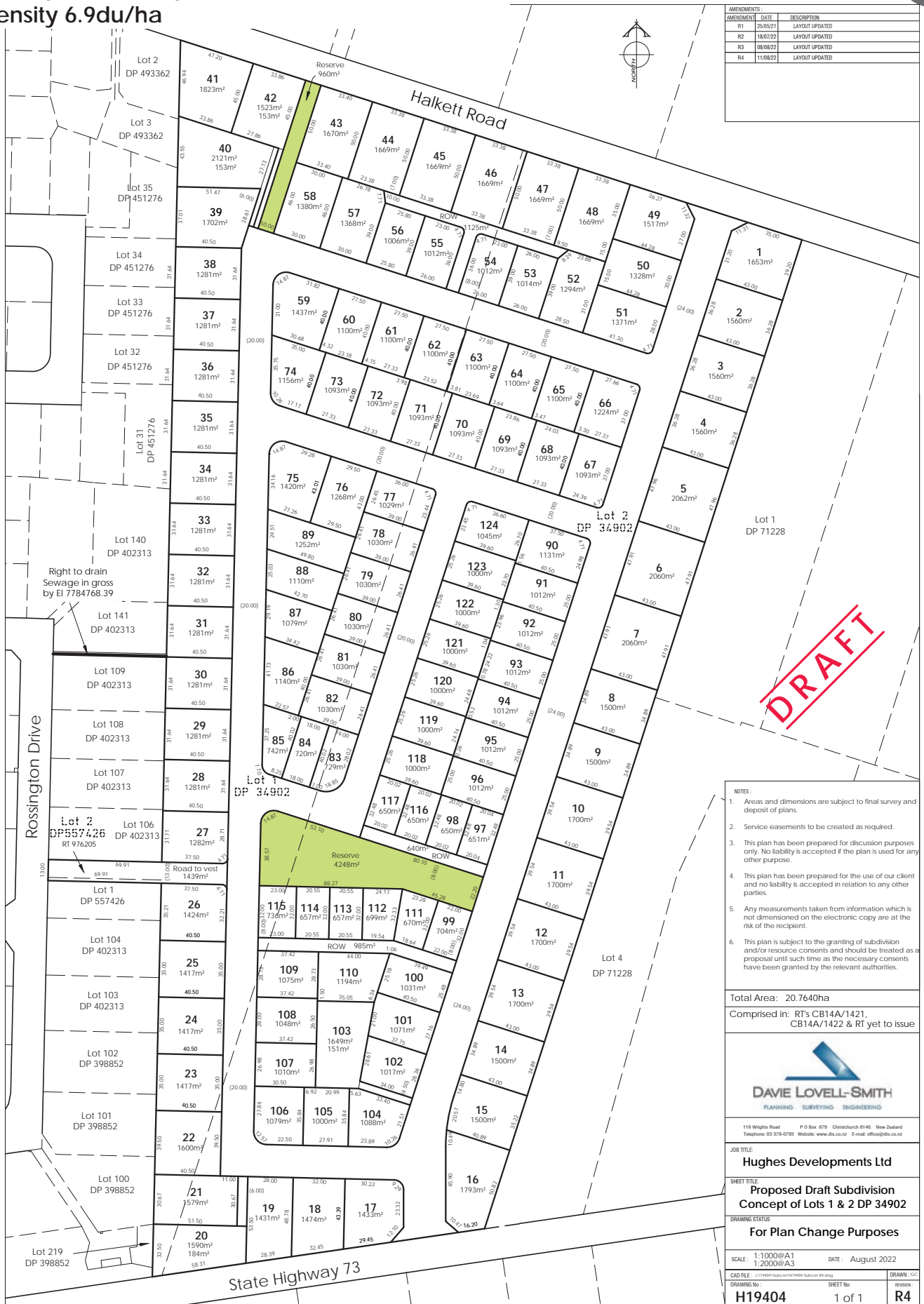
Figure  
8

38 dwellings in 9ha



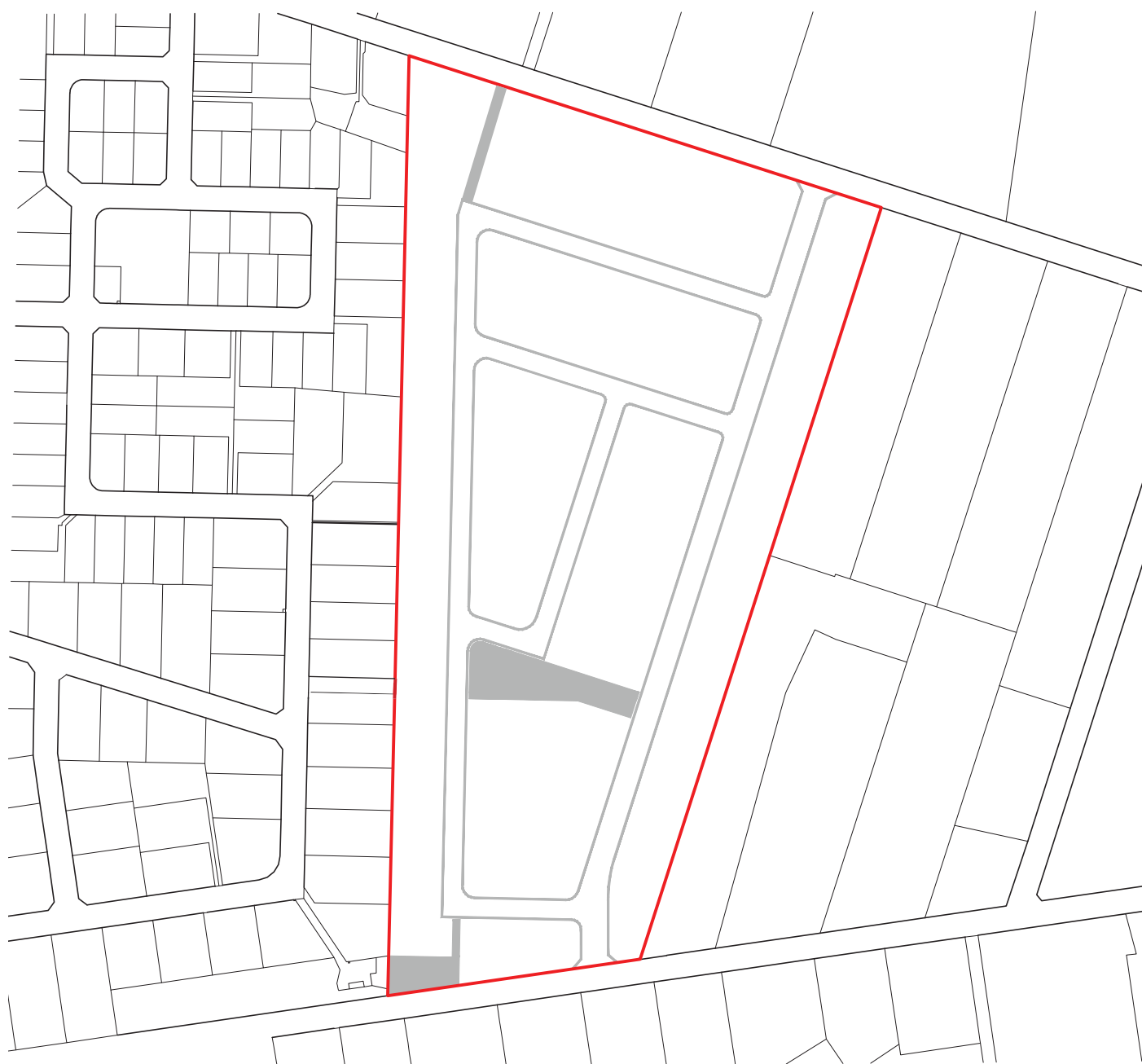



# Figure 9 Density Case Study 3 - HDL Draft Subdivision Plan Density 6.9du/ha




Figures supporting  
STATEMENT OF EVIDENCE OF LAUREN WHITE, ON BEHALF OF HUGHES DEVELOPMENT LIMITED  
in the matter of a private plan change request (PC74) to the Selwyn District Plan  
13 March 2023

Figure 10  
Net Site Area Calculations



 Areas not included in development density area (2.7ha, includes infrastructure lot (1774m<sup>2</sup>, reserve (4284m<sup>2</sup>), pedestrian link (960m<sup>2</sup>) and swales in the road network (20318m<sup>2</sup> as advised by DLS)

 Total area - 20.7Ha





Total area for calculating net density = 18ha

Figure 11  
Density Scenario 1

Achieving 12.3hh/ha (with vacant lots only)



No. Percentage

	500m <sup>2</sup> - 550m <sup>2</sup>	105	46%
	550m <sup>2</sup> - 750m <sup>2</sup>	33	15%
	750m <sup>2</sup> - 1000m <sup>2</sup>	83	38%
	>1000m <sup>2</sup>	3	1%

Total lot number: 223

Average lot size approx. 645m<sup>2</sup>



**Figure 12**  
**Density Scenario 2**  
**Density in response to application of good urban design principles**  
**8.3 hh/ha**



Figure 14  
Examples of Streetscapes with 500m<sup>2</sup> sections

