

BEFORE THE INDEPENDENT HEARINGS PANEL

UNDER

the Resource Management Act 1991

AND

IN THE MATTER OF

the submissions of B & A Stokes on
the Waimakariri Proposed District
Plan (#214) and Variation 1 (#29)

**PRIMARY EVIDENCE OF NICOLE LAUENSTEIN ON BEHALF B & A
STOKES**

(URBAN DESIGN)

Dated: 4 March 2024

GREENWOOD ROCHE
LAWYERS
CHRISTCHURCH
Solicitor: R Murdoch
(rmurdoch@greenwoodroche.com)

Kettlewell House
Level 3, 680 Colombo Street
P O Box 139
Christchurch
Phone: 03 353 0574

1 EXECUTIVE SUMMARY

- 1.1 The proposed rezoning of 81 Gressons and 1375 Main North Road, Waikuku (the **Site**) for residential development, described further in my evidence (the **Proposal**), provides for a variety of densities in close proximity to the Ravenswood Key Activity Centre (**KAC**), encouraging a wider range of people to the area and providing housing to cater for various needs. This enables the opportunity to build the kind of community diversity that fosters strength and resilience; one which is characterised by a wide-ranging socio-economic reach, a range of ages and different cultural backgrounds.
- 1.2 The Proposal completes and consolidates the urban form of the Ravenswood KAC. It assists in better defining the different elements that contribute to that urban form by providing legible transition that places the KAC (with its commercial areas) within the centre and gradually transitioning through various higher densities to the lowest density along Gressons Road. This close interconnected relationship between the outer areas (including the Site) and the KAC core supports the centric form and strengthens the commercial and communal centre.
- 1.3 In terms of the wider context, as illustrated in Figure xx below, the Proposal completes a 'gap' in the urban environment comprising Pegasus to the east of SH1, Woodend and Ravenswood/the KAC to the south and Waikuku to the north. That in turn supports more integrated, balanced urban form, ensuring that existing and new residential areas (as enabled by the Proposal) are accessible to community and commercial services and open space. That accessibility along with the proposed infrastructure also supports walking and cycling over vehicular movement, which is a key aspect of the Proposal.
- 1.4 As set out in further detail in the evidence of Mr Payne, the Proposal includes a range of initiatives that will enhance the ecological values of the Site including:
 - (a) naturalisation and enhancement of Stokes Drain, being an existing spring-fed waterway;

- (b) enhancement and connection of springs to Stokes Drain and to a new waterway on the southern boundary;
 - (c) protection and enhancement of the margins of those waterways through indigenous planting;
 - (d) provision of extensive, hydraulically separated treatment areas for stormwater;
 - (e) introduction of wetland planting and a dedicated biodiversity area.
- 1.5 The inclusion of these elements as part of the Proposal contribute to enhancing the resilience of the Site and its features and the wellbeing of the people and communities who reside there.
- 1.6 The importance of the wider area, including the Site, for Te Ngāi Tūāhuriri Rūnanga and Te Rūnanga o Ngāi Tahu is acknowledged, and further consultation is required to understand the particular values of the area and how those might be best addressed through the Proposal. As an initial step however, the Proposal seeks to enable the protection and enhancement of known values of cultural significance – being the waterways and the wāhi tapu site.
- 1.7 The Proposal will enable people and communities to provide for their wellbeing, and health and safety, both now and into the future. It is well connected and accessible, it provides a variety of housing choices in various settings and offers choice to the residential housing market, all important urban aspects that ensure the proposal contributes to a well-functioning urban environment as required by the NPS-UD. In addition, it offers opportunities for ecologically responsive design solutions and nuanced cultural interpretation and expression at a local and site specific level.
- 1.8 In my view, the Proposal is a more appropriate outcome for the Site than the alternative rural lifestyle / large lot residential development which is anticipated as an outcome under the notified Waimakariri Proposed District Plan (**PDP**).

2 INTRODUCTION, QUALIFICATIONS AND EXPERIENCE

2.1 My full name is Nicole Lauenstein.

- 2.2 I have the qualifications of a Dipl. Arch. and a Dipl. RUPL equivalent to a Masters in Architecture and a Masters in Urban Design (Spatial and Environmental Planning) from the University of Kaiserslautern, Germany. Before moving to New Zealand, I became a member of the BDA (German Institute of Architects) and the AIA (Association Internationale des Architects). I was an elected member of the Urban Design Panel for the Christchurch City Council from 2008 to 2016 and am a member of the Urban Design Forum.
- 2.3 I am the director of a+ urban, a Christchurch based architecture and urban design company established in 1999. I have over 25 years of professional experience in architecture and urban design, particularly within the crossover area of urban development, master planning, and comprehensive spatial developments.
- 2.4 I practised as an Urban Designer and Architect for the first 8 years in Germany, Netherlands, England, Spain, and Australia before re-establishing my own architectural and urban design practice in New Zealand. In both practices I have undertaken many projects combining the architectural and urban design disciplines. Projects have been varied in scale and complexity from urban revitalisation of city centres, development of growth strategies for smaller communities, and the design of architectural buildings both in the public realm and for private residential projects in sensitive environments.
- 2.5 Prior to my arrival in New Zealand, I worked for several European Architects and Urban Designers. I was involved in a range of urban studies and rural area assessments for the governance of the individual federal states in Germany, investigating urban sprawl of major cities such as Frankfurt, Darmstadt, Rostock, Berlin, and the effect on the urban and rural character. This work included developing mechanisms and criteria to facilitate sustainable development. Other work for private clients consisted of designing sustainable developments in sensitive areas within very stringent development guidelines.
- 2.6 My experience in New Zealand includes working on growth strategies for urban and peri-urban areas, including rural and urban residential developments with a mixture of densities from low to high. I have prepared several urban analyses, development strategies and design

concepts, for both urban and rural residential areas within the Canterbury region (including Lincoln, Rolleston, Tai Tapu, Ohoka, Rangiora, Kaiapoi, Lake Hood and Ashburton). I have also done this for Akaroa and in other places across the wider South Island, namely developments in Queenstown, Wanaka, Invercargill, the Marlborough Region, the Hurunui District, and the Buller District.

2.7 My most recent urban design and architecture work includes:

- (a) Urban analysis and strategic plans for Selwyn District Council, Hurunui District Council, Christchurch City Council, Queenstown Lakes District, Nelson and Buller District, Wellington CBD and Auckland City and the greater Auckland urban area.
- (b) Masterplans for urban development in Lincoln, Rolleston, Tai Tapu, Amberley, Rangiora, Ohoka, Ashburton, Christchurch, Westport, Wanaka, Queenstown, and Auckland.
- (c) Kirimoko residential development in Wanaka (Stages 1 – 6).
- (d) A mixed use development at Hagley Avenue, Christchurch.
- (e) A new Tait building and masterplan in north-west Christchurch.
- (f) Several commercial and residential 'rebuild' projects in Christchurch.
- (g) Outline Development Plans and masterplans for post-earthquake inner-city block infill and brownfield conversions in Christchurch.
- (h) Urban design consultation on large private and public rebuild projects in the Christchurch CBD justice and emergency services precinct
- (i) Analysis and identification of Character Areas within Christchurch as part of the Christchurch District Plan Review.
- (j) Papa Ōtākaro Avon River and East/North Frame concept design in the Christchurch Central City.
- (k) Several private plan changes and submissions to the proposed Selwyn District Plan.

(l) Several private plan changes and submissions to the proposed Waimakariri District Plan (**PDP**).

- 2.8 I have been engaged on behalf of B & A Stokes to prepare this urban design evidence in support of their submissions on the PDP to rezone the Site. Those submissions seek to rezone the Site to General Residential (**GR**) / Medium Density Residential (**MDR**), to enable the development of approximately 1,500 lots and associated infrastructure in accordance with the Outline Development Plan (**ODP**) and the ODP narrative included as an appendix to the evidence of Mr Clease.
- 2.9 When areas for roading and the blue/green network are removed, that target yield would likely enable a density outcome of approximately 12 households per hectare, with the opportunity for more density located near Ravenswood.
- 2.10 The specific nature of my involvement with the Proposal is described further in my evidence below.

3 CODE OF CONDUCT

- 3.1 While this is not an Environment Court proceeding, I confirm that I have read the Code of Conduct for Expert Witnesses (contained in the Environment Court Practice Note 2023). I agree to comply with the Code of Conduct in preparing this evidence and will continue to comply with it while giving oral evidence. Except where I state that I rely on the evidence of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

4 PURPOSE OF THIS EVIDENCE

- 4.1 This evidence:
- (a) explains my urban design peer review role;
 - (b) introduces the urban design strategy and key recommendations that now underpin the revised ODP;
 - (c) describes the key features of the revised ODP; and

- (d) considers the integration of the Proposal into the wider urban context, unique constraints, accessibility and connectivity, all of which are matters that characterise a “well-functioning urban environment” under the National Policy Statement on Urban Development 2020 (**NPS-UD**).
- 4.2 In preparation for the peer review and development of the design strategy several technical draft reports/evidence were made available. These include an ecological assessment of the Site (described in the evidence of Mr Payne on behalf of the Stokes), a visual and landscape assessment (described in the evidence of Mr Lester), a stormwater and flood management assessment (included in the evidence of Mr Hall), and a traffic design assessment (included in the evidence of Mr Rossiter).
- 4.3 The key documents I have relied upon in preparing my evidence are the following:
- (a) The Stokes’ submissions on the PDP and Variation 1.
 - (b) Expert reports and evidence prepared for the rezoning hearings on behalf of the Stokes.
 - (c) The relevant provisions of the PDP and Variation 1.
 - (d) Waimakariri District Plan Review Memo To Rezoning Submitters (via the Hearing Panel) in relation to greenspace requirements, esplanades, reserves and transport requirements.
 - (e) The NPS-UD, including practice and guidance notes.
 - (f) Waimakariri District Development Strategy 2048 (**WDDS**).
 - (g) Rural Residential Development Strategy 2019 (**RRDS**).
 - (h) Greater Christchurch Urban Development Strategy Update 2016.
 - (i) Mahaanui Iwi Management Plan 2013 (**IMP**).
 - (j) Canterbury Regional Policy Statement 2016 (**CRPS**).
 - (k) New Zealand Urban Design Protocol 2005.

(l) People Places Spaces: A design guide for urban New Zealand, Ministry for the Environment, 2002.

(m) Other non-statutory documents and guidelines related to urban design best practice.

4.4 I intend to address specific objectives and policies as they relate to urban matters in subsequent evidence in response to the Section 42A report.

5 INTRODUCTION AND BACKGROUND

5.1 My involvement with the Proposal started as an urban design peer review of the entire Proposal following the Stokes' initial submissions on the PDP.

5.2 During this process I have closely liaised with all relevant project consultants (traffic, engineering, ecology, and planning) to gain a better understanding of the underlying design and technical parameters that have informed the relief sought through those submissions. I have completed two site visits; one in January 2024 to re-acquaint myself with the wider area and recent urban development in and around Ravenswood (including the KAC), and a second site visit with Mr Lester to consider landscape matters. Those matters primarily related to the proposed edge treatment, the role of Stokes Drain in the Proposal, the various springs, the wider landscape connection and the wāhi tapu site.

5.3 During an initial workshop on the Proposal, several aspects of the design were discussed with a particular focus on four key topics:

(a) Site hydrology, aquatic ecology, and general water management.

(b) Movement hierarchy, access, connectivity, and internal distribution.

(c) Green spaces, landscape, and edge treatments.

(d) Sensitivities around the cultural narrative of the area and the wāhi tapu site specifically.

5.4 From this workshop, it became evident that there was an opportunity to ensure that all these aspects worked together as part of the Proposal in

a complementary and coherent manner. I was tasked to develop a holistic design strategy for the Proposal and provide a set of recommendations to inform the ODP to achieve that outcome. Due to the nature of the Site and in particular its hydrological patterns, a 'land-based' design approach was recommended for the strategy underpinning the ODP and its supporting narrative. This is discussed further below.

- 5.5 As noted, the peer review and development of this design strategy have been informed by technical inputs relating to traffic, infrastructure, ecology and landscape.

Land-based design strategy underpinning the ODP and narrative

- 5.6 In summary, the overarching design strategy for the Proposal is underpinned by a 'land-based' design approach where the specifics of the underlying land become the primary drivers and create the overall structure for the development. This manifests in the form of a blue/green network that is highly responsive to the natural characteristics of the Site and informs all of the subsequent designs.

Primary land-based drivers

- 5.7 The land-based design approach for the Proposal focuses on the integration of the Site's hydrology, in particular the existing waterways and key water channels, existing springs and their flow paths, and naturally occurring stormwater catchment areas at low points within the Site. It aims to retain and improve the inherent ecological values of the Site through naturalisation and/or protection of waterways via landscaped setbacks and esplanades. This approach creates an overarching "blue" structure for the Site.
- 5.8 Following this blue structure, a green network is laid across the Site, building on the existing green network that surrounds the Site by integrating and connecting the existing vegetated areas. This is done via green links, often along stormwater conveyance channels, natural waterways, and with strategically placed new recreational green spaces and landscaped stormwater treatment areas. This creates a "green network" that supports and interlinks with the blue network.

5.9 The final primary driver is the anchoring of the Site to the wider landscape through direct visual connections to key local and regional landmarks and land-based features. These include long distance views directly to Mount Grey and shorter views along green links towards key landscape features i.e. vegetation around the wāhi tapu site or the established oak trees. Other visual anchors can be found through open views along road corridors, green spaces and open stormwater areas to the wider rural and residential environment to the west and south.

Secondary 'people' based drivers

5.10 The secondary drivers informing the land-based design strategy are:

- (a) Creating a community around a strong local narrative by expressing the natural history of the Site. This includes historical connections to the Site and wider landscape which may be expressed in the design of any public spaces including, but not limited to, naming of streets and places, plant selection, signage, design details, and materiality.
- (b) Providing a fine grain internal and external connectivity at a local level. This is with the intention of creating a walkable interconnected neighbourhood, using the green network to facilitate direct movement that is prioritised over vehicular movement.
- (c) Creating a development that responds sympathetically to the existing patterns and structures of the surrounding area regarding density, typology, and scale of the build form, while relating building scale to the spatial setting and scale of the local landscape.
- (d) Creating a density distribution that respond to the existing urban fabric placing higher densities to the south in closer proximity to the KAC and Ravenswood residential areas, and locating lower density environments to the north towards the rural residential interface.

Recommendations

- 5.11 These drivers informed a series of recommended initiatives for inclusion in the ODP and/or the supporting narrative, or to implement as part of the development in future.
- 5.12 These recommendations were then discussed with the relevant technical experts engaged on behalf of the Stokes, and further developed to ensure the more technical aspects of the Proposal remained sound and workable. Those recommendations are included at **Appendix A**.
- 5.13 Further fine tuning of the ODP in response to those recommendations was then completed as an iterative process, resulting in the revised ODP and supporting narrative, attached to the evidence of Mr Cleese. The key urban design features of that revised ODP are described below.

6 REVISED ODP AND NARRATIVE

Summary – blue network

- 6.1 The blue network provides the main structure for the Proposal. It can be broken into four key aspects:
- (a) springs and natural waterways and associated green spaces;
 - (b) biodiversity / natural wetland areas;
 - (c) central west to east overland flow paths; and
 - (d) stormwater management areas (**SMAs**).
- 6.2 The natural waterways running from west to east are integral to the Site and its development. As set out in the evidence of Mr Payne, Stokes Drain in particular holds moderate ecological value and enhances the character and amenity value of the Site. This in turn promotes further care for the ecology of the waterway.
- 6.3 Several natural springs are present on the Site and will be retained and integrated into the Proposal. Spring water will be conveyed/redirected into Stokes Drain and into a waterway which will be established along the southern boundary of the Site, identified on the ODP (and referred to in my evidence) as the **Southern Waterway**. The sensitive

environments of these waterways will be protected via landscaped green spaces / esplanades which will in turn enhance their amenity and ecological value.

- 6.4 To create a buffer to the wāhi tapu site and maximise the ecological benefits of the Proposal, a biodiversity/ecological area is proposed adjacent to the existing protective bund around the wāhi tapu site. Subject to consultation with mana whenua, this could take the form of a natural wetland to assist with the natural flux in water levels of Stokes Drain. Establishment of that area will support a regenerative approach to natural features within the Site and could create tangible ecological benefits tailored to the location.
- 6.5 As described in more detail in the evidence of Mr Hall, the main overland flood flows onto the site from the west will be directed into a constructed overland flow path through the centre of the Site to control floodwater as it moves through the development (the **Central Flood Bypass Channel**). This Channel is designed to collect flood water from the Site's western boundary (via a dedicated diversion, known as the **Western Diversion**) and channel it through the centre of the Site, bypassing the SMAs and connecting into the lower reaches of Stokes Drain at its intersection with SH1. The Central Flood Bypass Channel is proposed to be encased in planted green space providing an east-west high amenity green corridor.
- 6.6 A significant SMA will be provided along the eastern boundary of the Site (the **Eastern SMA/Open Space**), which is the lowest area of the Site. In addition to the stormwater treatment function, the Eastern SMA/Open Space will form a large buffer to SH1 and create a natural large landscape setback on the Site.
- 6.7 As described in the evidence of Mr Hall, that Eastern SMA/Open Space will comprise three stormwater treatment facilities that are hydraulically separated by Stokes Drain, the Central Flood Bypass Channel and the Southern Waterway. The main function of the **Eastern SMA/Open Space** in the Site will be stormwater collection, retention and treatment, particularly the filtering and deposit of sediment before discharging treated water into the local waterways via the existing culvert under

SH1. As such, the Eastern SMA/Open Space is a critical contributor to the health of the blue network.

- 6.8 Depending on capacity and groundwater levels, the Eastern SMA/Open Space may be bunded or stepped into the ground creating contoured landforms. These vertical changes of the landform will be carefully integrated at the detailed design stage. Functional planting is intended to accompany the Eastern SMA to assist with breaking waterflow, stabilising the ground, and to work as biological filters. Amenity planting will also be used to provide some verticality to assist blending the basins into the wider landscape and the development.
- 6.9 The Eastern SMA/Open Space will be ephemeral in nature but will be mostly dry for long periods. Wet or dry, this area will increase the sense of open space, provide opportunities for longer distance viewshafts into the wider landscape, and will be an important part of the recreational walking and cycling network on the Site.

Summary – green network

- 6.10 The proposed green network is intricately tied to the blue network. Green nodes and corridors are proposed to surround waterways to preserve ecological values and increase amenity. The green network is foundational to the Proposal as a tool for placemaking, providing scale and contributing to the character and identity of the community (in terms of its urban form). It is also key to creating high amenity for off-street movement corridors. The green network and the proposed vegetation within it also acts as mitigation and a buffer for the development itself and for adjacent areas.
- 6.11 The green network has four key functions in the design:
- (a) it supports inherent ecological values and natural features through ecological linkages and riparian planting;
 - (b) it provides space for vegetation to assist in creating a high-amenity, interconnected, green environment using open/public space including green linkages, road reserves, and the Eastern SMA/Open Space;

- (c) it provides public spaces for recreation with a social/community function; and
- (d) it mitigates the impact of the built environment through visually and physically breaking up the development and/or buffering and screening it.

The wider interconnected green network

- 6.12 The natural waterways, springs and conveyance channels, potential biodiversity areas, and the Eastern SMA/Open Space provide ample opportunity for the planting of native vegetation along the margins and within detention basins and wetlands. They also provide open spaces and landscape buffers / setbacks, particularly in the case of the Eastern SMA/Open Space.
- 6.13 Tree lined avenues are proposed along with several larger and smaller internal green links that provide a finer grain, interconnected green network. Smaller green links no less than ten metres in width will be designed as landscaped areas at the subdivision design stage.
- 6.14 Along the edges of the Site the green network reaches across the Southern Waterway to connect directly with the adjacent Ravenswood SMA.

Placemaking, community and neighbourhood identity around green spaces

- 6.15 Several public open spaces are included in the ODP to add amenity to the neighbourhood, provide relief for more compact residential clusters, and provide residents with the opportunity for recreation. The location of these recreational areas has been determined based on the number of green spaces established in the wider area, and to ensure people living within the Site have access to an open space or reserve within a 500 metre walking radius of their home. These local parks will provide passive recreation opportunities which are essential for the level of residential density proposed.
- 6.16 The proposed green space in the centre of the Site forms the key community space, with two primary roads providing boundaries for that green space. A second smaller green space is proposed to be located

further to the west on the Site, adjacent to Stokes Drain. It is intended to accommodate the retention of existing specimen trees and provide a green space that directly associates with the waterway and allows for public access. Smaller green spaces will be placed around the springs at the southern boundary. The intention is for these green spaces to straddle the Southern Waterway, and provide connections to the adjacent areas to the south of the Site which have not yet been developed. A strong green link can be created between the Proposal and the large SMA in Ravenswood to stitch the areas together. These smaller green spaces are not shown on the ODP as their exact location and size will be determined at detailed design stage.

- 6.17 All green spaces function as the corresponding green heart of specific areas of the Site and offer a 'spatial break' and 'meeting place' within the built form of the neighbourhood. They promote social interaction between residents and create a hub for the local community. Cycle and walkways will be routed through these green spaces bringing the wider community into the heart of this new neighbourhood and allowing further opportunities for social connection.
- 6.18 The exact location and final size of the green spaces will be determined at the time of subdivision. However it is anticipated that the central green space will be the largest green space with approx. 35,000m². to be able to accommodate a variety of active and passive recreational opportunities along with landscaping. The other two green spaces will be smaller, between 3,000m² – 8,000m². The green space adjacent to Stokes Drain (approx. 0.8ha) will be an extension of the proposed green space adjoining the waterway with a strong focus on tree planting and natural landscaping intended to create a more tranquil and contemplative space.

Summary - movement network

- 6.19 The ODP provides a clear hierarchy of movement corridors and cohesively integrates with the surrounding context, including provision for connections to possible future development on adjoining properties. It provides appropriate access and good internal distribution. The ODP prioritises cycling and walking over vehicular transport and facilitates public transport on primary roads.

6.20 A clear hierarchy of movement corridors assists with legibility throughout the Site. This is particularly important in a reasonably flat terrain such as the Site where there are limited topographic or natural features to aid wayfinding.

6.21 The proposed arrangement of movement corridors will ensure the Proposal:

- (a) cohesively integrates with the surrounding context;
- (b) anticipates future connections as required;
- (c) provides appropriate access to, and external and internal connectivity for the Site; and
- (d) prioritises walking and cycling over vehicular movement.

Prioritising walking and cycling

6.22 All internal roads and non-vehicular links will provide a safe environment and high amenity to encourage walking and cycling for most trips, both within the Site and further afield. The benefits of high amenity cycle and walking infrastructure are well documented and include benefits to physical and mental health, reducing emissions and energy use, and improving community and social integration.

6.23 The following design principles have informed the pedestrian and cycling strategy for the Proposal:

- (a) Use local 'shortcuts' for pedestrian and cycle movement, creating direct routes along desire lines to key destinations and to existing and future adjacent neighbourhoods.
- (b) Create safe pedestrian and cycle routes, especially for school children and elderly people, with passive surveillance over public pathways from adjacent activities.
- (c) Avoid conflict between transport modes by catering for different users and creating slow traffic environments where cycle routes are sharing the road.

- (d) Create visually interesting streetscapes to encourage walking and cycling.
- (e) Use the amenity provided by the blue/green network to create dedicated walking and cycling connections to create an added incentive, making journeys more enjoyable.

Street scene

- 6.24 The Proposal will feature a variety of residential street typologies, from small lanes, secluded cul-de-sacs, and short neighbourhood streets to standard scaled streets and larger collector roads. Depending on hierarchy and traffic volumes, road reserve and carriageway widths will vary. All streets will have street tree planting to provide a sense of scale and shade in summer. The key collector roads will have avenue style tree planting to emphasise their importance. On smaller streets, on-street parking will be informal to assist with the reduction of travel speeds as it narrows the road.
- 6.25 Gressons Road forms the northern boundary to the Proposal. The intention is to locate slightly larger properties along this edge to allow for larger dwellings setbacks and provide a suitable mitigating landscape treatment. For this space, properties will be internally accessed from the Site. The Proposal will therefore continue to provide a reasonable sense of ruralness for the adjacent rural residential properties.
- 6.26 Wards Road forms the southern boundary of the Site. To avoid it becoming a separating element it will be integrated into the local road network and continue to provide access to existing properties. The intention is to use Wards Road to connect the Proposal to the KAC and Ravenswood neighbourhood. The exact treatment of the road will be developed at detailed design stage in direct response to the adjacent areas to the north and south of the road. This attention to detail will ensure the two areas stitch seamlessly together.
- 6.27 SH1 forms the eastern boundary. It bypasses the Site and will not form part of, or be directly connected to, the roading network of the Proposal. The Eastern SMA/Open Space will provide a green interface for the SH1 which is an appropriate scale for this major movement corridor and associated travelling speeds.

Summary – land use

Cohesive built environment.

- 6.28 The key elements that are intended to organise built form within the Proposal are the blue/green network, movement corridors and the connections to the landscape which create a natural structure for the placement of lots.
- 6.29 The result is an ODP layout which can achieve a diversity of lot sizes, from larger lots at the northern, more rural/residential interface with Gressons Road to more intensified areas with smaller lots and/or more comprehensively developed lots around the green spaces and within the southern part of the Proposal in proximity to the KAC and Ravenswood. These will vary in orientation and location and therefore offer a wide range of options to meet diverse housing needs. That in turn creates the opportunity for diverse architectural design responses throughout the development. In a new development of this size, it is important to provide opportunities for such variety to encourage social, economic, and cultural diversity that is reflective of the wider community. The proposed MRZ zoning creates the built form envelope to develop a wide range of housing styles and typologies.
- 6.30 All road-facing lots are intended to have adequate width to allow for breaks between built form and space for landscaping in front and side yards. This is to soften the visual impact of the built environment, especially fences. This will contribute to the residential street character and the amenity within the public realm. For medium density typologies it is anticipated that they will be developed in a comprehensive manner to ensure appropriate street and edge interfaces.
- 6.31 As part of reviewing and revising the ODP, consideration has been given to the relevant directions in the CRPS and the notified PDP regarding outline development plans, and to the notified MDRZ rules which guide subdivision and dwelling design, bulk and location.

Areas of residential intensification

- 6.32 As stated earlier in my evidence (and as set out in the evidence of Mr Lester), the target yield of the Proposal will achieve a minimum density

of just over 12 households per hectare once the land required for roading and the blue/green network is accounted for. The Proposal does not however preclude the achievement of a higher density outcome to achieve 15 households per hectare, as sought in the PDP.

- 6.33 Achieving that outcome would however require the inclusion of a generous proportion of medium density housing typologies which would be inconsistent with the typical standalone single storey dwelling on a single property which characterises residential development in this part of the Waimakariri district.
- 6.34 The MDRZ would however enable two - three storey semi-detached dwellings and attached townhouse typologies which could be distributed throughout the ODP in several smaller clusters where they can be naturally integrated with taller street trees or adjacent to recreational green spaces with vegetation to match the buildings in scale.
- 6.35 Consistent with best practice, any increased density should be located in close proximity to green spaces and/or commercial or community areas to balance density around amenity for the following reasons:
- (a) The green space would provide those residents in higher density housing with additional opportunity for outlook.
 - (b) The green space compensates for smaller sections and reduced recreational opportunity within the private environs.
 - (c) Higher numbers of dwellings around open space increases levels of active and passive surveillance.
 - (d) A more built-up environment improves the spatial definition of the open space, better defining its edges.
 - (e) Green spaces provide additional opportunity for on-street parking to support adjacent medium density housing.
 - (f) Adjacency to commercial/community areas provide easy access to services and reduces the need for the use of the car for everyday activities.

Density distribution in response to amenity and landscape structure

- 6.36 Whilst “density around amenity” is a key rationale for the location of medium density residential typologies, other areas within the Site could also support increased density, including the entire southern edge of the Site and along the proposed primary and secondary roads.
- 6.37 Any higher density development should however avoid being located adjacent to the Stokes Drain and the existing springs on the Site. It might seem counter intuitive to avoid locating these intensified residential clusters adjacent to natural waterways as they provide high amenity open space. However, Stokes Drain and, in particular, the local springs are relatively small waterways and this building typology would visually dominate and enclose them.
- 6.38 It is best practice to assess the suitability and effect of each location through a focused design process at the subdivision stage when more accurate and detailed information is available. Some flexibility as to the exact location of all medium density areas should therefore be retained.
- 6.39 It is also worth noting that there may be other constraints in relation to site geometry, hydrology, ecology, edge treatment, setbacks and possibly geotechnical condition in proximity to waterways and waterbodies. As a result, in practice it is likely that the final form of development will be at a lower density than what is theoretically enabled under the MRZ zoning.

Summary – cultural considerations

- 6.40 As set out in the evidence of Mr Lester and Mr Cleese, it is understood that the receiving environment (including the Site) holds significant importance for Te Ngāi Tūāhuriri Rūnanga and Te Rūnanga o Ngāi Tahu. That is evidenced through the silent file notation in the PDP which extends across the majority of the Site. It is also reflected in:
- (a) The wāhi tapu site, identified on the ODP.
 - (b) The existing spring-fed waterways on the Site.
 - (c) The proximity of the Site to Kōhaka-a-Kaikai-a-Waro or the historic Kaiapoi Pā, which is understood to be one of the most culturally

significant locations for Te Ngāi Tūāhuriri Rūnanga and Te Rūnanga o Ngāi Tahu.

6.41 The ODP has, to date, proposed to enable the protection and enhancement of known values of cultural significance – being the waterways and the wāhi tapu site. However, further consultation with mana whenua is required to understand the nature and extent of those, and possibly other, existing values, and how the proposal might best respond to those values.

Well-functioning urban environment within the Site

6.42 In my opinion, the adopted recommendations and subsequent refinement of the Proposal have generated a revised ODP and supporting narrative which sets out a strong framework for a well-functioning urban environment within the Site itself.

6.43 The balance of this assessment considers the extent to which the Proposal (as shaped by the ODP and the supporting narrative) will contribute to a well-functioning urban environment within Woodend/Pegasus and as part of the Waimakariri district generally.

7 WIDER URBAN CONTEXT

Urban context – urban form and growth

NPS-UD

7.1 The NPS-UD set a new direction for urban development, with a focus on increasing capacity and intensification within existing urban environments. The Greater Christchurch area constitutes an “urban environment” and straddles three districts - Selwyn, Christchurch, and Waimakariri (refer to my **Appendix B** – Regional Overview). The Woodend/Pegasus area also constitutes part of that urban environment.

Greater Christchurch urban context

7.2 Christchurch remains the main urban centre in the Greater Christchurch area with the majority of job opportunities, commercial activities, and the largest number of services. Travel distances from the Site and Ravenwood to key destinations within the Christchurch metropolitan area are reasonably short, approximately 20 – 25 minutes (off-peak).

This is an acceptable travel distance and time compared to other metropolitan areas such Auckland, Wellington, or even Dunedin. A major city the size of Christchurch with all its services and work opportunities will always create a pull for people to move to the wider area and commute to work. This can never be completely eliminated.

- 7.3 With respect to smaller townships and settlements within the commuting range of larger metropolitan areas, it is important to provide a good level of access to daily services within a walking/cycling distance within the same locality and ensure that digital connectivity is strong to support the growing trend of working from home. At the same time, park and ride facilities can reduce the carbon footprint of commuter travel and a growing community and bus services can also contribute with additional routes and services.

Wider district context – the KAC of Woodend and Pegasus within the Waimakariri District

- 7.4 As part of my involvement in other Plan Changes and submissions in the Waimakariri district I have familiarised myself with the wider area over the last 4-5 years. This includes the statutory and non-statutory planning and urban design documents and guidelines specific to the Waimakariri district. I have undertaken several site visits to many different urban and rural areas in the district and am familiar with the Greater Christchurch area.
- 7.5 The WDDS has identified Rangiora and Kaiapoi as the primary KACs for the district, followed by Woodend/Pegasus and Oxford. This creates a hierarchy within the district of urban townships based on existing population and approximate size. The anticipated urban growth is directed towards these urban areas.
- 7.6 However, for Waimakariri there are also significant other matters beyond the size of an existing urban area that need to be taken into consideration when locating urban growth.
- 7.7 Many areas in the Waimakariri district are affected by development constraints of various nature such as coastal inundation, liquefaction and flooding, noise contours, and areas of cultural significance.

- 7.8 The primary growth areas identified in the WDDS (Rangiora, Kaiapoi, Woodend and Pegasus) are all curtailed by these constraints. Three out of the four centres (Kaiapoi, Pegasus and Woodend) are affected by several natural hazards including coastal inundation, liquefaction, and flooding, whilst Rangiora has to consider primarily high water tables and flooding. Management of that natural hazard risk is therefore critical in order to provide growth areas that are resilient, as directed by the NPS-UD.¹
- 7.9 Having said that, when locating urban growth, it is important to find the right balance between the advantages of proximity to a KAC and existing infrastructure against better accessibility and connectivity against the disadvantages of potential natural hazards. Each proposal needs to be considered based on its own merits, in particular where technical solutions are available to deal with these hazards. A key requirement of urban growth and intensification is consolidation into a compact urban form.

Constraints of the Site versus direct access to KAC

- 7.10 To gain a better understanding of the existing constraints for this Site I have considered the hazard maps provided by Waimakariri District Council as part of the PDP review. I have also considered, and rely on, the expert evidence of Mr Hall (Infrastructure) and Mr Charters (Geotechnical).
- 7.11 As set out in the evidence of Mr Hall, the main natural hazard risk for the Site is the overland flow path running through the centre of the Site and the associated risk of flooding. Mr Hall's evidence is that this risk can be suitably managed via a number of initiatives, including most notably, the Central Flood Bypass Channel (and the supporting Western Diversion). In that regard, the potential constraint imposed by that natural hazard risk can, as set out in Mr Hall's evidence, be alleviated.
- 7.12 The corresponding consideration is then the direct connection to the commercial centre of a KAC, making the Site an ideal location for urban growth. Location of residential growth adjacent to that KAC brings with it the benefits of easy pedestrian and cycling, access to all relevant daily

¹ NPS-UD Policy 1(f).

services, connections to existing urban neighbourhoods, and easy access to public transport and other public and community services. These are all characteristics which comprise what the NPS-UD defines as a “well-functioning urban environment”.²

Accessibility³

- 7.13 At the district scale, the Proposal is well-positioned to access services like larger supermarkets, specialist shops, medical services, secondary education, entertainment, and workplaces within a six to eight kilometre radius. Larger recreational areas such as the beach, the Tūhaitara Coastal Park which covers approximately 700ha of land along the coastline from the Waimakariri River mouth to the settlement of Waikuku Beach, the Ashley and Kaiapoi Rivers, and the Waimakariri River are all destinations within the wider district that are also a reasonable distance from the Site.
- 7.14 Kaiapoi and Rangiora are fully established townships with a fast-growing population, and are supported by established commercial/business areas, industrial areas, and associated workplaces. They are within a six to eight kilometre radius of the Site and can easily be reached by bike, car, or bus.
- 7.15 The closest high schools are in Rangiora and Kaiapoi. Both are within a cycling distance of six to eight kilometres and take approximately 20-25 minutes to travel using a combination of local and smaller rural roads. In the future, the Cam River trails could also provide a slightly longer, but very safe and enjoyable cycle way to these townships.
- 7.16 Local primary schools in Woodend and Pegasus Bay are just 2.5 kilometres and two kilometres away, respectively. Considering the anticipated growth in area it can be expected that a new school will be established in either Ravenswood and/or within the development Site itself in future. This is not precluded by the ODP.
- 7.17 For day-to-day convenience, the shops and supermarket are less than one kilometre away, within the Ravenswood KAC, and within 800m/ 10 minute walk for the majority of the Site south of Stokes Drain. In

² National Policy Statement on Urban Development 2020, policy 1.

³ National Policy Statement on Urban Development 2020, policy 1(c).

addition, the central part of the Site will provide some everyday services (preschool, dairy and/or café) and be a distance of no more than 400 metres from each residential lot within the Site.

7.18 Access to daily recreational areas from the Site is excellent, with plenty of open/green space to be provided within the Site itself. Local reserves and open space are also located within adjacent Ravenswood and Pegasus. Within the Site, varied recreation / green space options will be provided from open SMAs, wetlands, green spaces, and the Stokes and Southern Waterway areas, all interlinked and within less than 400 metres from each residential lot. The Site is well located and very well connected to promote pedestrian and cycle movements over the use of the car for many activities. As noted above, key shopping areas, primary schools, other community facilities, and recreational areas are all within an easy walking or cycling distance of one to three kilometres from the Site.

7.19 As set out in the evidence of Mr Rossiter, public transport routes already connect Pegasus/Woodend to Christchurch, and there is a local bus service which connects Pegasus to Rangiora.

7.20 In addition, internal collector roads will be wide enough to accommodate a bus route that connects the Site directly to the KAC and from there to the wider Christchurch Metro Bus network, in future.

Connectivity⁴

Connectivity – External

7.21 Although the Proposal has several evenly distributed access points, the eastern collector road will be the main vehicular access route into the Site as it connects through the Ravenswood KAC to SH1. The proposed crossing over the Southern Waterway, alongside the existing SMA of Ravenswood, will create a strong natural gateway, linking Ravenswood to the Site.

7.22 The proposed layout of the Site also incorporates other access points, including the possible connections to future development areas (i.e. to the west of the Site). Wherever possible, those access points (shown on

⁴ National Policy Statement on Urban Development 2020, objective 3, clause 3.8(2)(b).

the ODP) respond to opportunities for direct connections across to existing or future development in logical positions.

7.23 Not providing access from SH1 directly into the Site is a deliberate move for several reasons:

- (a) It allows the eastern part of the Site to be used entirely for the Eastern SMA/Open Space to create a large setback to SH1 which also provides opportunities to enhance ecological and amenity values.
- (b) It acknowledges the main function of SH1 as a state highway that is not compatible with residential/urban activities.
- (c) It prioritises the connection of the Site to Ravenswood along the full length of Wards Road.

7.24 The establishment of park and ride facilities within the KAC would further reduce the reliance on private vehicles by providing bus connections to Kaiapoi, Rangiora and Christchurch. The proposed internal road layout for the Site is also set up to accommodate a bus loop using several collector roads.

Connectivity – Internal

7.25 Within the Site there are two natural movement desire lines.

7.26 Primary lines will always follow the natural waterways whilst the second desire-line is radial and leads to the connection to the KAC. The slow movement north-south green corridor (along the internal edge of the eastern open space) combined with the three east-west green/blue corridors create an internal pedestrian path and cycle network. Ensuring that pedestrian and cycle movement can safely and directly navigate a separate shared pathway will retain a high level of connectivity in this area and to the neighbourhood.

Key pedestrian/cycle routes and connections

7.27 Further internal connectivity within the Site is provided through the main east-west and north-south primary and secondary roads. Additional local roads and pedestrian/cycle links will provide the finer grain network and create shorter internal connections and a balanced distribution to access

all properties. To avoid the waterways and overflow channel becoming a separating element (in terms of connectivity), the ODP provides a variety of vehicular and non-vehicular crossing points at short intervals.

- 7.28 The off-road routes will be designed as shared pedestrian/cycle ways with a minimum three metre wide formed path using green links, utility and green spaces, or wide road reserves to separate them from the road carriageway.
- 7.29 In addition, the several smaller green links will be provided through the Proposal primarily to ensure the pedestrian connectivity at a finer grain. These will be no less than ten metres in width and will be designed to minimise their length and maximise views through them to ensure adequate passive surveillance from local roads.
- 7.30 To ensure that utility and recreational green spaces are easily accessible, active, and safe spaces, these shared pathways are routed through utility reserves and the spaces are bounded on two sides by roads.

Connections to the cultural landscape

- 7.31 Some of the internal roads may be suitable to be aligned to form a straight viewshaft to Mount Grey. This will give the development a strong sense of place and anchor its location.
- 7.32 The new east-west collector road can be aligned to maximise tangible connections to the Southern Alps and the ocean, whilst the green corridor along Stokes Drain and the Southern Waterway culminating in the natural wetland will create a nuanced connection with the wāhi tapu site. As previously discussed, consultation with mana whenua may highlight other opportunities to recognise / enhance connections within the Proposal to the cultural values of the landscape.

Compact urban form

- 7.33 The Proposal wraps around the northern edge of the Ravenswood KAC, “filling a gap” in the wider urban fabric and connecting Woodend, and Ravenswood with Pegasus. As illustrated **in Appendix C**, it ensures that the KAC is located in a central position surrounded by urban activities to maximise the benefit of the KAC with regard to access to services,

connectivity between commercial and residential areas, efficiencies in distribution and concentration of infrastructure and public transport.

7.34 The Waimakariri 2048 District Development Strategy has identified Rangiora and Kaiapoi as the key activity centres for the district followed by Woodend /Pegasus and Oxford. This creates a hierarchy within the district of urban townships based on existing population and approximate size. As set out in the evidence of Mr Cleese, the Site is identified within the planned direction for urban growth to support the Ravenswood/Woodend KAC. In that regard, the Proposal, which seeks to enable residential development in a way which contributes to the effective functioning of that urban environment, is consistent with that Strategy.

Variety of housing⁵

7.35 As discussed earlier in my evidence, the Proposal enables and encourages a variety of housing choices within the development itself and adds to the choices available in the District.

7.36 That variety is secured through the underlying MRZ and through the ODP and its supporting narrative, which identifies the area adjoining Gressons Road as being appropriate for lower density, with higher density opportunities to be enabled toward the south of the Site. By accounting for, and seeking to enhance, the existing landscape, ecological and known cultural values of the Site and its surrounds, the housing enabled by the Proposal may have particular attraction to those with an existing strong connection to the land. The variety in the typology of housing also enables diversity in terms of household needs and socio-economic composition.

7.37 The proximity to the KAC with access to urban amenities coupled with a wider aspect that is more rural / distant from the larger centres of Christchurch, Kaiapoi and Rangiora also offers a point of difference. In addition, the ODP provides a strong narrative around the blue and green network with the opportunity for cultural and historic references through design. These aspects will translate into housing typologies that will

⁵ National Policy Statement on Urban Development 2020, policy 1(a).

differ from those in Pegasus, the older parts of Woodend and even the new residential areas in Ravenwood.

8 CONCLUSION

- 8.1 The ODP is specifically tailored for the Site in all aspects, from the way it builds on the inherent qualities of the Site, to the integrated technical solutions and the connectivity to the surrounding areas. It creates a well-functioning urban environment that is respectful to the natural environment, and enables people and the wider community to provide for their own wellbeing and health and safety, which in turn builds resilience.
- 8.2 From an urban design perspective the Proposal will contribute positively to the wider urban environment, encompassing the Ravenswood KAC, Woodend and Pegasus. It will complement and support the activities that have started to develop around the KAC Ravenswood, and will strengthen the urban fabric of the local community.

Nicole Lauenstein

4 March 2024

Appendix A – Design Strategy Recommendations for the ODP

- The Proposal should look to protect and/or enhance the existing ecological qualities of the Site in accordance with the recommendations of Wildlands, showing how good development can occur in these areas by taking care of the land and working with it.
- The landform of the Site should retain its contours and natural flow patterns wherever possible. Larger established vegetation should be strengthened and protected by adding a green space around it.
- Keeping and/or replacing the extent of existing waterways and retaining Stokes Drain will protect and in some cases enhance both the ecology of the Site and its amenity and character. The corresponding benefits to the urban environment relate to:
 - site character;
 - scale and bulk of vegetation;
 - amenity for people;
 - beneficial microclimate;
 - visually breaking of the development;
 - providing connectivity along green corridors for pedestrians and cyclists; and
 - providing shade and windbreaks where vegetation follows waterways.
- The Proposal should include planting which separates and provides a landscape buffer for the wāhi tapu site.
- Additionally, the ODP should provide an area for the potential establishment and/or enhancement of a biodiversity habitat in the lower reaches of the waterways / large green space. It also should also provide the opportunity to consider regenerative measures around waterways and green areas, including on the eastern side of the Site (the **Eastern SMA / Open Space**).

- Benefits of these initiatives to the urban environment will include provision of a buffer area to the wāhi tapu site, and buffer and set back to SH1. The Eastern SMA / Open Space would also provide an additional recreational area with a point of difference, and the opportunity to incorporate and/or reflect various educational and cultural values. Collectively this will provide a sense of local identity, increased resilience, and an improved microclimate where water flows through Site.

Recommendations - Blue Network

- The Proposal should:
 - Develop a cohesive blue network strategy which maintains a separation of stormwater from spring/freshwater, protects springs with green space and leads/redirects spring water via either Stokes Drain or the Southern Waterway to the Eastern SMA / Open Space at the edge of SH1.
 - Place natural wetlands at the endpoints of Stokes Drain / within the Eastern SMA / Open Space to assist with water management and to enhance ecological values.
 - The Southern Waterway has the opportunity to meander and pick up spring water along its path. It should be different to Stokes Drain and have a more open landscape treatment.
 - Divert overland flow paths and carry most of that water through the centre of the Site through natural low points. Those paths will follow a contoured alignment, avoiding straightening or levelling of the entire Site and instead following the natural pattern of flow across the land.
 - Use the large stormwater basins as a transition from denser development/housing to natural wetlands, creating an open space buffer.
 - Create gateways where green spaces and developed area meet at the heads of roads. This is to provide natural access points into the green area.

- **Recommendations - Green Network**

- The Proposal should:
 - Wrap the green network around the blue network to protect it and to realise its benefits. Blue/green networks are often inseparable and are the skeleton of a development, breaking it into smaller parts and providing a human scale and high amenity.
 - Ensure that the sense of place and the strength of the local character is characterised by the waterways, the open landscapes and big sky, views to the Canterbury foothills, and the relationship between the verticality of buildings or vegetation to the horizontal nature of the land. This should be contrasted with smaller more enclosed green spaces within the Proposal (break out spaces).
 - Ensure that the three main west-east blue corridors which also act as green corridors have wide enough reserves to accommodate pedestrian/cycle routes. These will sometimes need roads alongside them for access and passive surveillance. Roads along their full length should be avoided as this will separate developed areas and create a monotonous linear appearance.
 - Use the two north-south collector roads as green avenues with large deciduous trees to create scale.
 - Introduce a north-south 'people collector' green corridor for slow movement. This should be weaved through the Eastern SMA/Open Space and other smaller green links. The opportunity should be provided to connect those links through the stormwater management area (**SMA**) at Ravenswood.
 - Enable the use of green spaces for various purposes depending on scale and location. They should work with their natural qualities (i.e. large spaces should allow viewshafts to notable landscape features, for example Mt Grey), have purposeful activities and designs, ensure that small spaces allow enclosure and informality, and ensure that all green spaces are interconnected to create a network throughout the entire Site.

- Provide relational connection between the large recreational space and Stokes Drain to create a landscaped edge and position a community hub at the other edge of this green space depending on whether sport and recreation or just active play activities are anticipated within the development. This green space should have, at minimum, two active public edges for passive surveillance. The shape and orientation of the reserve should enable a long distance viewshaft to Mount Grey.
- Position a second green space south of the large stand of oak trees along Stokes Drain to protect the trees and create a setback for development. This row of trees already has a very unique character and sense of enclosure to it already. The established oak trees provide verticality and mitigate adjacent rural residential views so protecting this area during construction and limiting interference is recommended.
- Add smaller green spaces around the existing springs as 'pocket parks' and use water flow as a short green link to connect them to the wider blue/green network. This will protect the delicate nature of the springs with native low planting avoiding deciduous trees. These should be positioned at the end of cul-de-sacs, along smaller lanes, or integrated into green pedestrian links.
- Provide an additional green space around the larger spring on Wards Road as a connecting green space for this residential area. This area should be treated as a single environment with the reserve thus creating a linking element straddling the southern boundary.
- Use the Southern Waterway as a larger green connection, providing the opportunity for linkages between the Proposal to Ravenswood /KAC. The shared path should be positioned to the south of the Waterway to allow ease of movement and provide a variety of pedestrian/cycle crossings over the Southern Waterway.
- Create several smaller internal green links along desire-lines to provide green shortcuts and a high amenity fine-grain network for

pedestrian/cycleways. This ensures movement is not solely reliant on the road network.

- Ensure that the maximum distance that any one point within the development is from an open green space is 500 metres.
- Create a design rationale for vegetation with native plants in the Eastern SMA/Open Space(including the wetland planting) and along waterways. It should also allow for some verticality with a focus on large trees in park areas and along streetscapes in order to provide scale and balance the built form. The Proposal needs tree clusters to break what would otherwise become a continuous roofscape.

Recommendations - interfaces and edge treatment

Northern edge

- The treatment along Gressons Road needs to provide some visual protection to address the loss of rural outlook while not being a fully enclosing edge treatment. It is important to ensure that it is wide enough (ten metres) for layered planting of varying height, that it has cohesive fencing of a rural typology, and that it creates a larger setback for dwellings. This may require slightly larger lots. This boundary treatment should be extended along to the interface with the rural residential properties but with these properties, the internal setback could be reduced to six metres in width.

Western edge

- This primarily requires a setback to collect and channel the receiving surface water towards the central overland flow path (the **Western Diversion**). Some mitigating planting would be beneficial along this rural edge to break up the continuous roofscape, but this edge should not be planted up in its entirety to allow for views into the rural landscape.

Eastern edge

- The Proposal locates a large SMA (comprising three separate facilities) and naturalised waterways on the eastern boundary of the Site (the Eastern SMA/Open Space). This creates a setback to the existing small residential

lots along SH1 as well as a very large setback for the entire Proposal from SH1. Additional landscape mitigation measures could include bunding of the Eastern SMA/Open Space, general contouring to support separation of waterways from SMAs, and adding verticality through native tree planting.

- The interface with the larger pocket of land along SH1 should be treated like an urban-to-urban connection providing vehicular, cycling, and pedestrian links to the boundary. Effects on the rural outlook can be addressed through temporary mitigation in the form of soft landscaping. This should include layered planting (four metres wide) of a residential nature that can be partially removed or thinned out when development extends into this area.
- A wāhi tapu site sits within the large green area along SH1. Edge treatment and mitigation needs to be a layered approach with physical buffers and visual buffers, but also access controls. A natural wetland would provide the best solution as it makes direct pedestrian access to this edge difficult. Movement would best be controlled through the use of constructed boardwalks. The wetland itself would provide a spatial buffer that allows visual presence and an awareness of the wāhi tapu site. The final location and design of these initiatives should be subject to further consultation with mana whenua.

Southern edge

- As mentioned, Wards Road and the Southern Waterway serve as a connecting element between Ravenswood and the Site. No mitigation is required as the aim is to provide strong visual and physical connections. Creating a boundary should be avoided as this edge should be blurred and indiscernible.

- **Recommendations - cultural considerations**

- In addition to the wahi tapu site, the value of this Site to mana whenua is marked by the silent file notation in the PDP, which covers the majority of the Site. The wider area is understood to hold significant importance to Te Ngāi Tūāhuriri Rūnanga and to Te Rūnanga o Ngāi Tahu generally.

- Further consultation with mana whenua in respect of all such matters and the opportunities to protect and reflect those values within the Proposal is therefore strongly recommended.

Recommendations - movement network

- The Proposal should elevate the pedestrian and cycle network above the vehicular network as many day-to-day destinations for residents within the development will be within walking and cycling distance as the KSC business zone develops further. A fine grain network should be provided to connect internal destinations as direct as possible and several connections should be offered towards the KAC /Ravenswood. Wider cycle connections to Pegasus, Woodend, Kaiapoi and Rangiora should be considered.
- North-south collector roads should be treelined avenues to emphasize their hierarchy. Their carriageway width needs to be sufficient to accommodate a bus route.
- Connectivity to the Ravenswood development and within the Site itself is not just a roading issue. This needs to be stitched together using the Southern Waterway and the Eastern SMA/Open Space as well as smaller green spaces to create green connections. The intention is to downplay the east-west vehicular movement along Wards Road and provide an alternative route within the development itself. A shared pedestrian/cycleway with laterals crossing over the Southern Waterway for ease of connectivity with Ravenswood should be provided.
- The possibility of future connections to the west/southwest and northwest of the Site should be provided, as well as connections to adjoining land that does not currently form part of the Site. External connectivity with a finer grain along the southern edge of the Site to Ravenswood should also be provided.
- The exact locations of access points along Wards Road needs to be confirmed at the subdivision stage to ensure they align directly with opposite roads or are offset to form T intersections.

Recommendations – land use

Residential

- Given the context of the existing environment and in light of the relevant NPS-UD directions, an appropriate target density for the Site should be 12+ households per hectare with the ability to intensify in places to 15 households per hectare.
- Any local community hub needs to be kept small and defined as to its use/function such as limiting ground floor area to 1000 - 1500m².
- Clarity around green space (type, location, purpose, size) should be provided. Additionally, if school/sport facilities are needed within the Site, those facilities should be located in close proximity to the larger green space/community hub.
- The possible ecological/biodiversity area (potential Mudfish habitat) adjacent to the existing protective bund around the wāhi tapu site should be given its own space and function.
- The facilities within the Eastern SMA/Open Space should provide additional open space with recreational pathways. Clear access points should be designed as small nodes at edge of the Site.





- LEGEND - LANDUSE**
- GREEN SPACE NETWORK
 - STORMWATER CONVEYANCE AND TREATMENT NETWORK
 - SPRING WATER COLLECTION & CONVEYANCE NETWORK
 - STANDARD DENSITY RESIDENTIAL (MINIMUM 12 DPH)
 - LOW DENSITY RESIDENTIAL
- LEGEND - INFRASTRUCTURE**
- OUTLINE DEVELOPMENT PLAN AREA
 - INDICATIVE COLLECTOR ROAD
 - INDICATIVE KEY LOCAL ROAD
 - STORM WATER BYPASS
 - 10.0 M WIDE LANDSCAPE TREATMENT
 - DEVELOPMENT THRESHOLD/ GATEWAYS
 - POTENTIAL MINOR THRESHOLD
 - INDICATIVE PEDESTRIAN- CYCLE NETWORK
 - * POTENTIAL COMMUNITY HUB
 - EXISTING SPRINGS (APPROX. LOCATION)



Draft

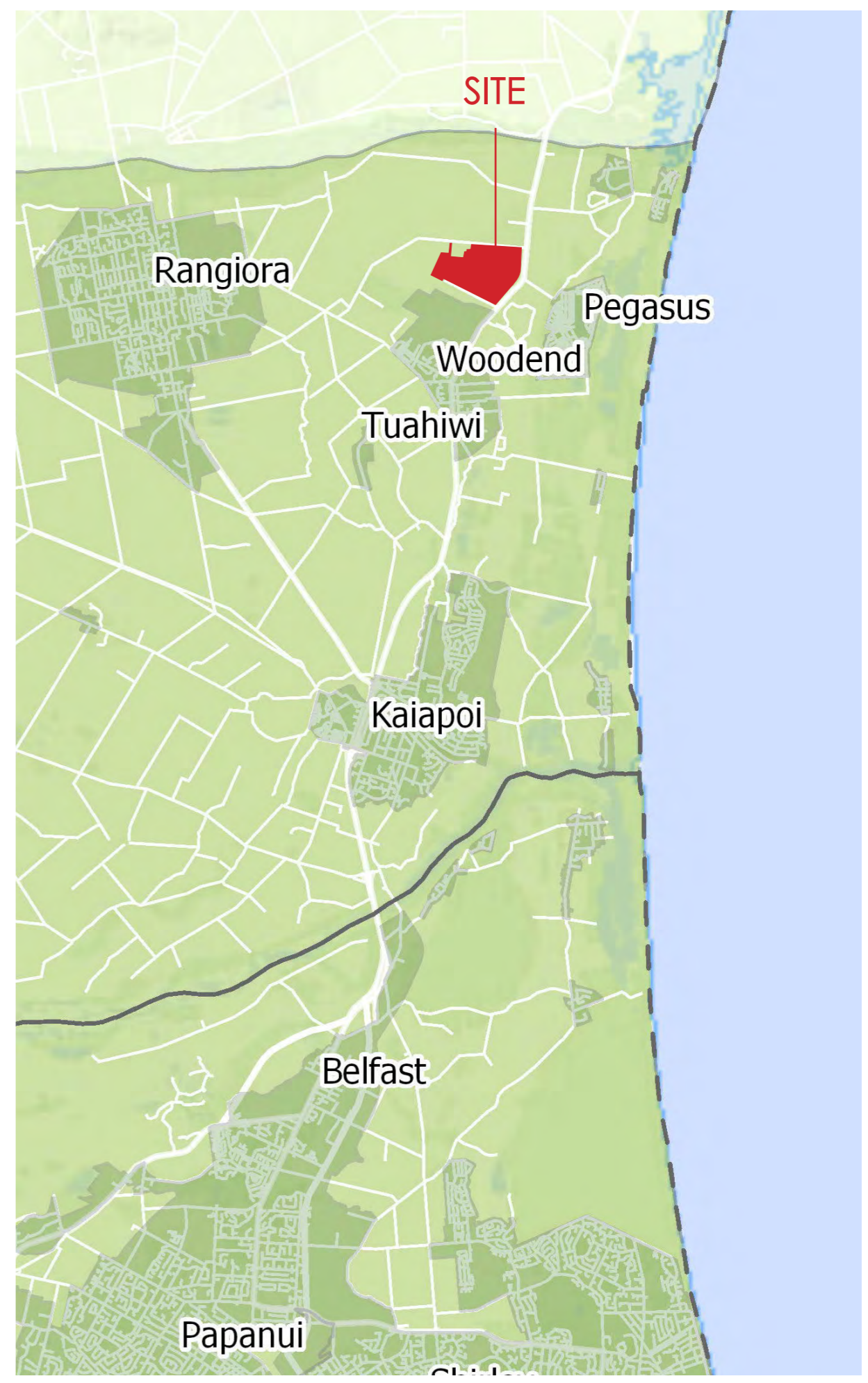
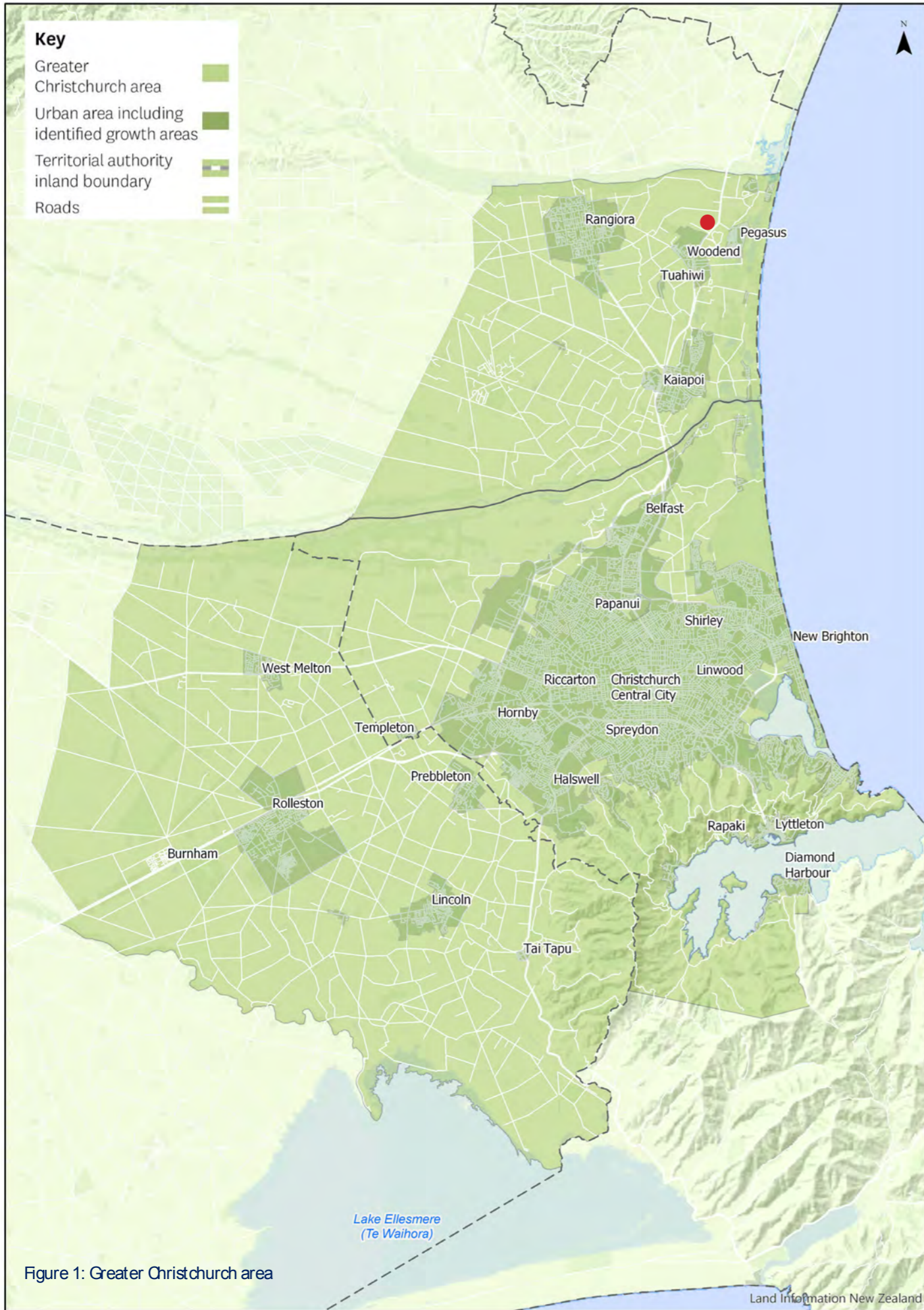
RMM
ROUGH MILNE MITCHELL LANDSCAPE ARCHITECTS

CHRISTCHURCH +64 3 366 2288
WAIKATO +64 3 376 7960
AUCKLAND +64 21 244 8630
DUNEDIN +64 27 488 8795
NELSON +64 27 200 0600
info@rmm.co.nz

Proposed Outline Development Plan
Stokes
Raveswood Waikuku Land

JOB No.	21346
SCALE	1:4000 @ A2
DATE	18/01/2024
DESIGNED	RMM
DRAWN	DRAWN BY
CHECKED	CHECKED BY
STATUS	DRAFT
DRAWING No.	REVISION
MP 1.0	1
SERIES	
1 OF 1	

Appendix B – Greater Christchurch context



Appendix C – Woodend/Ravenswood/Pegasus context

2048 Waimakariri District Development Strategy

Waimakariri District Operative plan with proposal design strategy overlay

