Selwyn District - Rural Character Assessment

Rural Zone – Character Assessment Report
Prepared for Selwyn District Council

14 November 2017

Document Quality Assurance

Bibliographic reference for citation:
Boffa Miskell Limited 2017. *Selwyn District - Rural Character Assessment: Rural Zone – Character Assessment Report*. Report prepared by Boffa Miskell Limited for Selwyn District Council.

Prepared by:	Amanda Anthony/ Yvonne Pfluger Landscape Architect Boffa Miskell Limited	
Reviewed by:	Yvonne Pfluger/ Stephanie Styles Principal Landscape Architect Boffa Miskell Limited	
Status: [FINAL]	Revision / version: [1]	Issue date: 14 November 2017

Template revision: 20150331 0000

File ref: C15143M_001c_Rural_Character_Density_20171030.docx

Cover photograph: Sheep within the *Inner Plains, Anthony, 2017*

CONTENTS

1.0 Introduction

Selwyn District Council has engaged Boffa Miskell Ltd to assist in reviewing and describing the 'rural character' of the Rural Zone areas within the District, and to identify and describe any areas where the 'rural character' within the Rural Zone has been significantly eroded.

A key goal of the Rural Character Assessment is to inform the development of options for managing residential density and business activities, bulk and location of buildings and amenity planting, shelterbelts and plantation forestry in the rural zones. This work will assist the Council with policy development for their District Plan Review in relation to appropriate future patterns of density, buildings, planting and shelterbelts within the rural environment. This assessment is one of many inputs to the review of the Selwyn District Plan. The Selwyn Landscape Study, which identified Outstanding Natural Landscapes under RMA S6(b) and Visual Amenity Landscapes under S7(c), being the other most pertinent one to the management of the rural landscape of the district.

1.1 Scope

The scope of this report is to describe the rural character of the Port Hills, Inner Plains, Outer Plains, Malvern Hills, and High Country areas, which are currently identified in the Selwyn District Plan. This assessment includes the identification and analysis of the landform, vegetation cover, spatial land use patterns and built form characteristics of each one of these areas. This report also identifies and describes areas where the 'rural character' has been significantly eroded through existing development. The report includes photographs to illustrate the findings for each area.

The Existing Development Areas, as identified in the Operative Selwyn District Plan, are not within the scope of this assessment. The assessment of Outstanding Natural Landscapes, Visual Amenity Landscapes and Forestry Exclusion Areas has been undertaken by BML recently under a separate scope of works and has been referenced as part of this assessment.

1.2 Rural Character

Landscape, as defined by the New Zealand Institute of Landscape Architects (NZILA), is the "cumulative expression of natural and cultural features, patterns and processes in a geographical area, including perceptions and associations" (NZILA, 2010). While all landscapes are dynamic and continually change, the rate of change varies under different physical, social and economic conditions.

Rural landscapes are, by their nature, strongly influenced by the type of rural activity and the intensity of associated settlement. Natural elements generally remain strongly evident but are overlaid by patterns and processes of human activity. Natural systems operate but, in places, are manipulated to enhance productivity. Human induced patterns and processes are related predominantly to productive land uses such as agriculture, horticulture and forestry, typically including paddocks, shelterbelts, wood lot and forest blocks, cropping regimes and settlement. The patterns of human activity are generally large scale (by comparison with urban areas),

reflected in generally low-density settlement, few structures and often a sense of spaciousness. Rural landscape and inhabited landscapes are not to be confused with “wilderness” or “natural” landscapes where human presence is minimally present or absent.

Defining rural character relies on an understanding of work done by various specialists, analysis of topographic and various other mapping and spatial data (datasets), field survey and photography, as well as aerial photography. For this particular study, much of the work has been based on a desk top analysis with field work to verify findings on a broad level.

Within the Selwyn District (refer to **Appendix 2, Figures 2 - 10**), the density of development varies from the zone to zone. Changes associated with land-based production activities such as farming, forestry or extractive industries; developments providing for peri-urban or rural residential lifestyle provide different development patterns which create the character for each zone.

1.3 Study Approach

As outlined, this Rural Character Assessment was undertaken as an independent technical assessment by Boffa Miskell’s landscape planners.

The study approach involved:

- reviewing the Selwyn Landscape Study to provide context;
- incorporating the Landscape Character Area information from the Selwyn Landscape Study to assist in describing the character of each area as a base for assessment;
- undertaking site visits to confirm general character with a focus on the edges of the rural areas;
- analysing and describing the rural character of each of the five rural areas identified in the operative plan, including a review of the appropriateness of boundary outlines; and
- illustrating rural character and specific elements within graphic material and photographs.

2.0 The Landscape Character Areas of the Selwyn District

The starting point for the assessment in the Selwyn Landscape Study is the understanding of the Landscape Character Areas that make up the District. The methodology for this process is set out in detail in the Selwyn Landscape Study and is not repeated in this assessment. The findings of the character area assessment do, however form a basis for this assessment and has been replicated in the following sections.

In total, eight Landscape Character Areas have been determined for the Selwyn District, these are:

1. Te Pātaka o Rākaihautū/Banks Peninsula
2. Coastal Plains (Te Waihora/Lake Ellesmere to Rakaia River Mouth)

3. Low Altitude Plains
4. Malvern Hills - Foothills and Downlands
5. Front Ranges (Big Ben and Torlesse Ranges)
6. Kura Tawhiti/Castle Hill Limestone Basin
7. Intermontane Ranges and Basins
8. Kā Tiritiri o Te Moana/Main Divide Ranges

A description of each Character Area is provided in the following section and the character areas are illustrated on **Figure 1**.

2.1 Landscape Character Area 1: Te Pātaka o Rākaihautū / Banks Peninsula

Photograph 1: Selwyn District area of the Port Hills near Gebbies Pass

This Landscape Character Area encompasses the western segment of Te Pātaka o Rākaihautū/ Banks Peninsula, where it meets the district boundary on the Port Hills to the adjacent Christchurch City. The segment of Banks Peninsula / Port Hills included in this area extends from Lansdowne / Sign of the Bellbird in the north to Te Tara o Te Rangihikaia/Gebbies Pass / Valley in the south.

The western section of the Port Hills contains part of the outer slopes and crater rim of the Lyttelton volcano, which form a distinctive landform rising on the eastern side of the lower coastal plains. The prominent ridge of the crater rim reaches 573m at its highest point at Ōmawete/Coopers Knob.

Landform

To Ngāi Tahu, the peninsula is known as Te Pātaka o Rākaihautū or the great food store of the Waitaha ancestor Rākaihautū, captain of the Uruao canoe, in reference to the abundance of forest birds and timber that could be obtained from the peninsula forests. Another name for the peninsula, Kā Kōhatu Whakarakaraka o Tūterakiwhānoa links back to the very creation of the peninsula being the heaped up stones raked into place by Tūterakiwhānoa, grandson of Aoraki, following the capsizing of Te Waka o Aoraki – which forms the South Island. A later explorer Tamatea, captain of the Takitimu canoe, is responsible for volcanic rock outcrops when he called for fire from the north to warm him after being caught in a southerly storm. These names and traditions explain the landscape features of mana whenua, critical to their understanding of the world, as well as their heritage and ongoing identity.

Banks Peninsula covers an elliptical area of approximately 50 x 30 kilometres. It was formed by two great low-angle basaltic "shield" volcanoes, firstly Lyttelton then Akaroa. The principal landform defining the Lyttelton volcano is the distinctive crescent shaped mass of the Port Hills stretching between the harbour mouth in the east and Gebbies valley in the south. The volcanoes were islands at the time of formation with the outwash plains eventually reaching them to form a Peninsula. The volcano is thought to have reached a height of about 1200 m before erosion started to wear it down. As the frequency of eruptions decreased, the speed of erosion accelerated, particularly of the softer ash in the centre of the crater, causing the crater to be widened and deepened. Later the crater was breached in the west at Gebbies Pass.

There is no evidence of glaciation on Banks Peninsula, but during the glacial periods of the last 2 million years, fine sand and silt formed by the grinding action of ice on rocks of the Southern Alps, was carried by winds, deposited and accumulated as loess, up to 20m thick on much of the Peninsula. The loess tends to be thickest below about 150 masl (metres above sea level), owing to having been eroded from the upper slopes and redeposited on the lower ones. Ongoing tunnel and gully erosion and landslips commonly affect loess slopes.

In profile, the Port Hills crater segment has characteristic deeply-eroded gentle dip slopes on its "outside" flanks, while inside the crater, the rocky scarp slopes are typically steep to moderately steep immediately beneath the uneven summit, exhibiting many tors and rocky outcrops.

Landcover

The vegetation originally covering the Port Hills reflected the variety in elevation (from sea level to 580m), rainfall (600 to 850 mm per year) and topography, while today's land cover reflects historical modification and present land uses.

Several reserves fall within the Selwyn part of the western Port Hills with Kennedys Bush and Ahuriri Reserve/ Omahu Bush being two ecologically important areas. The reserves contain one of the best examples of the native podocarp forest that would have covered the majority of gullies and slopes prior to human modification. Ahuriri Reserve is the only substantial example of the lowland mataī/tōtara forest once common on the deeper, well drained soils of the plains and foothills. The remnant contains significant numbers of regenerating tōtara and mataī, as well as an abundance of other native trees and shrubs.

The majority of the western Port Hills slopes are grazed or in production forest today and have undergone substantial modification from their original land cover. The slopes and ridges mostly contain a mosaic of grassland, while regenerating shrublands can be found in some of the wetter gullies. The grazed slopes mostly contain exotic grasses with some interspersed tussocks in less intensively grazed areas. Exotic woody weeds, such as gorse and broom, are a regular occurrence.

In February 2016, a large fire on the Port Hills burnt much of the vegetation on the northern boundary of the district and damaged infrastructure, forestry and areas of native vegetation.

Landuse

In pre-European times, Ngāi Tahu, and Ngāti Mamoe and Waitaha before them, utilised this area of Te Pātaka o Rākaihautū. In particular, Te Tara o Te Rangihikaia/Gebbies Pass was a key transport route between Te Waihora (Lake Ellesmere) and Whakaraupō (Lyttelton Harbour), and the respective pā and kāinga of Waikākāhi, Ngāti Koreha and Mānuka (on the Te Waihora side)

and Ōhinetahi, Whakataka and Rāpaki (on the Whakaraupō side). Mahinga kai largely focussed on the fish, waterfowl and wetland plants and resources associated with Te Waihora, but also included the forest birds and timber available in the forests of the hills. Volcanic rock, as well as other stone resources were also important in the area.

Historically, the pattern of agricultural development and subdivision on Banks Peninsula has been strongly influenced by agronomic features such as soil type, topography and climate as well as access and transport considerations. In the mid 1900's pastoralism was based on relatively extensive grazing of sheep and cattle with wool being the major income. The nature of the farming during this period had a significant impact on the landscape with the ability to closely graze livestock ensuring that forest and weeds were not able to regenerate. Where farming proved to be less economic over time, the landscape reverted relatively quickly back to regenerating forest, as can still be seen in many gullies today.

The typical farming block on the western Port Hills has become smaller through subdivision over time and residential development is an increasingly important land use today. Currently, the majority of settlements are confined to the lower-lying valleys and slopes, with the upper slopes and crater rim generally free of dwellings. Around Tai Tapu (Otahuna) and Lansdowne (Early Valley Road) a number of residential dwellings are found on lower slopes and spurs.

Forestry occurs in smaller to medium-sized blocks on the western slopes of the Port Hills within Selwyn District and the stands of conifers generally form a mosaic of land uses with pastoral farming. The forestry blocks generally follow the landforms, with many of them occurring in gullies. Some shelterbelts form distinctive lines around the toe of the lower slopes, in particular near settlement areas.

Key Landscape Characteristics

- Western segment of Lyttelton volcano landform
- Prominent rocky outcrops showing volcanic origins
- Land use mosaic of extensive grazing and small- medium sized forestry blocks
- Native vegetation largely confined to reserves and gullies with regenerating forest
- Settlement generally around the toe of slopes and lower ridgelines
- Key named peaks, passes, spurs and ridges: Ō-Rongomai (Cass Peak), Ō-Mawete (Coopers Knob), Te Moko Peke, Te Tara o Te Rangihikaia (Gebbies Pass), Ō-Turi , Mānuka pā and Ngāti Koreha pā significant to migration and settlement traditions of manawhenua and ongoing tribal identity.

2.2 Landscape Character Area 2: Coastal Plains (Te Waihora/Lake Ellesmere to Rakaia River Mouth)

Photograph 2: Te Waihora/ Lake Ellesmere

The Coastal Plains Landscape Character Area includes the coastal lagoon and wetland complex Lake of Te Waihora / Lake Ellesmere, west of Banks Peninsula and the coastal strip west to the Rakaia River mouth. The coastal environment predominantly comprises sweeping gravel beaches, interspersed with gravel beach ridges, and areas of back dune and lagoons, such as Muriwai/Coopers Lagoon. Te Waihora /Lake Ellesmere is Canterbury's largest and New Zealand's fifth largest lake – covering an area of approximately 20,000 ha – with approximately 75 kilometres of shoreline. The majority of the lake and shoreline is located in the Selwyn District. The active and major floodplain of the Rakaia River forms this Landscape Character Area's western extent, where a series of alluvial outwash gravels occupy this large river mouth. Elevation ranges from 0 to 20m and rainfall ranges from 600 to 800 mm per year.

Te Waihora / Lake Ellesmere and the coastal margin are flat and surrounded on the landward side by pastoral land, abutting the Low Altitude Plains Landscape Character Area to the north. Due to the low profile of this Character Area, large skies are experienced.

Landform

Te Waihora / Lake Ellesmere is a shallow coastal lagoon separated from the open ocean by Kaitorete Spit, a spit of sand and gravels. The lake is fed predominantly by spring-fed tributaries, as well as the rain-fed Waikirikiri/Selwyn River. Groundwater and rain drain from the Canterbury Plains, and is transported to the lake by a series of subterranean systems, numerous drains, spring-fed tributaries and the Waikirikiri / Selwyn River.

The name Te Waihora neatly describes its form and character literally meaning 'flat, spread out water'. It is also known as Te Kete Ika a Rākaihautū – The Fish Basket of Rākaihautū – giving reference to the abundance of native freshwater, estuarine and coastal wandering fish that occur at the lake, as well as linking to the creation and migration traditions of the Waitaha people that first inhabited the area. Due to its immense cultural significance and ongoing importance the ownership of the lakebed of Te Waihora was returned to Te Rūnanga o Ngāi Tahu as part of the Ngāi Tahu Claims Settlement Act 1998.

The coastal interface of this Landscape Character Area with the South Pacific Ocean incorporates the undulating gravel beach, sand dunes and associated interdune back swamps, gravel ridges and bars with wetlands on the margins of small lagoons where streams exit the Selwyn plains. The Rakaia River mouth is characterised by its active and distinctive braided patterns, formed by outwash gravels and small floodplain terraces.

The underlying geology of this character area reflects the historic alignment of the Waimakariri River and current influences of the Rakaia River outwash fans.

Several other lagoons fall within this character area, with the hapua lagoon at the Rakaia River mouth being the most prominent one. The smaller Muriwai/Coopers Lagoon is also of ecological as well as cultural value as a wetland ecosystem and mahinga kai – the bed of which is also owned by Te Rūnanga o Ngāi Tahu.

Landcover

Most of the Te Waihora / Lake Ellesmere and Muriwai/Coopers lagoon margins consist of herbaceous saline and freshwater vegetation of low growing, native rushes and sedges interspersed with pockets of exotic deciduous tree and shrub species such as willow and poplar. The coastal gravel beaches from Te Waihora /Lake Ellesmere to the Rakaia River are covered with dune species such as pingao and marram grass.

Landuse

The shores of Te Waihora /Lake Ellesmere retain a long history of settlement with a large number of historic and important cultural sites located around the lake and along the ocean interface. Settlements such as Taumutu and Whakamatakiuru/Fishermans Point, exist due to the fisheries and waterfowl resources the lake provides, including the significant commercial tuna/eel and pātiki/flounder fishery that continues to this day. Customary and recreational hunting and fishing also remains important to both Ngāi Tahu and the wider community. The beds of both Te Waihora /Lake Ellesmere and Muriwai/Coopers Lagoon are vested in the fee simple ownership of Te Rūnanga o Ngāi Tahu and are managed in accordance with management plans that control activities affecting the lakes, including ongoing commercial use. The lake and its wetland margins, including Muriwai/Coopers Lagoon, which lies to the southwest, provide very important habitat for many species of wetland and water birds including large numbers of migrant waders and native fish species. Te Waihora is internationally significant for the abundance and diversity of its birdlife and nationally significant for its wetland vegetation. Bird watching is a popular activity in this area.

Te Waihora is artificially opened to the sea near the boundary of the district to enable surrounding landuse, settlement, as well as fish passage. A water conservation order and resource consent governs the lake opening regime and seeks to protect the following outstanding features:

- habitat for wildlife, indigenous wetland vegetation and fish; and
- significance in accordance with tikanga Māori in respect of Ngāi Tahu history, mahinga kai and customary fisheries.

The Rakaia Huts township has numerous small dwellings and is located close to the Rakaia River. The Rakaia River mouth is a popular salmon fishing area areas and also includes a significant archaeological and wāhi taonga management area, being an important site of early Māori settlement.

Key Landscape Characteristics

- Large coastal lagoon and wetland systems supporting outstanding wildlife, indigenous wetland vegetation and fish.
- Sweeping gravel beaches along the coastal interface
- Flat, open pastoral, lake and seascape with large skies
- Bird watching within this relatively remote part of the district
- Numerous Ngāi Tahu sites of significance, including pā, kāinga, wāhi mahinga kai and wāhi tapu centred around key wetland, Waipuna and waterways such as Taumutu, Orariki, Whakamatakiuru, Pakoau, Kūaowhiti, Tūtakahikura, Waiwhakaheketupapaku and Muriwai.

2.3 Landscape Character Area 3: Low Altitude Plains

Photograph 3: Irrigation on the Selwyn Plains

The Low Altitude Plains Landscape Character Area forms the central portion of Kā Pākihi Whakatekateka o Waitaha/ the wider Canterbury Plains. This Character Area is defined by the foothills of the Malvern Hills in the north west, by the Waimakariri River to the North East, Te Waihora / Lake Ellesmere to the Southwest and is flanked on the South West by the Rakaia River.

This Character Area is defined by the flat, open and expansive plains which have little topographical relief. Elevation ranges from 0 to 150m. This highly modified landscape possesses a linearity, emphasised by the characteristic shelterbelts, dissecting roads and broad scale agricultural land use. The central natural landscape feature of the area is the Waikirikiri/Selwyn River and its tributaries including the Waianiwaniwa, Te Hororātā and Hawkins Rivers, which flow from the Malverns Hills to Te Waihora/Lake Ellesmere.

The Low Altitude Plains are dotted with a number of townships of varying intensity which service the rural community. Intensity and frequency of such settlements decreases with distance from neighbouring Christchurch City.

Landform

The Low Altitude Plains consist of flat to gently undulating, fertile, loamy to free draining soils, old greywacke gravel fans and floodplains of historic river alignments and glaciation events of the mountains in the North West. Generally, the Low Altitude Plains are open with distant views to the Port Hills of Banks Peninsula in the South East and the Torlesse, Benmore and inland Craigieburn Ranges in the North West.

The Waikirikiri / Selwyn River bed traverses the plains from the Torlesse Range foothills near the township of Coalgate for approximately 50km flowing into Te Waihora / Lake Ellesmere in the

east. Due to the porous nature of the alluvial greywacke gravels of the riverbed, a portion of the Waikirikiri / Selwyn riverbed appears to be dry around the SH 1 bridge for much of the year, but the river water runs beneath the surface in a series of aquifers and subsurface river flows south east toward the ocean. Traditionally the Waikirikiri / Selwyn River has always flowed through the Whitecliffs area and from Chamberlains Ford area to Te Waihora / Lake Ellesmere.

The Low Altitude Plains are bound by the Rakaia and Waimakariri Rivers, which formed the outwash plains. Historically the Waimakariri River frequently flooded the greater plains, and at one point bisected the Low Altitude Plains from Darfield to Te Waihora / Lake Ellesmere. Remnants of the old river courses and outwash events through the Selwyn District can be identified through evidence of the deep greywacke gravel deposits, the remnant alluvial fan patterning and terrace landforms.

Landcover

Landcover throughout the Low Altitude Plains includes a mosaic of pasture which is predominantly modified from its original form, linear roads and small clusters of exotic plantation trees. Agricultural patterns of shelterbelts, fenced paddocks and irrigation pivots create a patchwork pattern on the land when viewed from the air. About 0.5% of original indigenous vegetation exists on the plains due to intensive largescale farming practices, successive clearance and land drainage practices, which have greatly modified the nature of the plains habitat. Small areas of native plantings are being re-established into the Waikirikiri / Selwyn River catchment area by charitable trusts and volunteer groups. There is also ongoing work to identify and protect existing remnant indigenous plant communities by landowners and other interested parties (SDC, ECAN and volunteer groups).

Land Use

Prior to European settlement, the Low Altitude Plains area was extensively used by Ngāi Tahu as a mahinga kai, particularly for the now locally extinct buff weka, kiore (Polynesian rat), as well as aruhe (bracken fern) and tuna (eel). The Waikirikiri was the central travelling route linking a network a food gathering sites as well pā/kāinga stretching along the length of the river from the lake to the Malvern Hills. Beyond here, further trails, food gathering and settlement sites led towards both the Waimakariri as well as the Rakaia and then inland to the key mountain passes that linked through to Te Tai Poutini (the West Coast), and facilitated the important pounamu (greenstone) trade.

Today, the Low Altitude Plains are characterised by the well-established townships of West Melton, Rolleston, Lincoln and Taitapu, which lie within a 20km radius from Christchurch City. Subdivision in the Inner Plains area of the District (identified in the Operative District Plan) adjacent to the City boundary and the larger Selwyn townships typically intensifies to smaller landholdings and lifestyle blocks. Less intense settlement patterns arise farther from major settlements, with the main centres on the Western plains consisting of Darfield, Sheffield, Springfield and Hororata; while Leeston, Southbridge, Doyleston and Dunsandel are located in the southern part of this area. The Low Altitude Plain's predominant land use is agriculture, with dairy farming being the dominant use. Dryland sheep farming is found on the shallow stony soils but in these areas irrigated dairy farming is becoming more prevalent.

Major transmission lines and towers intersect the plains from Rakaia in a South West transect heading toward Templeton on the western side of Christchurch City and northwards into

Waimakariri District. The towers are prominent elements in the flat Low Altitude Plains landscape.

Key Landscape Characteristics

- Flat, open and expansive plains which have little topographical relief
- A largely linear landscape which is emphasised by the characteristic shelterbelts and dissecting roads, as well as the central spine of the Waikirikiri /Selwyn River
- Broad scale, highly modified agricultural land use
- Very little native vegetation
- Distant backdrops of the Te Whata a Rama/Torlesse, Benmore and inland Craigieburn Ranges

2.4 Landscape Character Area 4: Malvern Hills - Foothills and Downlands

Photograph 4: The downlands east of the Torlesse Range

The Foothills and Downlands Landscape Character Area forms the low-lying and open foothills which extend from the north-west of the Low Altitude Plains Landscape Character Area to the front ranges in the north east. Round Top (894m) forms the south western part of this Landscape Character Area with the Russell Range (941m) forming the northern backdrop. Beyond this Landscape Character Area to the north is the Front Ranges Landscape Character Area comprising the Big Ben and Te Whata a Rama/ Torlesse Ranges.

The Waikirikiri/Selwyn and Hawkins Rivers traverse the valley floors of this Landscape Character Area weaving their way southwards toward the Plains. The north western and western edges of this Landscape Character Area adjoin the settlements of Springfield, Sheffield and Coalgate while Windwhistle and Glenroy flank the southern edges of this area.

The Malvern Hills retain an undulating character which is further divided into areas of enclosed valley floors, rolling shoulder slopes, spurs and summits along the rolling shoulder slopes. The underlying geology of this Landscape Character Area is of volcanic origin and is related to the sheets of rhyolite lava found in the Te Kiekie/Mt Somers area north west of Ashburton.

Landform

The elevation of the Malvern Hills, at between approximately 300m to 1,211m, is much lower than the adjacent and adjoining inland ranges of Te Whata a Rama/ Torlesse and Big Ben Ranges (1,963m). However, the Malvern Hills provide an important gradual rise to the mountains further north.

Landcover

Within this Landscape Character Area, the lower slopes of the hills are predominantly low production grassland, however, there are frequent locations where scrub is apparent, mainly within gullies and on steeper slopes. Scrub here comprises predominantly matagouri, manuka, some gorse and broom, and some mixed native species found in gullies. Pockets of indigenous forest, notably manuka and kanuka are present on the northern slopes of the more elevated western parts of this area.

Pasture covers much of the remainder of the character area especially in the productive valley areas, with tussockland, gorse and regenerating indigenous vegetation also common in steeper areas. Plantation forestry has also been established in some parts, with some large plantations present in central and western areas.

Landuse

The Malverns Hills area was part of the inland trails, settlements and food gathering areas of Ngāi Tahu Whānui significant for various resources and species including koreke (extinct native quail), kāuru (made from cabbage tree root), āruhe, weka and tuna. These trails were also significant as part of the east-west coast travelling route that supported pounamu trade.

The current predominant land use is agricultural, with pastoral grazing with sheep and beef farming being dominant. Large plantations of production pine forestry are also present.

The transmission lines and towers intersect the Malvern Hills from Glenroy in a south-western transect toward Sheffield on the north-western side of this character area. The towers are prominent elements in the open rolling lower hill slopes of this landscape.

There is also a large open cast coal mine within the Malvern Hills and other small historic mines in the area.

Key Landscape Characteristics

- Low lying and open foothills with moderately divided valley systems and flat valley floors
- Small pockets of indigenous and regenerating scrubland and forest
- Areas of plantation forestry
- Pastoral grazing being a dominant land use
- Prominence of transmission towers
- Important Ngāi Tahu trails, settlements and food and resource gathering areas, such as Whakaepa (near Coalgate) that linked through to the Upper Waimakariri basin and onto the mountain passes to Te Tai Poutini and were part of the pounamu trade route.

2.5 Landscape Character Area 5: Front Ranges (Big Ben and Torlesse Ranges)

Photograph 5: View of Torlesse Range from State Highway 73

This Landscape Character Area is located between the Foothills and Downlands, the Kura Tawhiti/ Castle Hill Basin and the Intermontane Ranges and Basins Landscape Character Areas. The distinctive north-south extending mountains in this area act as the front range that fringes the upper plains. To the northeast is the rugged Te Whata a Rama / Torlesse Range, with Castle Hill Peak and Mount Torlesse rising to just under 2,000m and to the southwest is the lower Big Ben Range, with Ben More rising to 1,655m. These two front ranges are divided by Porters Pass and State Highway 73 and are very visible from parts of the Low Altitude Plains. These ranges are often snow-covered and provide the skyline in longer distance views from the plains.

Landform

The landform of this Landscape Character Area is typically steep and highly dissected by minor glacial and continued erosion through alluvial and tectonic forces. With elevation ranging from 450m to around 2,000m the predominantly sedimentary basement rocks of these ranges are closely associated with the spine of the Southern Alps. Uniform greywacke and argillite rocks were formed from sea-floor deposits and have been uplifted to their current height. Extensive scree and boulders are evident at higher altitude, along with sharp crested peaks and relatively smooth flat-topped ridge crests.

The ranges have been separated from the main spine of the Southern Alps by a series of large rivers that dissect and drain this landscape. Deep colluvium and moraine deposits can be found throughout.

Landcover

The landcover of the front ranges has not been modified to the same extent as the plains below. The remaining native vegetation communities are generally restricted to steep slopes and gullies. They include mountain beech fragments (of various sizes), mixed broadleaf forests, mixed shrublands and tussock grasslands. Podocarp forests around the base of the foothills have been heavily logged and only very small fragments remain. The remainder of the area contains plantation forests and extensive pastoral grassland.

At higher altitudes, the landcover is predominantly exposed rocky outcrops with pockets of low alpine vegetation, scree and boulders. The peaks of the Torlesse Range are often snow-clad and highly visible from long-distance viewpoints on the plains.

The Korowai/Torlesse Tussocklands Park covers approximately 21,000 hectares centered on the Torlesse and Big Ben Ranges, in Selwyn's high country. This conservation area, which is managed by the Department of Conservation, contains extensive native vegetation, in particular alpine shrubs, such as *Dracophyllum*. The Torlesse and Big Ben ranges are high, dry mountain ranges with remarkable flora and fauna. Slim-leaved snow tussock/wï kura is common and the high-altitude tussock grasslands represent the eastern limit of mid-ribbed snow tussock. Unique scree plants are found, such as vegetable sheep (*Raoulia eximia*) and penwiper/porotaka (*Notothlaspi rosulatum*), Haast's scree buttercup (*Ranunculus haastii*), scree lobelia (*Lobelia roughii*) and scree pea (*Montigena novae zelandiae*).

Landuse

Kura Tawhiti and Te Whata a Rama which make up part of the Torlesse Range are key features of this landscape area for Ngāi Tahu, being significant maunga or mountains that could be seen from the settlements on the plains and that were also key food gathering areas for valued alpine and forest species.

Much of this Landscape Character Area is accessible for a variety of recreational pursuits including hiking and mountain biking. Plantation forestry and high-country grazing is also typical on the lower slopes. State Highway 73 provides the main access route through the mountain range to the West Coast, with Porters Pass being one of the popular viewpoints in the area. The Torlesse Range is very accessible from Christchurch and a very popular recreation area. The main access points into the park are the Kowai River (private), Porters Pass and Lake Lyndon Road. There are no settlements in the area, but occasional farm buildings/ homesteads are found.

Key Landscape Characteristics

- Highly visible Ranges including Kura Tawhiti and Te Whata a Rama, evident from the Low Altitude Plains and significant to Ngāi Tahu.
- Sharp crested peaks and smooth flat-topped ridge crests.
- Mosaic of landcover with extensive scree at higher altitudes and greater modification at lower altitudes.
- Tourist and recreation interest in the area (mountain biking, hiking).

2.6 Landscape Character Area 6: Kura Tawhiti/ Castle Hill Limestone Basin

Photograph 6: Rocks at Castle Hill

The Kura Tawhiti/ Castle Hill Limestone Basin Landscape Character Area lies to the west of the Torlesse Range (Front Ranges Character Area) and east of the Craigieburn Range (Intermontane Ranges and Basins Character Area), and is distinguished by its specific underlying geology.

Castle Hill is one of Canterbury's iconic landscapes that is well-known by locals and tourists alike. The limestone outcrops that occur throughout the basin are a distinctive and recognisable part of this Landscape Character Area. Their prominence in this Landscape Character Area is amplified through the presence of State Highway 73, where they are frequently viewed from. The limestone ridges and rock outcrops are of particular prominence around Castle Hill and Spittle / Flock Hill, but distinctive formations cross the entire basin.

The Porter River drains the basin with a number of tributaries converging near Prebble Hill before flowing into Broken River.

Landform

The Castle Hill Basin with its karst and limestone outcrops is a classic area of Canterbury geology, which is considered a geological showpiece with its easy access from Christchurch and the presence of good and easily accessible limestone ridges and rock formations. Many fossils can be found across a number of important sites within the basin and there are representative examples of the broad diversity of geological features, landforms, soil sites and active physical processes present.

The geology of the rocks at Castle Hill / Kura Tawhiti comprises tertiary limestone, mudstone, sandstone and tuffs which were eroded by water to form the distinctive sculptured landforms of a karst landscape. Cave Stream is an interesting example of a limestone cave, with an accessible stream running through it.

Land cover

While the wider basin is predominantly in agricultural use with exotic pasture, the DOC managed Castle Hill conservation area is botanically important because the limestone and related rocks support rare plants. The presence of a number of threatened plant species, such as the highly threatened buttercup *Ranunculus paucifolius* which is found on land adjacent to Kura Tawhiti / Castle Hill Conservation Area, led to the designation of the Lance McCaskill Nature Reserve.

The karst surface landforms provide a variety of habitats for plant species that are restricted to, or favour, growing on calcareous soils, such as scattered scrubland remnants among limestone boulders and crevices, sparse limestone scree vegetation, and calciphilic tor vegetation of mosses and lichens.

Furthermore, many bird species, several lizards and some invertebrates (mainly snails), for which the limestone tors and outcrops provide an important habitat, have been recorded in the Castle Hill Basin.

Land use

Much of the Landscape Character Area is used for pastoral grazing with levels of modification varying between the slopes and flat areas within the basin. The agricultural land use has a long-standing history and many farm buildings, such as those at Castle Hill Station.

Castle Hill Village is a small alpine settlement with a specific character that reflects an 'alpine chalet' theme with building design controls reflecting the alpine environment.

'Kura Tawhiti', which has Tōpuni status under the Ngāi Tahu Claims Settlement Act 1998, means 'the treasure from a distant land', and is an allusion to the kumara, an important food once cultivated by Māori in this region. The site was part of a trail network, where Ngāi Tahu tūpuna camped overnight and gathered food on their journeys from over 600 years ago. Numerous archaeological sites have been identified in the area, including numerous habitation caves and rock drawings.

The tors and bluffs of the basin provide high scenic values and are an integral part of the landscape. The site is a popular stopping place for travellers on the major east/west highway across the South Island. Furthermore, the area is also very popular with rock climbers, who come to the area in great numbers to climb at Castle Hill and Spittle Hill.

Key Landscape Characteristics

- Iconic and distinctive limestone outcrops, including significant archaeological and heritage sites for Ngāi Tahu, containing ancient rock drawings.
- Important karst landscape and impressive rock formations at Cave Stream.
- Open, dry basin with agricultural land uses on private land.
- Highly significant native limestone vegetation occurring in reserves.

2.7 Landscape Character Area 7: Intermontane Ranges and Basins

Photograph 7: Lake Coleridge within the Intermontane Ranges

The Intermontane Ranges and Basins Landscape Character Area extends between the Main Divide Ranges to the west and the Front Ranges to the east. This Landscape Character Area includes the typical 'High Country' that Te Waipounamu/ the South Island is renowned for.

While the Kura Tawhiti/ Castle Hill Limestone Basin with its prominent limestone outcrops is described as a separate character area, this area includes the wider Whakamatau/Lake Coleridge Basin at the confluence of two major braided rivers – the Rakaia and the Waitāwhiri/Wilberforce (including the catchment of its tributary, the Harper River). The braided Waimakariri and many of its lower tributaries, such as the Porter / Broken River area are also included in this area. The Black and Craigieburn Ranges are two of the major mountain ranges that fall within the character area.

Landform

To Ngāi Tahu, the Southern Alps are known as Kā Tiritiri o Te Moana – literally meaning 'the white caps of the ocean'. This name comes from the view of the mountains the earliest tūpuna (ancestors) saw when arriving from the sea on their waka – which to them looked like the peaks seen in a rough ocean. The alps also form the hull of the great canoe of Aoraki – Te Waka o Aoraki - which was wrecked when it struck an undersea reef and flipped upside down, forming the South Island (and providing its original name). Aoraki and his brothers who were on board climbed to the top of the upturned hull and became the highest peaks, including Aoraki/Mt Cook.

The elevations are lower than in the ranges to the west (around 2000m) and fluvial and erosional processes are more prevalent in the absence of recent glaciers around the peaks of the ranges. However, the signs of past glaciation are clearly evident in the landscapes of the basins and their landforms. Features of these basin landscapes include extensive glacial terraces, moraines, lakes and kettleholes, as well as outwash surfaces. Remaining lakes in the area include well-known Whakamatau/Lakes Coleridge, Moana Rua/Pearson and Ōpōrea-iti/Grassmere. The wide braided rivers are iconic features of the landscape and the eroding scree slopes and rock outcrops on the ranges create an impressive backdrop to the lower-lying valleys. Extensive fans are visible signs of more recent erosional processes.

Landcover

These relatively dry basins, valleys and mountains are one of Canterbury's distinctive landscapes with extensive scree slopes and stark contrasts between the less modified ranges and the farmed basins and valleys. Alpine areas have extensive scree slopes and basins that support interesting and diverse alpine ecosystems including tall tussocklands, herbfields and specialised scree communities that can withstand the harsh alpine climate.

Farmers on the various large high country stations have cultivated this land for generations. As a result, the indigenous plant communities have been modified by pastoralism and vegetation is now dominated by pasture and tussock grasslands. The low-growing nature of this vegetation found in the basins, along the river terraces and on the slopes of the ranges allows the landforms to dominate the landscape and define the horizons. This accentuates the vastness of these landscapes.

Many of the mountain ranges are within Department of Conservation (DOC) management, where beech forest is more prevalent, such as in the headwaters of the Avoca and Harper Rivers. Due to the rainfall gradient from the main divide and following historic burning / deforestation for farming more eastern areas do not support the same extensive forests as the Arthurs Pass area.

Landuse

Whakamatau/Lake Coleridge is a significant site for Ngāi Tahu, being part of the well known Rakaia 'pounamu trail' following up along the Waitāwhiri/Wilberforce River to Nōti Raureka (Brownings Pass) and down to Arahura on Te Tai Poutini (the West Coast). It is significant as a mahinga kai as well as nohoanga for the gathering of food, particularly tuna/eels. Other key sites in the area include Te Ruahikihiki (Lake Selfe), Ōtūmapuhi (Mount Algidus), Kohikaaroaroa (Harper River) and Otūtekawa (Avoca River), utilised as mahinga kai.

European history is closely associated with high country pastoralism, and evidence of this can be seen in the landscape with the presence of homesteads and associated buildings. Recently, through the tenure review process (Crown Pastoral Land Act 1998) some areas of high country land have been retired from grazing and their management has been transferred to DOC. The remainder have been transferred to freehold land, often resulting in intensification of agricultural land use in these lower-lying areas. There is limited settlement in this landscape, aside from the small high country village Lake Coleridge, and the isolated homesteads of the high country stations.

The Craigieburn Range is one of Selwyn's tourist attractions with a number of commercial and club ski fields that operate in this area during the winter months, including Porter Heights,

Cheeseman, Broken River and Craigieburn. During summer these areas are popular for hiking and mountain biking.

Key Landscape Characteristics

- Iconic High Country landscape
- Highly legible landforms shaped by past glacial and more recent fluvial processes
- Alpine mountain ranges with extensive scree slopes
- Braided rivers and lakes form vast basin landscapes
- Agricultural farming use, traditionally with extensive grazing
- Tourist and recreation interest in the area (skiing, mountain biking, hiking)

2.8 Landscape Character Area 8: Main Divide Ranges

Photograph 8: Snowy peaks in the High Main Divide Range

The Main Divide Ranges includes the steep and precipitous mountains of the Main Divide in Kā Tiritiri o Te Moana/the Southern Alps, which form the western boundary of the District. This Landscape Character Area transitions to the east into the Intermontane Ranges and Basins Landscape Character Area, where a lower rainfall and lower mountain ranges are prevalent. The area includes the prominent mountain ranges in the headwaters of the Waimakariri, Waitāwhiri/Wilberforce, Mathias and Rakaia Rivers that contain many well-known, glaciated peaks.

The Main Divide Ranges area is characterised by high mountains, deep valleys, high rainfall and indigenous vegetation. This Landscape Character Area, away from the Arthur's Pass valley, is the most remote and isolated with the lowest level of modification.

Landform

To Ngāi Tahu, the Southern Alps are known as Kā Tiritiri o Te Moana – literally meaning 'the white caps of the ocean'. This name comes from the view of the mountains the earliest tūpuna (ancestors) saw when arriving from the sea on their waka – which to them looked like the peaks seen in a rough ocean. The alps also form the hull of the great canoe of Aoraki – Te Waka o Aoraki - which was wrecked when it struck an undersea reef and flipped upside down, forming the South Island (and providing its original name). Aoraki and his brothers who were on board climbed to the top of the upturned hull and became the highest peaks, including Aoraki/Mt Cook.

The Selwyn District section of the Southern Alps comprises predominantly sedimentary rocks (predominantly greywacke and argillite) and have been severely glaciated and sculpted by erosional and tectonic forces. The mountainous landscape comprises glaciated eroded bedrock forms, arêtes, cirque basins, U-shaped glacial troughs, extensive areas of bare rock and scree and permanent ice and snow above 1400m in elevation.

Elevation within this Landscape Character Area extends from 550m in the southern reaches to up to 2400m, with rainfall ranging from 5,000 through to 8,000mmm a year.

Landcover

The land cover of this area varies between the high alpine ecosystems with specialised alpine plants and herbs, subalpine shrubland at mid elevations and beech forest covering the lower slopes. Important stands of New Zealand cedar/kaikawaka also exists in the headwaters of the Wilberforce River.

The wide braided rivers are generally dominated by wide gravel plains and islands, with specialised plant communities adapted to the challenging and ever-changing braided river bed environment. Overall vegetation modification is quite limited and weeds are generally confined to river valleys, where they are less prevalent than in more eastern areas.

Land Use

The main divide area was utilised by Ngāi Tahu as a travelling route connecting the east and west coasts and in particular supporting the valuable pounamu trade. Key trails include those following the three main rivers of the Rakaia, Waimakariri and Waikiriri. Perhaps the most significant is famous 'pounamu trail' that utilised Nōti Raureka or Brownings Pass, which followed the Rakaia River up past Whakamatau/Lake Coleridge then along the Waitāwhiri/Wilberforce River and up to the pass where it proceeded down the Arahura River. The pass itself is named after Raureka, a Ngāti Wairangi women who is famed with being the first to cross the pass and come into contact with Ngāi Tahu along the Rakaia, subsequently showing them her pounamu toki (adze) as well as the way back to the Te Poutini (West Coast). Today Nōti Raureka is still a popular walking trail as part of the well-known '3 passes' walk and is utilised each year as part of the Aoraki Bound journey run by Ngāi Tahu and Outward Bound.

Land use within this Landscape Character Area is overwhelmingly natural with very limited human intervention evident. Areas of human modification are focused on Arthur's Pass Village, where a series of houses, lodges and huts are present, as is the main road (State Highway 73) and railway line which travels through this deep valley. Elsewhere, human modification is very sparse and comprises occasional huts and small tracks. With majority of this Landscape Character Area being protected for conservation purposes, land use is restricted to recreational hiking, skiing and back country activities.

Key Landscape Characteristics

- Steep and precipitous mountainous environment
- A range of highly recognisable mountain peaks, cirques, tarns and glaciers
- Deep U-shaped river valleys
- Indigenous forest cover on lower slopes and alpine vegetation on more elevated slopes
- Very high rainfall over the Main Divide

- Arthurs Pass Village being the only settlement and main modification, including State Highway 73 and the railway line.
- Nōti Raureka (Brownings Pass) and its associated trails running to the head of the Waitāwhiri/Wilberforce River is significant to Ngāi Tahu as part of the pounamu trails connecting the east and west coast.

3.0 Rural Character Assessment

The following assessment describes the rural character of the Port Hills, Inner Plains, Outer Plains, Malvern Hills, and High Country areas of the Rural Zone as identified in the Operative District Plan. The rural character assessment focusses predominantly at describing the areas, but also the elements that may have caused the rural character to be eroded or altered significantly.

The assessment focusses on elements of geographical landform, vegetation cover, spatial land use patterns and built form characteristics. It also looks at edges/boundaries of the areas and identifies whether there is a perceptible change between each area and where the rural character has been significantly modified along the interfaces. Refer to **Figures 2 – 10**.

3.1 Port Hills

Photograph 9: Overlooking the Port Hills from within the Inner Plains

The Port Hills rural zone borders Christchurch City along its north-east boundary and the Inner Plains zone along its south-west boundary where it follows the 60m contour line along the lower slopes of the Port Hills. Elevation within the Port Hills zone ranges from 60m along the base to 534m at its highest point.

The character of the Port Hills can be described as a rural landscape with a sense of spaciousness due to the predominant absence of dwellings above the identified 60m contour line., The mosaic of vegetation and interesting landform that is part of a broader remnant volcanic crater provides an intriguing skyline visible from the Inner and Outer Plains of the Selwyn District.

Geographical Landform

The Port Hills gently rise from the flat plains with finger like spurs extending from the ridgeline, as they broaden towards the lower slopes. Rocky outcrops can be seen along the craggy crater rim which express the landform's volcanic origins.

Vegetation Cover

The vegetation cover of the Port Hills is a mixed patchwork of native and exotic shrubs, forests and exotic grassland, with some larger-scale plantation forests on the mid to lower slopes north and south of Tai Tapu. Shelterbelts mainly appear on the lower slopes to along paddock boundaries and in the vicinity of a few residences. Exotic woody weeds, such as gorse and broom, are a regular occurrence. Native vegetation is largely confined to reserves and wetter gullies with regenerating forest.

Spatial Land Use Patterns

The Port Hills land use patterns consist mostly of pastoral farming made up of sheep and beef grazing on exotic grassland. Only a small number of paddocks are delineated with shelterbelts and most are divided with post and wire fencing. Forestry blocks within the Port Hills tend to follow the landforms occurring in gullies and are small to medium-sized blocks located on the western slopes, apart from two larger areas above Holmwood Rise and Otahuna Road. Refer to **Figures 2 – 3** for lot sizes.

Built Form Characteristics

The majority of buildings within the Port Hills are confined to the lower slopes and mostly comprise residences and farm buildings, sheds, etc. The upper slopes tend to be relatively free of buildings and where they are present, they are located along the Summit Road near the northern zone boundary of the zone. Residential buildings tend to be relatively modern and are medium to large in scale.

Zone Boundary / Edges

The boundary of the Port Hills zone is somewhat deceiving when viewed from within the zone and from the plains. From a landform perspective, the boundary outline would be expected to skirt along the bottom of the slopes rather than follow a contour line part way up the slope (at the 60m contour). In some areas this presents an unclear boundary to a largely undeveloped landscape with the potential for creeping development up the lower slopes from the more developed Inner Plains zone. In some areas, such as around Otuhuna and above Holmes Road, Early Valley Road and Ahuriri Road, the more liberal building regime below the 60m contour is reflected in a number of dwellings occurring along the lower slopes, elevated just above the plains to the east.

If a protection of the Port Hills' rural character and current lack of built development was to be achieved over the longer term along the base of the slopes as well as higher areas, the current boundary line would need to be realigned with the bottom of the slopes where it meets flat land. Given the Port Hills area contains VALs and ONF/Ls (as recommended in the BML Outstanding Natural Landscape Study) which extend down below the 60m contour line, realigning the boundary zone with these lines would represent a more consistent, landform oriented approach. However, in some areas the creeping development from the plains has already extended onto these lower slopes, compromising the rural character of these areas. In these areas the existing zoning is reflected through the existing land uses.

Key Rural Characteristics

- Prominent rocky outcrops showing volcanic origins
- Land use mosaic of extensive grazing and small-medium sized forestry blocks
- Native vegetation largely confined to reserves and gullies with regenerating forest

- Buildings are generally located on the lower spurs and slopes

Recommendations

- *Change Port Hills zone boundary to follow the ONL/ VAL outlines from its current alignment that follows the 60m contour line. This will provide a clear distinction between the Inner Plains and Port Hills zone. The VAL/ ONL areas exclude existing denser residential developments, where the rural character has already been compromised which will better align with the Inner Plains zone.*
- *The density for the lower slopes (below 160m contour line) within the VAL should be maintained at the current level (40ha).*
- *Since the upper slopes are more visually exposed, lower densities in these areas are considered appropriate. The current regime with a 100ha minimum lot size above the 160m contour appears to successfully discourage higher residential density in these areas and should be maintained.*
- *The ONL areas are generally located on higher lying areas, but also include less modified spurs and gullies below the 160m contour. The rural character of the Port Hills is largely derived from the mosaic of land uses, interspersed with areas of native vegetation. The settlement pattern generally follows the base of the slopes and valleys with built form generally absent on the prominent volcanic spurs. This pattern should be continued by aligning the density in all of the ONL areas. This would mean introducing a 100ha minimum lot size within all ONL areas, independent of elevation. This would include, in particular, the prominent spurs in the south of Otahuna that are currently free of residential development and which have a more open rural character than some of the northern, more developed spurs, such as above Early Valley and Holmes Road.*

3.2 Inner Plains

The Inner Plains rural zone is contained by the Waimakariri River to the north, Christchurch City on the east, the Port Hills rural zone on the south east and the Outer Plains rural zone along the southern and western boundaries.

The rural character of the Inner Plains is dominated by vegetated lifestyle blocks divided with post and rail fencing, expressive entry features, manicured shelterbelts/ clusters of exotic trees providing a sense of enclosure along the road boundary and a high density of dwellings.

Geographical Landform

The landform of the Inner Plains is relatively flat with very limited topographical change.

Vegetation Cover

Vegetation cover in the Inner Plains is primarily high producing exotic grassland with small pockets of forestry. The vegetation and related outlook ranges from dense shelterbelts lining the sides of the roads to wide open views across exotic pasture. Commonly, shelterbelts delineate lifestyle block paddocks or rural residential lots. While the Inner Plains still retains a 'rural' feel, domesticated planting, made up of native and exotic rows and clusters of trees, along boundaries is a common sight. Mowed berms and manicured hedgerows are a key characteristic of the Inner Plains (**refer to Photograph 10**). Overall, the vegetation pattern within the Inner Plains is more domesticated than rural in many places. A number of areas, on the outskirts of Prebbleton, Rolleston and West Melton provide a landscape character that is more closely aligned to rural-residential or lifestyle blocks with smaller land holdings and agricultural uses that are not production oriented, such as horse paddocks.

Photograph 10: View of domesticated planting along Newtons Road within the Inner Plains.

Spatial Land Use Patterns

When traveling through the zone, patterns of land being carved up over time are very visible based on smaller paddock sizes (approximately 4 hectare blocks) as seen in **Photograph 11** below. Only a few grazing animals can be seen in the paddocks (sheep, horses, alpaca, etc.)

compared to a working farm. The linear shelterbelt patterns give a clear indication of spatial land use patterns within the Inner Plains, where they are often associated with residential use. The small-scale rural-lifestyle / rural-residential properties often contain medium to large modern homes with small paddocks for their hobby farms. Currently to subdivide land within the Inner Plains Zone, the minimum lot size is four hectares in the Selwyn District Plan. Very few undeveloped paddocks appear across the zone which greatly contrasts in character with other rural areas (refer to **Figures 4 -5**).

Photograph 11: View of a small-scale rural property from Newtons Road within the Inner Plains.

Built Form Characteristics

Residential development within the Inner Plains appears to occur in clusters fronting most roads, reflecting the underlying subdivision patterns. Houses and sheds are commonly set back between 30 – 60 metres from the road boundary and screened from view by shelterbelts or vegetation clusters. Paddocks sometimes front the road boundary, providing a buffer between a residence and the road. Long tree lined driveways are a typical element to provide access to residences. Most commonly, residences are surrounded by a rural post and rail type fence with an entry feature signalling the entrance to the property.

Within the Inner Plains, buildings are primarily residential and range in scale from medium to large in size. The character of buildings on the Inner Plains tends to be modern in character as shown in **Photograph 12**.

Photograph 12: Large, modern homes visible from Hayes Road overlooking the Inner Plains.

Around Tai Tapu (Otahuna) and Lansdowne (Early Valley Road) a number of residential dwellings are found on lower slopes and spurs of the Port Hills, which form part of the Inner Plains zone in the Operative Plan (see **Photograph 13)**.

Commercial development has spread from Christchurch City into the Inner Plains along Main South Road, blurring the distinction from leaving Christchurch City to entering a 'rural' environment within Selwyn District. Templeton forms another node of development within the District boundaries after a short stretch of mixed commercial and rural activities along SH1, which means that the overall rural character in this area has been substantially modified.

Photograph 13: Houses within the Inner Plains on the corner of Sherwood Rise and Heaton Drive, just below the Port Hills zone.

Zone Boundary / Edges

Where the Inner and Outer Plains border each other, the zone boundary can be perceived in some parts with a distinct difference in character between areas, while it is not perceptible in some other parts of the zone. For instance, the western edge of the Inner Plains is distinctly reflected in land uses in some areas where signs of residential activity, such as lines of letter boxes can be found on the Inner Plains side of the road, with large, open paddocks for grazing on the opposite side which fall into the Outer Plains (see **Photograph 14**). Where this distinctive change along edges is visible the potential consequences of rules in relation to density of development and types of activities are currently demonstrated.

Photograph 14: Outer Plains (left – open paddock) and Inner Plains (right – letter boxes and shelterbelts) boundary near Halkett (corner of McKays Road and Sandy-Knolls Road).

In contrast, south of Lincoln, paddock sizes within the Outer Plains appear to be smaller in size and the character of the environment is somewhat more domesticated, which gives these areas a character that is similar to that of the Inner Plains. In this area between Lincoln, Springston, Greenpark and Tai Tapu the landscape character of the Outer Plains area is more closely aligned with the one found on the Inner Plains, which indicates a boundary adjustment in this part of the zone would be appropriate to reflect recent development that has extended out from the small settlements surrounding it. Due to the accessibility to Christchurch and Lincoln this area is desirable for residential development and appears to be under increasing pressure.

However, along the south-eastern boundary where the Inner Plains borders the Port Hills and Outer Plains south of Tai Tapu there is no visible or distinct difference between the three zones other than the topographical change as seen below in **Photograph 15**. In this area, residential development is quite limited and a more rural character can be found across all three zones.

Photograph 15: View from State Highway 75 overlooking the Port Hills zone (top of landform on left), Inner Plains (landform and paddock on left) and Outer Plains (paddock on right).

Overall, the boundary between the Inner and Outer Plains zones appears to be slowly eroding in some areas, to a point where there is no longer a visible difference. In these areas creeping

development over the zone boundary could over time undermine the purpose of the current rules in relation to density of development.

Careful consideration should be given to any future subdivision or development within this zone and especially along the Inner/Outer Plains boundary as there is a real risk of losing the remaining 'ruralness' and becoming overly dense. In some areas this has already changed to a point that the desired rural characteristics of the Outer Plains can no longer be achieved, therefore it may be warranted to contemplate a boundary adjustment to direct future denser development into these expansion areas of the Inner Plains Zone, alleviating pressure from other Outer Plains areas near the boundaries.

Key Rural Characteristics

- Relatively flat land, primarily covered in high producing exotic grassland.
- Smaller sized properties with paddocks divided by shelterbelts or hedgerows.
- Residential buildings often clustered near road boundaries.
- Road boundaries and paddocks lined in manicured shelterbelts or domesticated planting with mowed berms.
- Rural post and rail fencing with entry features to signal access to residences.
- Zone edges range from being very distinctive to blurred in other areas.
- Any further residential density, in particular in areas that have already been subdivided to the current 4ha minimum lot size, could erode what is left of the rural character in the Inner Plains.

Recommendations

- *The Inner Plains boundary should change along the Port Hills boundary to follow the ONL and VAL outlines along the base of the Port Hills landform to deter any further higher-density development on the lower slopes and spurs (as set out under the Port Hills section above).*
- *Where the Inner Plains borders the Outer Plains, there is the opportunity to realign the boundary to exclude the more developed land, where rural character has already been compromised. Realigning the boundary now to recognise the change which has occurred will enable better containment of the recent trend to smaller-sized subdivision to protect the Outer Plains zone.*
- *The specific areas that may be more appropriately managed under the Inner Plains due to their domesticated character are listed below. Should this recommendation be pursued, these areas would need to be ground-truthed in more detail to ensure boundary amendments are outlined correctly to reflect rural character. The following areas are recommended for rezoning from Outer Plains to Inner Plains:*
    - *South of Lincoln*
    - *South-west of Rolleston/ South of Burnham*
    - *North-west of Rolleston - short stretch along Railway Road*
    - *A short stretch along Old West Coast/ Halkett Roads adjacent to the existing zone boundary*
- *The current minimum lot size (4ha) and subsequent residential density within the Inner Plains should remain the same, given the subdivision that has already taken place to date.*

3.3 Outer Plains

The Outer Plains rural zone is bordered by the Waimakariri River in the north, the Inner Plains rural zone to the east, Lake Ellesmere, the sea and Rakaia River to the south and the Malvern Hills rural zone to the west. The Outer Plains is the second largest zone within the Selwyn District, following the High Country, containing the central portion of the Canterbury Plains. This highly modified and productive landscape possesses a linearity, emphasised by shelterbelts, dissecting roads and broad scale agricultural land use. Refer to **Figures 6 – 7**.

Geographical Landform

The Outer Plains are relatively flat to gently undulating, fertile land. The elevation ranges from 0 to 500m above sea level where the Outer Plains border the Malvern Hills.

Vegetation Cover

The Outer Plains are primarily covered in high producing exotic grassland, small clusters of exotic forestry with gorse and/or broom bordering the river beds (Waimakariri, Selwyn and Rakaia Rivers). Exotic shelterbelts are interspersed across the plains and tend to be more prevalent near existing residential development areas. Agricultural patterns of shelterbelts, fenced paddocks and pivot irrigators create a distinctive patchwork pattern on the land, particularly when viewed from the air. There is a distinct lack of native vegetation present on the plains as much of the vegetation has been cleared, cultivated and converted into dairy farms within the last decade as seen in **Photograph 16**.

Photograph 16: View from Leaches Road of highly modified land used for agricultural purposes.

Spatial Land Use Patterns

There is a clear land use pattern apparent throughout the Outer Plains which is predominantly intensive agriculture. Dairy farming is the dominant agricultural use in the southern parts of the Selwyn rural landscape, with sheep and beef farming and areas of cropping/ arable farming common as well, in particular in the northern and western parts. The majority of land south of the Selwyn River has been converted into irrigated dairy farming and has a 'spacious' appearance by views gained across the flat plains as seen in **Photograph 17**. Many shelterbelts were removed over the past decade to allow for large scale pivot irrigation. This change in land use has had a significant effect on the character of the plains by creating a 'busier' place with dairy sheds and high stock numbers.

Photograph 17: View from corner of Haldon and Dunsandel Roads looking west over exotic pasture with the Main Divide in the background.

South-east of State Highway 1 (SH 1), in the area around Lincoln- Rolleston- Leeston-Southbridge, individually held lots tend to be smaller (under 20ha) in comparison to the rest of the Outer Plains, particularly the south-western part, which contains mostly larger lots (more than 40ha). Here the spatial land use pattern changes to include more residential development and shelterbelts in comparison with the remainder of the Outer Plains zone. Refer to **Photograph 18** below as a typical example.

Photograph 18: View of smaller paddock size within Outer Plains, south of SH 1.

The Land Use Recovery Plan 2013 is a statutory document prepared under the Canterbury Earthquake Recovery Act 2011 which took effect in December 2013. Its purpose is to provide for residential and business land use to support recovery and rebuilding to 2028. This led to the development of a chapter within the Canterbury Regional Policy Statement for the Greater Christchurch area (chapter 6) which includes a portion of the Selwyn District. The Greater Christchurch area extends to cover the Port Hills, the Inner Plains and a part of the Outer Plains zone. Refer to **Figures 6 - 7** for the Greater Christchurch boundary within the Outer Plains zone.

The Greater Christchurch boundary does not align with any zone in the Selwyn District Plan, nor does it relate to any particular change in rural character. As the Greater Christchurch boundary is intended primarily related to land for recovery and growth of residential and business activity, it would not appear necessary to include this as large an area as is currently shown. Growth of residential and business activity into this currently indicated land would lead to a significant change in rural character.

In the current plan, minimum lot sizes within the Outer Plains are of a medium size (over 20ha) to support a rural land uses rather than residential use. However, 20ha is generally too small to support productive working farms, which is reflected in some parts of the Outer Plains. The large-scale farms in the southern part of the district, following the Rakaia River in an approximately 20km wide band (north west of SH1 and west of Leeston- Southbridge) generally contain lot sizes that are larger than 40ha.

Built Form Characteristics

Development within the Outer Plains consists mostly of farm related activities with residences serving these uses, such as workers' accommodation. Buildings and structures visible from the linear roads include milking sheds, hay barns, irrigation pivots and different types of fencing which delineate property boundaries.

Transmission power lines and towers of varying sizes (depending on voltage) intersect the plains and are a prominent element within the rural landscape. Within the Outer Plains, residences tend to be sited along the road and evenly spaced at larger distances rather than in clusters in comparison to the Inner Plains. Occasionally, residences are set back further from the road with associated garages and storage sheds. Established plantings and shelterbelts surround residences to shelter them from the harsh winds experienced on the plains, which creates a sense of privacy and helps to screen dwellings from the working farms nearby. Refer to **Photograph 19** for a typical cluster of buildings found throughout the Outer Plains. The character of buildings within the Outer Plains ranges from relatively new and modern to well-established homesteads with mature plantings surrounding them. The scale of buildings also ranges from small hay barns to very large milking sheds and associated infrastructure.

Photograph 19: View from Dunsandel Road overlooking a collection of buildings including a residence, farm worker's accommodation and storage sheds.

Expanding subdivision seems to occur on the outskirts of existing settlements and development areas within the Outer Plains, such as around Kirwee, Darfield, Springfield and Southbridge. This creeping development has the potential to blur the distinction between the 'rural' working landscape and small scale rural settlements.

Zone Boundary / Edges

Overall, the boundary of the Outer Plains appears to be slowly eroding in some areas where it borders the Inner Plains as it presents no visible difference (as outlined in detail under Inner Plains). In this respect, creeping development across the zone boundary could over time undermine the purpose of the current rules in relation to density of development.

Careful consideration should be given to any future subdivision along the Inner/Outer Plains boundary as ongoing under-sized subdivision and creep of residential development poses a risk for the rural character currently experienced within large parts of the Outer Plains. The areas where large-scale productive farming continues to dominate the rural character of the zone are located in the western, north-western and south-western part of the zone. In these parts existing lots are predominantly above 40ha in size and the landscape character is one of a productive farming landscape, apart from more settled areas surrounding the small townships/ settlements.

Where the Outer Plains border the Malvern Hills, topographical change provides a clear indication of the zone change. Farming practices also change along this landform boundary from dairy to predominantly sheep and beef farming, reflecting the lower productivity of the land within the hill country.

Key Rural Characteristics

- Relatively flat to gently, undulating land, primarily covered in high producing exotic grassland.
- Larger paddocks reflect the larger lot sizes compared to the Inner Plains and are divided with rural post and wire fences rather than shelterbelts.
- Farmed paddocks extend up to the road boundary and have a sense of 'spaciousness' and openness.
- Residential dwellings appear to be scattered, often in the vicinity of road boundaries, rather than in clusters.
- Zone edges range from being very distinctive to blurred in other parts where the Outer Plains adjoin the Inner Plains. In these areas there could be a risk of eroding rural character through creep of residential activity and presence of smaller lots that do not provide the same level of spaciousness and rural outlook.
- Intensification of farming is obvious in many places, with pivot irrigators a common sight throughout the Outer Plains.

Recommendations

- *Area-specific recommendations regarding potential minor boundary adjustments between the Inner Plains and Outer Plains zones have been made under the Inner Plains section above.*
- *Currently the Greater Christchurch Urban Boundary (as shown in the Land Use Recovery Plan and Regional Policy Statement) is not reflected in the landscape in terms of a change in rural character. It is, therefore, not recommended to adopt this LURP / RPS boundary for any boundary adjustments relating to the Inner Plains and Outer Plains Zones.*

- *The existing townships and settlements throughout the Outer Plains have in some areas sprawled into the immediately surrounding areas with residential subdivisions that are more closely aligned to rural-residential lot sizes. Potential re-zoning of these areas that do not provide a rural character anymore will be addressed in the Rural-Residential Chapter of the Proposed District Plan.*
- *It is recommended to define a boundary for a split of the Outer Plains Zone into an upper (western) and lower (eastern) part to identify the spatial extent of the Outer Plains Rural Zone that continues to provide the character of a rural working landscape. The Upper Outer Plains along the western and southern parts (roughly west of Rolleston-Leeston-Southbridge) currently consists of productive, large-scale properties with sparse residential development. Since the majority of lots in this Upper Outer Plains section are currently well above 40ha in size, it is recommended to increase the minimum lot size for these areas in order to maintain the rural character that is largely derived from a working landscape.*
- *The existing rural character of the Lower Outer Plains (roughly east of Rolleston-Leeston-Southbridge) has a higher visual amenity, and lower degree of openness, as it is less related to character of a production landscape. This existing rural character could be maintained under the current 20ha minimum lot size regime, as a higher number of properties are already subdivided to 20-40ha in size.*

3.4 Malvern Hills

The Malvern Hills rural zone is bound by the Outer Plains to the south-east and the High Country rural zone to the north-west.

The rural character of the Malvern Hills is very much a working farm environment with a sense of spaciousness, very low density of dwellings, vegetated and supported with rural infrastructure. Dwellings are generally associated with productive farming uses with sheds, barns and yards in their vicinity. Refer to **Figures 8 – 9**.

Geographical Landform

The Malvern Hills are made up of undulating foothills and downlands which provide an important gradual rise to the adjoining High Country mountains and a contrast to the relatively flat Outer Plains as seen below in **Photograph 20**.

Photograph 20: Overlooking the Malvern Hills in the foreground with the High Country in the background.

Vegetation Cover

The Malvern Hills have more vegetation cover than the Outer Plains. The lower slopes are predominantly low producing grassland with mixed native and exotic shrubs found in the gullies and covering the steeper slopes. Pockets of native forest are present in gullies with native tussock land scattered along higher elevation areas, often surrounded by exotic pasture or forestry. Shelterbelts are present along the low-lying valley floors which delineate paddocks and property boundaries.

Spatial Land Use Patterns

The primary land use within the Malvern Hills is farming with sheep and cattle being the dominant grazing animals. Paddock sizes appear to be larger than those within the Outer Plains. However, on steeper slopes delineation of property boundaries is often less obvious, as shelterbelts are generally only present on the lower elevations. This zone also contains some of the large-size commercial forestry blocks found within the Selwyn District.

Built Form Characteristics

Given the rolling landforms within the Malvern Hills zone, buildings are easily screened from the roads. Compared to the Outer Plains, density of residences and associated farm buildings is

substantially lower within the Malvern Hills. Buildings within this zone appear to be of a mature character than those within the Plains and are small to medium in scale as illustrated in the example in **Photograph 21**. Clusters of houses are located along the road boundary and appear more along the fringe of townships, namely Whitecliffs, Glentunnel and Coalgate.

Photograph 21: Medium size residence within the Malvern Hills.

Zone Boundary / Edges

The south-eastern edge of the Malvern Hills zone is bound by roads and the change in zone is only noticeable through the change in terrain/ landform from the flat Outer Plains to the undulating hills. The north-western edge, where the zone meets the High Country, skirts around the bottom of the adjoining Torlesse and Big Ben mountain range. Visually there is no distinct change in the landscape other than related to topography.

Key Rural Characteristics

- Undulating and rolling rural landscape located at the edge of the high-country
- Primarily low producing grassland with sheep and beef farms
- Contains majority of forestry blocks within the Selwyn District
- Low density of residential development, mostly related to farm accommodation
- Limited access to the hill country has confined residential development largely to low-lying areas in valley floors and along the edges of the zone.

Recommendations

- *Parts of the Malvern Hills zone fall within the ONL or VAL areas as identified in the Selwyn Landscape Study.*
- *The low level of existing built development in the area reflects the current large lot size found throughout this zone (with the majority of lots above 100ha). This in order to protect these distinctive rural landscape values the minimum lot size should be increased from the current 20ha. An increase of lot size would be appropriate to maintain a rural character with a mosaic of land uses, including extensive grazing and forestry.*
- *Residential land use can most easily be absorbed in the low-lying parts of the landscape, where skyline views to residences can be avoided.*

- *The existing settlements along the eastern part of the Malvern Hills Zone have in some areas sprawled into the immediately surrounding areas with residential subdivisions that are more closely aligned to rural-residential lot sizes. Potential re-zoning of these areas that do not provide a rural character anymore will be addressed in the Rural-Residential Chapter of the Proposed District Plan.*
- *An amendment of the zone boundary to follow the landform, would however, lead to an increase in residential density along the roads surrounding the Malvern Hills with an adverse effect on the views towards the backdrop provided by the elevated landform. It is, therefore, recommended to maintain the existing boundaries.*

3.5 High Country

The High Country rural zone is bound by the Malvern Hills to the east and the inland basins and mountain ranges of the Main Divide to the west. The area, which is Selwyn's largest rural zone, broadly encompasses the part of the district west (and inclusive) of the Torlesse/ Big Ben Ranges.

The rural character of the High Country varies between the highly natural mountain ranges and areas of public conservation land, and those where extensive high-country farming has led to changes in land cover in the past century. The western parts, mountain ranges and DOC managed areas can be described as a very natural and wild environment. The remainder of the grazed high-country basin and valley areas provide a sense of spaciousness with very low density of buildings, while only partially covered in indigenous vegetation. Refer to **Figure 10**.

Geographical Landform

The High Country includes a high variety of landforms made up of high mountains with steep eroding scree slopes and rocky outcrops, deeply incised valleys, broad intermontane basins and wide braided rivers valleys. The elevation of the High Country ranges from 550m up to 2,400m.

Vegetation Cover

The vegetation cover of this zone varies between alpine grass and herbfields, native shrubs, beech forest and tall tussock grasslands. High Country stations have cultivated the flat valley floors for farming purposes and this vegetation consists of exotic grassland in these areas. On the slopes a transition occurs from predominantly exotic grasses to tussock lands with more native species.

Shelterbelts are present on the valley floors to provide shelter between paddocks but are uncommon compared to the Plains. Overall, the woody vegetation cover is often limited to slopes and gullies with open valley floors and fans. The High Country expresses a very specific rural landscape character of extensive land use and large tracts of conservation land. Modification to vegetation cover is generally confined around high country stations as illustrated in **Photograph 22** below.

Photograph 22: Modified valley floors used for agricultural activities in the vicinity of high country stations with contrasting high mountains covered in native vegetation in the background.

Spatial Land Use Patterns

A large part of the High Country is primarily used for conservation and recreational activities rather than residential or agricultural purposes. The lower lying areas, such as the valley and basin floors, have been intensified in agricultural use over time for sheep and cattle grazing.

Only few buildings and structures occur throughout the High Country and settlements are contained within Castle Hill Village, Lake Coleridge Village and Arthur's Pass Village. Remaining high country homesteads and associated farm and accommodation buildings are spaced out throughout the zone, reflecting the large sizes of high country stations.

Built Form Characteristics

The character of the current buildings and structures within the High Country is typical for the large-scale stations, where clusters of small to medium scale buildings can be found in a mature setting around the homesteads, as shown in **Photograph 23** below. Primarily the built forms consist of farm buildings, sheds, barns, farm workers' accommodation and homesteads.

Recreational huts are also scattered within the High Country which are linked by tracks within the DOC managed land.

Photograph 23: Character of High Country built form with typical historic farm buildings/ sheds

Zone Boundary / Edges

Where the High Country borders the Malvern Hills there is no distinct boundary difference visible. The zone edges follow the landform boundaries between the lower, undulating hill country and the steeper slopes of the front ranges. Since these areas have landform constraints on productive land uses and location of residential buildings, the zone boundaries are less obviously reflected in the landscape than the underlying terrain There is no substantial modification or erosion of rural landscape characteristics along the zone boundaries as the natural setting still dominates.

Key Rural Characteristics

- Iconic High Country landscape with open valley floors and fans
- In conservation land native vegetation ranging from high alpine ecosystems and beech forests to tussock lands dominates
- Agricultural farming activities on the valley and basin floors with higher levels of modification around homesteads

- Primarily recreational use in DOC managed areas
- Minimal built development within the High Country with nodes around stations
- Zone/boundary edges to Malvern Hills are not reflected in the landscape due to overall low level of development and terrain constraints

Recommendations

- *The entire high country and mountain ranges has been identified as either ONL or VAL in the Selwyn Landscape Study and the whole area warrants a higher level of landscape protection than the plains.*
- *The high country has a low ability to absorb change related to residential development and other structures without adverse effects on the rural character.*
- *The rural character that gives the high country its high aesthetic values relates to the openness, extensive views to the mountain ranges and extensive form of agriculture.*
- *Higher levels of modification are contained in few nodes throughout the zone, which is a pattern that should be maintained.*
- *The low level of existing built development in the area reflects the current minimum lot size of 120ha which should be maintained in order to protect to distinctive rural landscape values.*

Appendix 1: Bibliography & References

Boffa Miskell Limited (2017) Draft Selwyn Landscape Study, SDC

Boffa Miskell Limited (2010) Review of the Canterbury Landscape Study, ECAN

Boffa Miskell Limited (2015) Christchurch City Landscape Study, CCC

Boffa Miskell Limited (2006) Banks Peninsula Landscape Study, CCC

Boffa Miskell Limited & Lucas Associates (1993) Canterbury Regional Landscape Study Vol 1 and 2

Hayward, B.W; Kenny, J.A and Johnston, M.R (1998) Inventory and Maps of Important Geological Sites and Landforms in the Canterbury Region, including the Chatham Islands. Geological Society of New Zealand Miscellaneous Publication 98

Kenny J A, Hayward BW (1998) Inventory and Maps of Important Geological Sites and Landforms in the Canterbury Region, Geological Society of New Zealand Miscellaneous Publication 98

Lynn I.H (1993) Land Types of the Canterbury Region. Landcare Research New Zealand, Lucas Associates.

Meurk C D and Wilson H D, Burrows C J & Partridge T R (2008) The Natural History of Canterbury, edited by Winterbourn M, Knox G, Burrows C, Marsden I, Canterbury University Press

Molloy L, Smith R (2002) Landforms- the Shaping of New Zealand, Craig Potton Publishing

Molloy B.P.J. (1969) Recent history of the vegetation. In: Knox, G.A. (ed) The Natural History of Canterbury, pp 340- 360. Reed, Wellington

Sewell R J, Weaver S D, Reay M B (1993) Geology of Banks Peninsula, Institute of Geological and Nuclear Sciences

Weaver S, Sewell R, Dorsey C (1990) Extinct Volcanos, Geological Society of New Zealand Guidebook No7

Websites:

http://www.legislation.govt.nz/act/local/2001/0003/latest/DLM85766.html

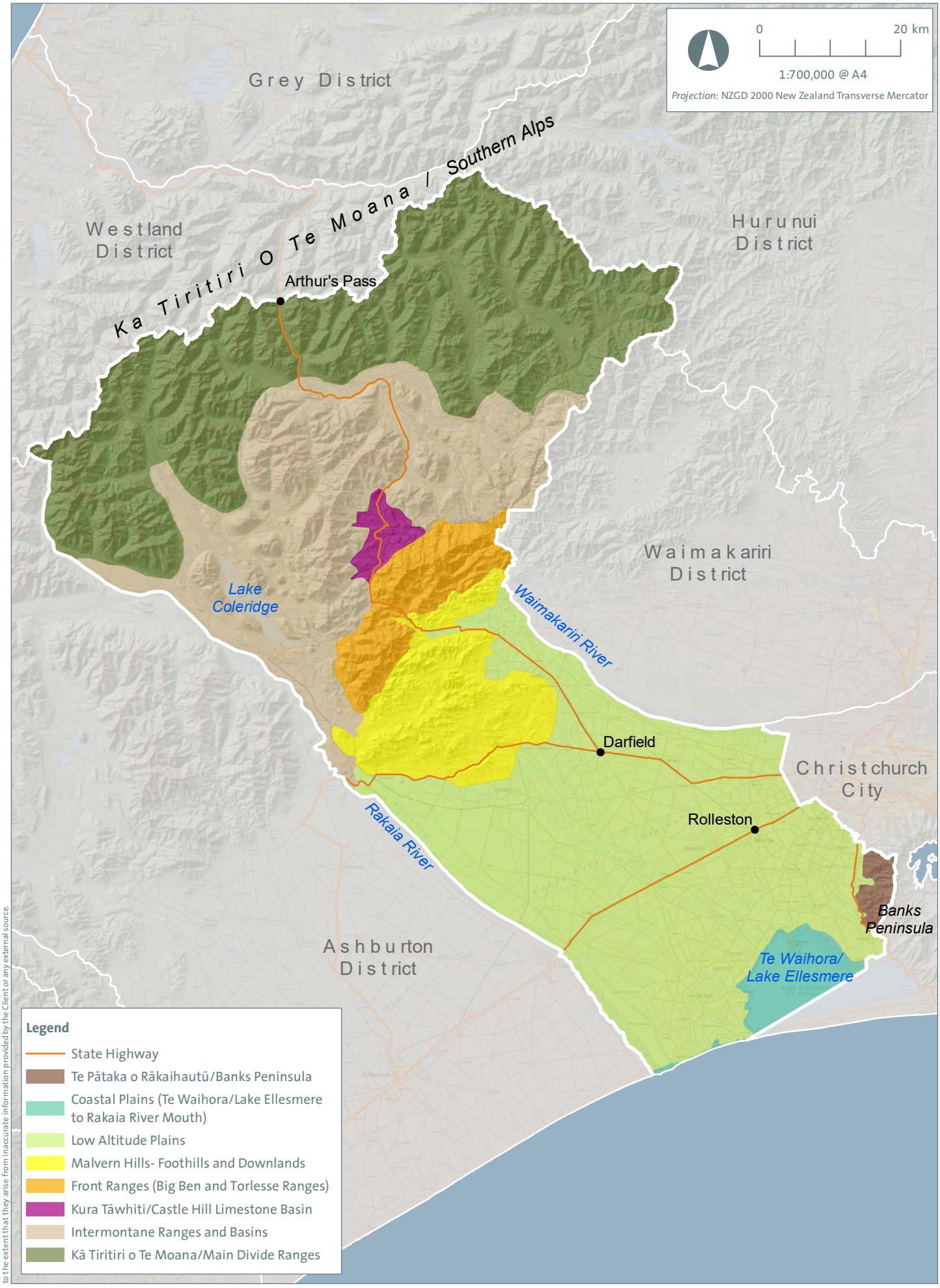
http://resources.ccc.govt.nz/files/FactsheetPORTHILLS-naturalenvironment.pdf

http://christchurchcitylibraries.com/heritage/publications/richmanpoorman/richardbedwardowen/

http://maps.doc.govt.nz/mapviewer/index.html?viewer=dto

Appendix 2: List of Figures

File Ref: C15143M_010_A4P_Landscape.mxd



Boffa Miskell
www.boffamiskell.co.nz

Data Sources: Landscape areas sourced from Selwyn District Council. Topo map sourced from LINZ topo 303 map series.

SELWYN DISTRICT COUNCIL RURAL CHARACTER ASSSESSMENT

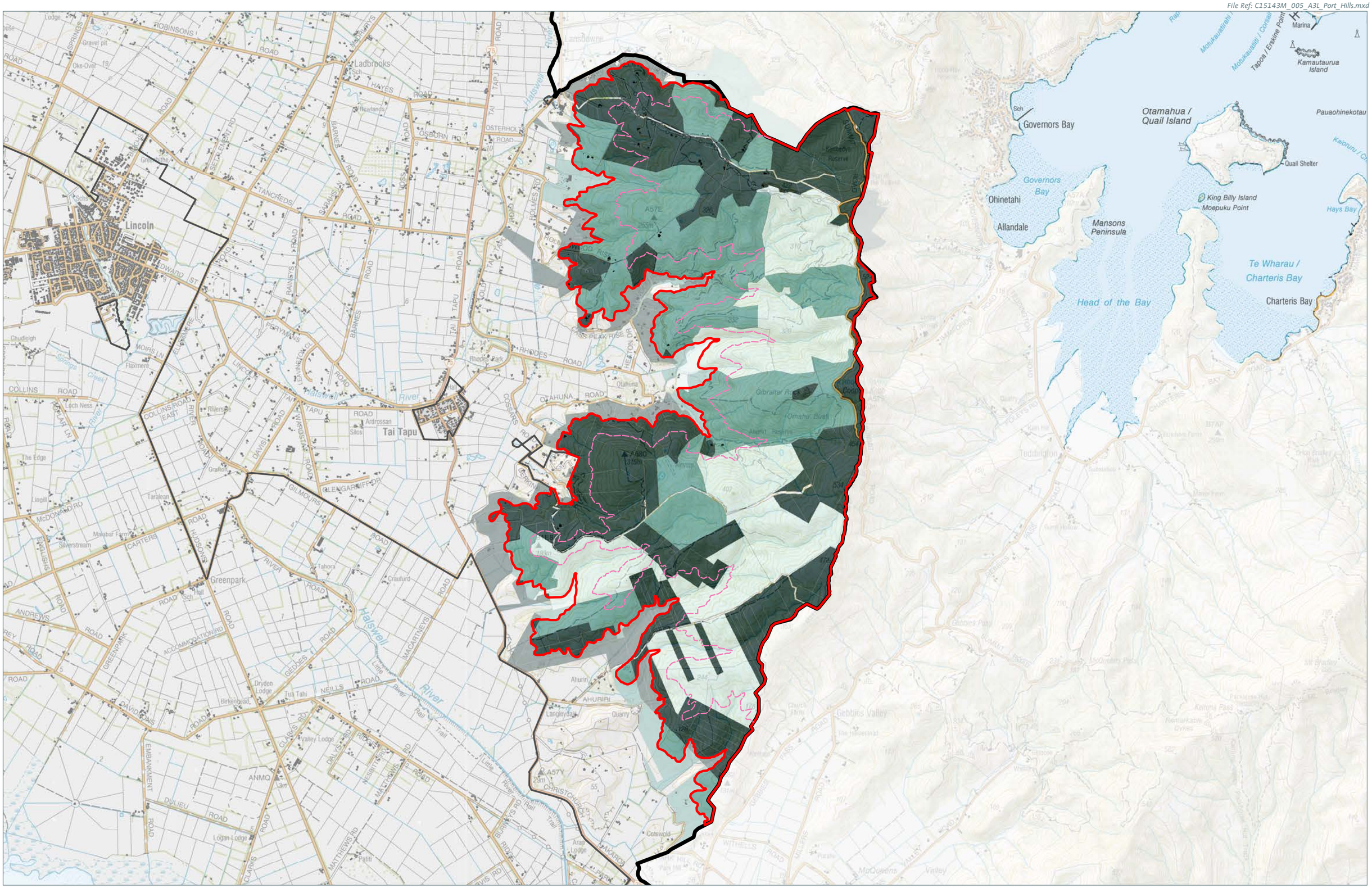
Landscape Characterisation Map

Date: 14 November 2017 | Revision: 0

Plan prepared for Selwyn District Council by Boffa Miskell Limited

Project Manager: **james.bentley@boffamiskell.co.nz** | *Drawn:* BMc | *Checked:* AAt

Figure 1



Boffa Miskell
www.boffamiskell.co.nz

0 1 km
1:50,000 @ A3

Projection: NZGD 2000 New Zealand Transverse Mercator

Data Sources: Topo maps sourced from LINZ topo 50 map series. Crown copyright reserved. Cadastre sourced from the LINZ Data Service and licensed for re-use under the Creative Commons Attribution 3.0 NZ licence.

Legend

- 0 - 40 ha
- 40 ha - 80 ha
- 80 ha +
- Lower extent of Port Hills (upper slopes)
- Port Hills Rural Zone
- Selwyn District
- Inner Plains Rural Zone
- Buildings

SELWYN DISTRICT COUNCIL RURAL CHARACTER ASSESSMENT

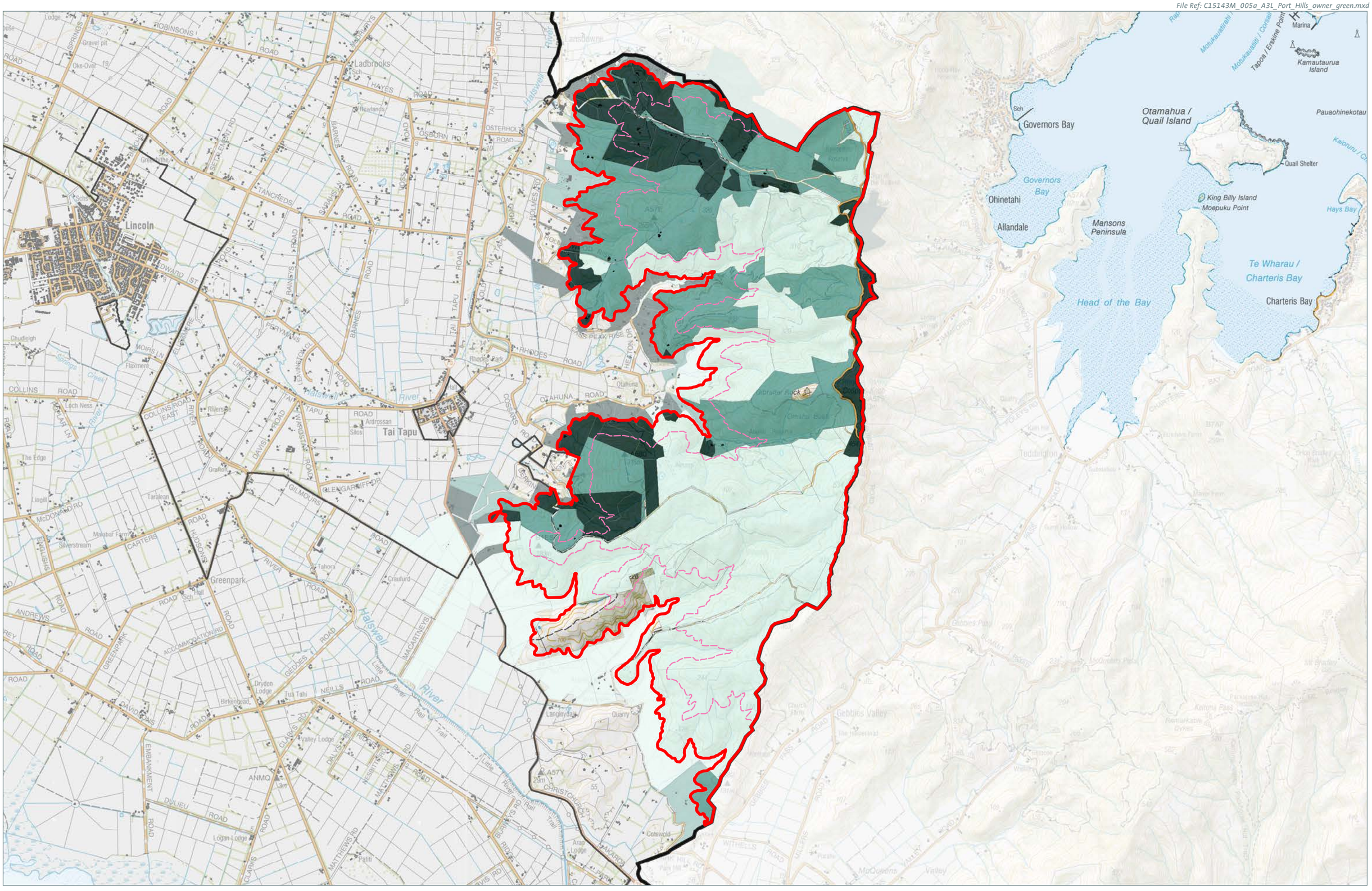
Port Hills Lot Sizes

Date: 14 November 2017 | Revision: 0

Plan prepared for Selwyn District Council by Boffa Miskell Limited

Project Manager: **james.bentley@boffamiskell.co.nz** | *Drawn:* AAn | *Checked:* JBe

Figure 2



Boffa Miskell
www.boffamiskell.co.nz

0 1 km
1:50,000 @ A3

Projection: NZGD 2000 New Zealand Transverse Mercator

Data Sources: Topo maps sourced from LINZ topo 50 map series. Crown copyright reserved. Cadastre sourced from the LINZ Data Service and licensed for re-use under the Creative Commons Attribution 3.0 NZ licence.

Legend

- 0 - 40 ha
- 40 ha - 80 ha
- 80 ha +
- Lower extent of Port Hills (upper slopes)
- Port Hills Rural Zone
- Selwyn District
- Inner Plains Rural Zone
- Buildings

Parcel data aggregated by owner sourced from SDC Sept 2017. Some parcels were missing from the data received

SELWYN DISTRICT COUNCIL RURAL CHARACTER ASSESSMENT

Port Hills Lot Sizes By Owner

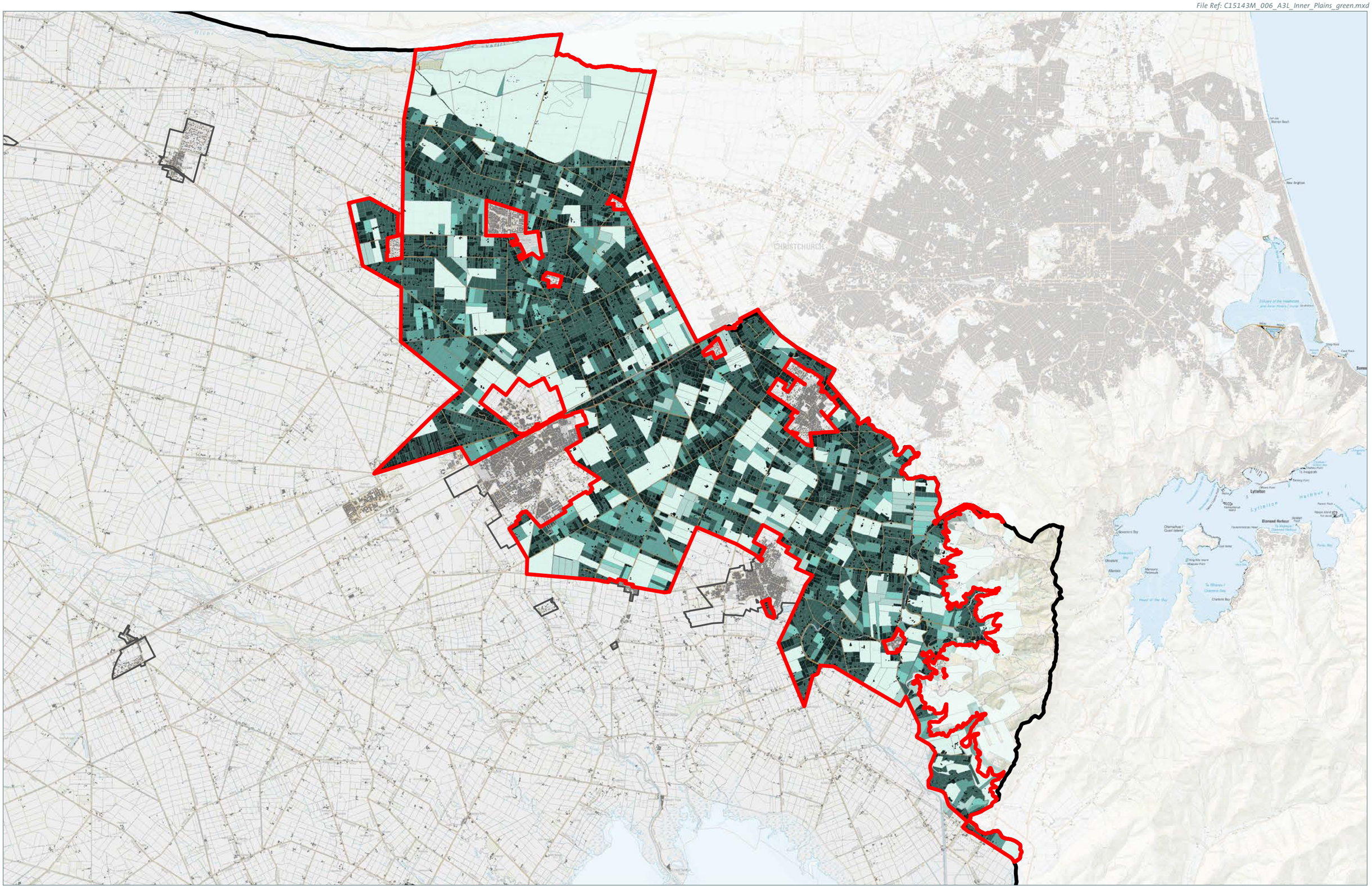
Date: 14 November 2017 | Revision: 0

Plan prepared for Selwyn District Council by Boffa Miskell Limited

Project Manager: **james.bentley@boffamiskell.co.nz** | *Drawn:* AAn | *Checked:* JBe

Figure 3

File Ref: C15143M_006_A3L_Inner_Plains_green.mxd



Boffa Miskell
www.boffamiskell.co.nz

0 2.6 km

1:130,000 @ A3

Projection: NZGD 2000 New Zealand Transverse Mercator

Data Sources: Topo maps sourced from LINZ topo 50 map series. Crown copyright reserved. Cadastre sourced from the LINZ Data Service and licensed for re-use under the Creative Commons Attribution 3.0 NZ licence.

Legend

- 0 - 4 ha
- 4 ha - 8 ha
- 8 ha - 12 ha
- 12 ha - 16 ha
- 16 ha - 20 ha
- 20 ha +
- Inner Plains Rural Zone
- Selwyn District
- Outer Plains Rural Zone
- Buildings

SELWYN DISTRICT COUNCIL RURAL CHARACTER ASSESSMENT

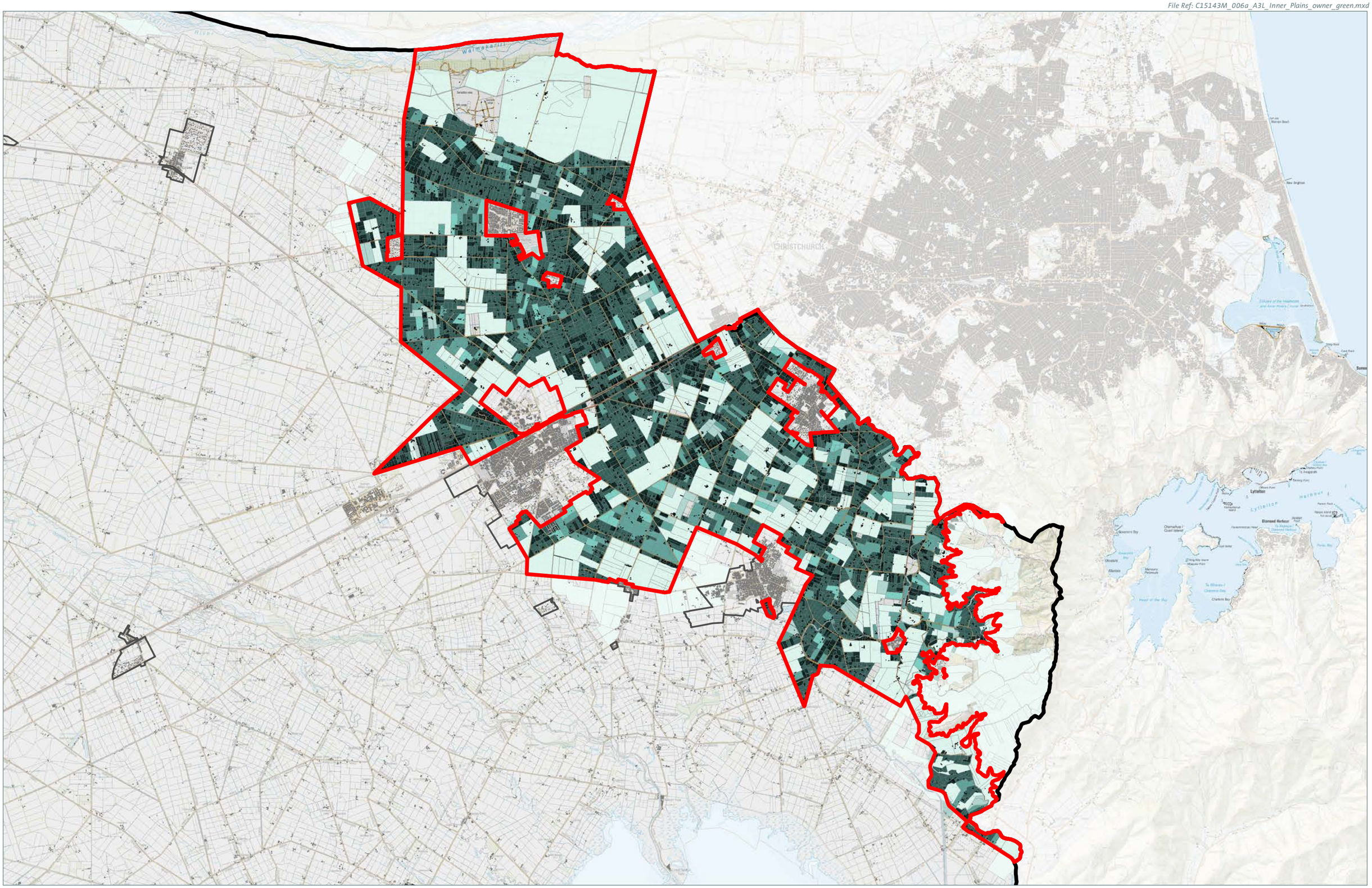
Inner Plains Lot Sizes

Date: 14 November 2017 | Revision: 0

Plan prepared for Selwyn District Council by Boffa Miskell Limited

Project Manager: **james.bentley@boffamiskell.co.nz** | *Drawn:* AAn | *Checked:* JBe

Figure 4



Boffa Miskell
www.boffamiskell.co.nz

0 2.6 km
1:130,000 @ A3

Projection: NZGD 2000 New Zealand Transverse Mercator

Data Sources: Topo maps sourced from LINZ topo 50 map series. Crown copyright reserved. Cadastre sourced from the LINZ Data Service and licensed for re-use under the Creative Commons Attribution 3.0 NZ licence.

Legend

- 0 - 4 ha
- 4 ha - 8 ha
- 8 ha - 12 ha
- 12 ha - 16 ha
- 16 ha - 20 ha
- 20 ha +
- Inner Plains Rural Zone
- Selwyn District
- Outer Plains Rural Zone
- Buildings

Parcel data aggregated by owner sourced from SDC Sept 2017. Some parcels were missing from the data received.

SELWYN DISTRICT COUNCIL RURAL CHARACTER ASSESSMENT

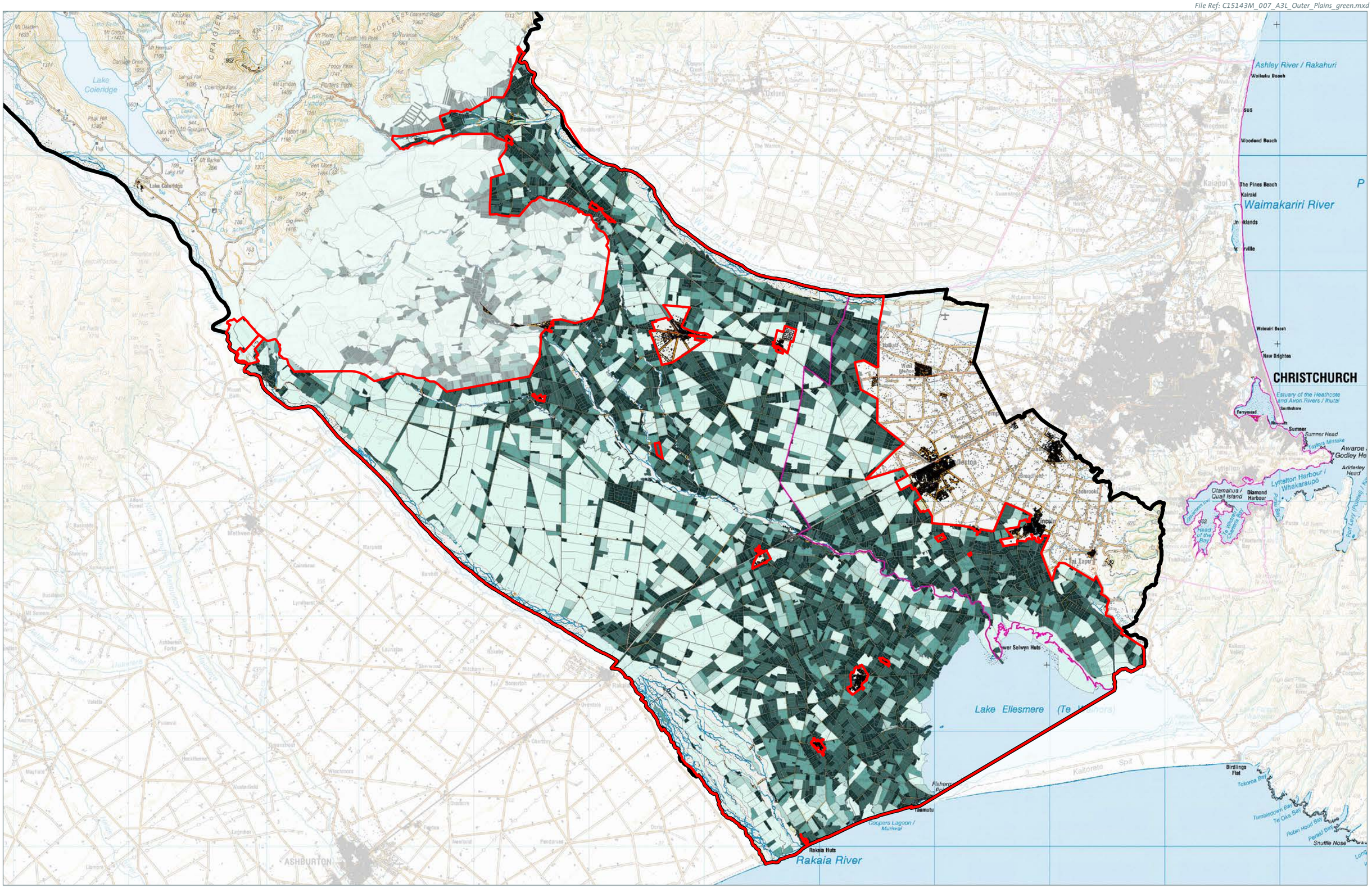
Inner Plains Lot Sizes By Owner

Date: 14 November 2017 | Revision: 0

Plan prepared for Selwyn District Council by Boffa Miskell Limited

Project Manager: **james.bentley@boffamiskell.co.nz** | *Drawn:* AAn | *Checked:* JBe

Figure 5



Boffa Miskell
www.boffamiskell.co.nz

0 6 km
1:300,000 @ A3

Projection: NZGD 2000 New Zealand Transverse Mercator

Data Sources: Topo maps sourced from LINZ topo 250 map series. Crown copyright reserved. Cadastre sourced from the LINZ Data Service and licensed for re-use under the Creative Commons Attribution 3.0 NZ licence.

Legend

- 0 - 20 ha
- 20 ha - 40 ha
- 40 ha - 60 ha
- 60 ha - 80 ha
- 80ha +
- Greater Christchurch Boundary
- Outer Plains Rural Zone
- Selwyn District
- Buildings

Greater Christchurch Boundary sourced from ECAN data service.

SELWYN DISTRICT COUNCIL RURAL CHARACTER ASSESSMENT

Outer Plains Lot Sizes

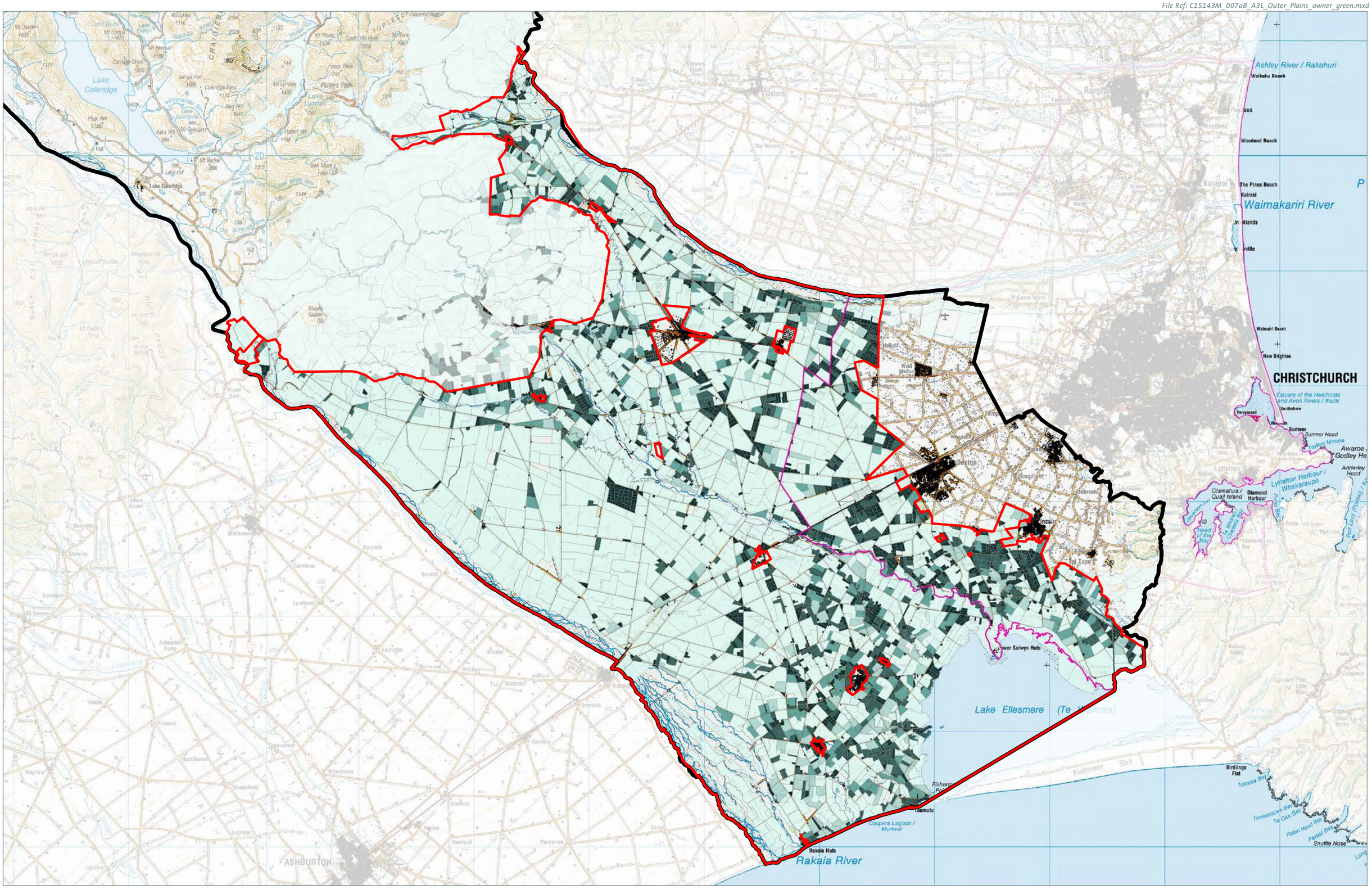
Date: 14 November 2017 | Revision: 0

Plan prepared for Selwyn District Council by Boffa Miskell Limited

Project Manager: **james.bentley@boffamiskell.co.nz** | *Drawn:* AAn | *Checked:* JBe

Figure 6

File Ref: C15143M_007aB_A3L_Outer_Plains_owner_green.mxd



Boffa Miskell
www.boffamiskell.co.nz

0 6 km
1:300,000 @ A3

Projection: NZGD 2000 New Zealand Transverse Mercator

Data Sources: Topo maps sourced from LINZ topo 250 map series. Crown copyright reserved. Cadastre sourced from the LINZ Data Service and licensed for re-use under the Creative Commons Attribution 3.0 NZ licence.

Legend

- 0 - 20 ha
- 20 ha - 40 ha
- 40 ha - 60 ha
- 60 ha - 80 ha
- 80 ha +
- Outer Plains Rural Zone
- Greater Christchurch Boundary
- Selwyn District
- Buildings

Parcel data aggregated by owner sourced from SDC Sept 2017. Some parcels were missing from the data received. Greater Christchurch Boundary sourced from ECAN data service.

SELWYN DISTRICT COUNCIL RURAL CHARACTER ASSESSMENT

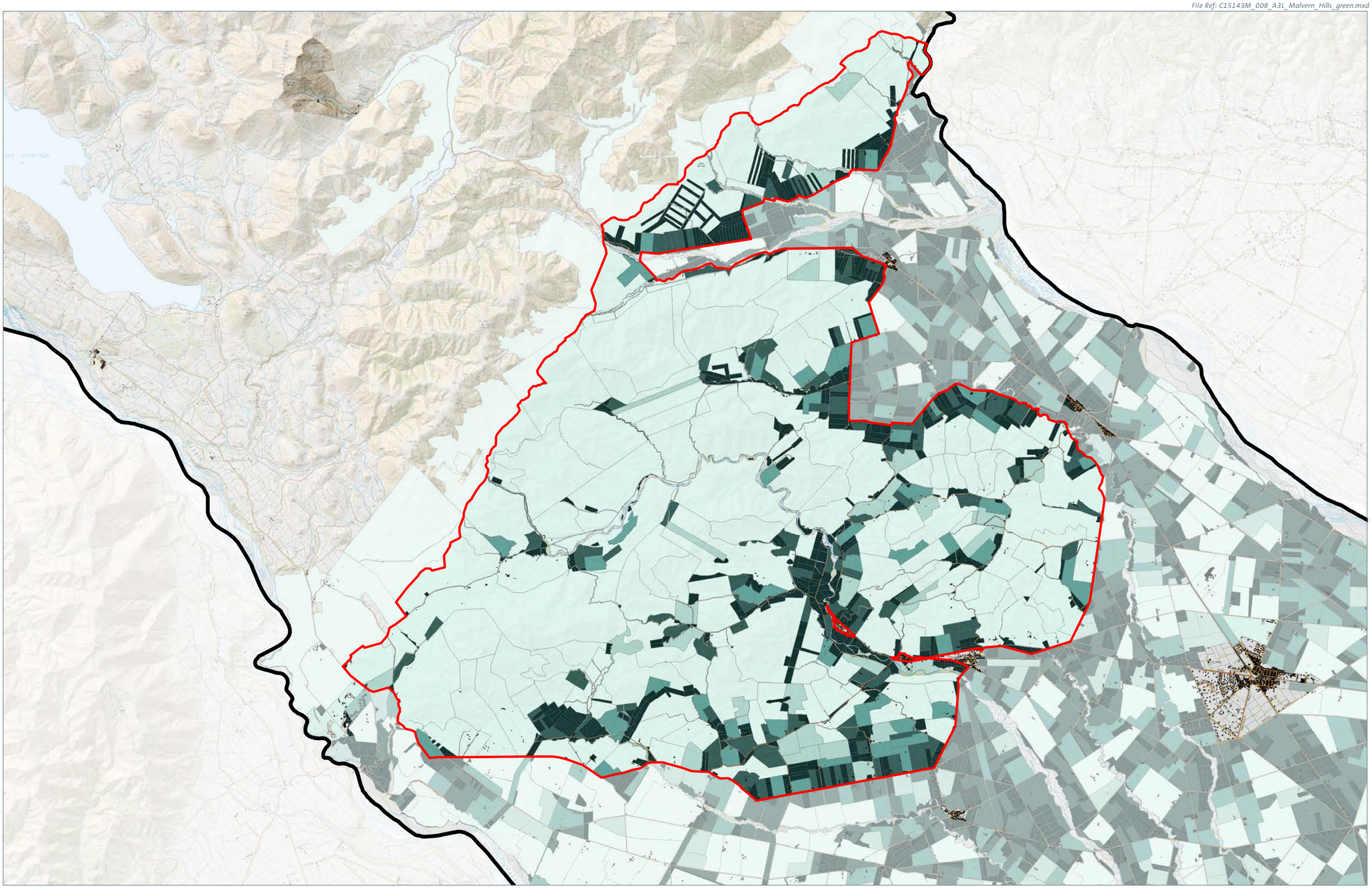
Outer Plains Lot Sizes By Owner

Date: 14 November 2017 | Revision: 0

Plan prepared for Selwyn District Council by Boffa Miskell Limited

Project Manager: **james.bentley@boffamiskell.co.nz** | *Drawn:* AAn | *Checked:* JBe

Figure 7



Boffa Miskell
www.boffamiskell.co.nz

0 2.8 km
1:140,000 @ A3

Projection: NZGD 2000 New Zealand Transverse Mercator

Data Sources: Topo maps sourced from LINZ topo 50 map series. Crown copyright reserved. Cadastre sourced from the LINZ Data Service and licensed for re-use under the Creative Commons Attribution 3.0 NZ licence.

Legend

- 0 - 20 ha
- 20 ha - 40 ha
- 40 ha - 60 ha
- 60 ha - 80 ha
- 80 ha +
- Malvern Hills Rural Zone
- Selwyn District
- Buildings

SELWYN DISTRICT COUNCIL RURAL CHARACTER ASSESSMENT

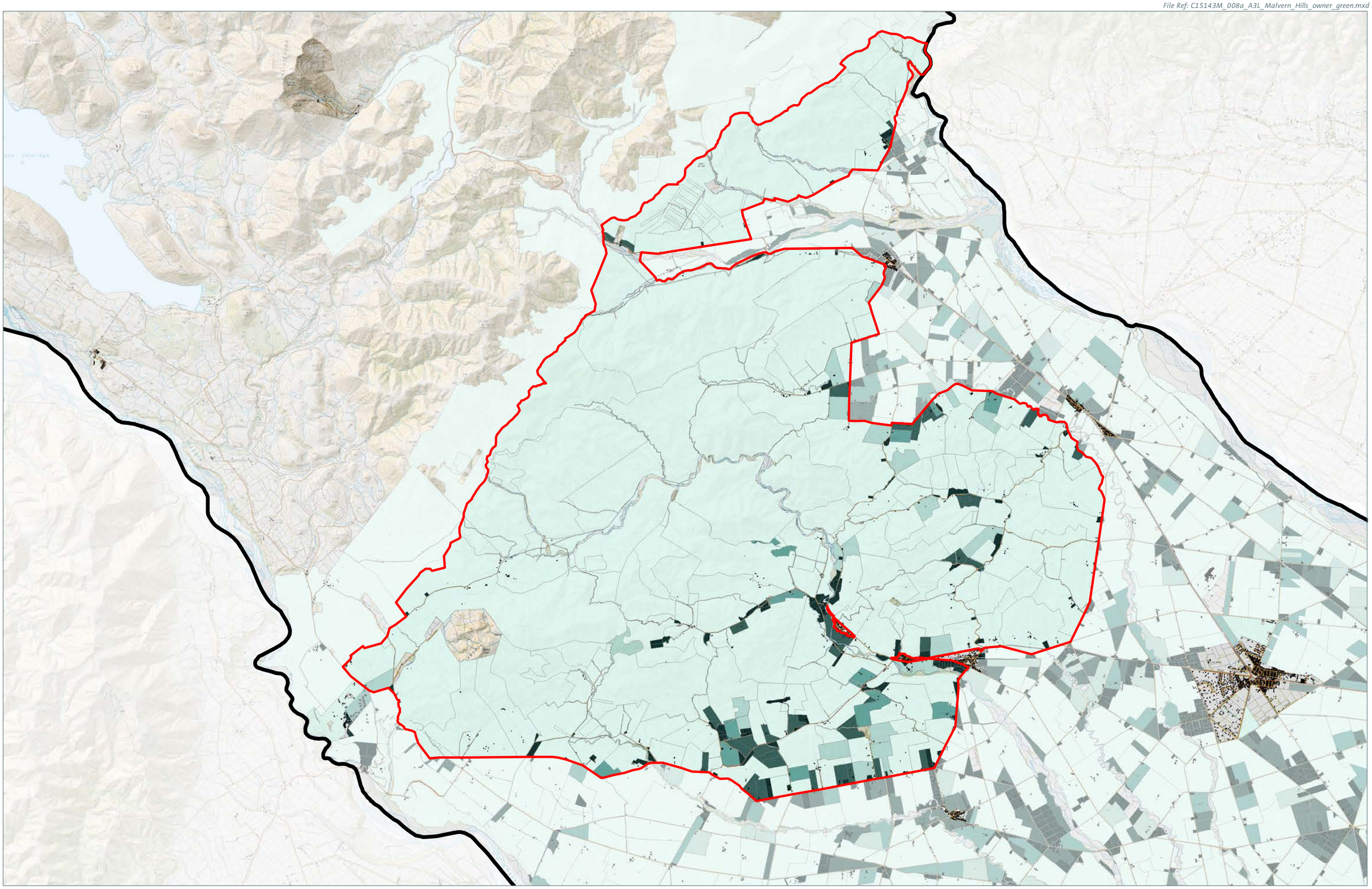
Malvern Hills Lot Sizes

Date: 14 November 2017 | Revision: 0

Plan prepared for Selwyn District Council by Boffa Miskell Limited

Project Manager: **james.bentley@boffamiskell.co.nz** | *Drawn:* AAn | *Checked:* JBe

Figure 8



Boffa Miskell
www.boffamiskell.co.nz

0 2.8 km
1:140,000 @ A3

Projection: NZGD 2000 New Zealand Transverse Mercator

Data Sources: Topo maps sourced from LINZ topo 50 map series. Crown copyright reserved. Cadastre sourced from the LINZ Data Service and licensed for re-use under the Creative Commons Attribution 3.0 NZ licence.

Legend

- 0 - 20 ha
- 20 ha - 40 ha
- 40 ha - 60 ha
- 60 ha - 80 ha
- 80 ha +
- Malvern Hills Rural Zone
- Selwyn District
- Buildings

Parcel data aggregated by owner sourced from SDC Sept 2017. Some parcels were missing from the data received.

SELWYN DISTRICT COUNCIL RURAL CHARACTER ASSESSMENT

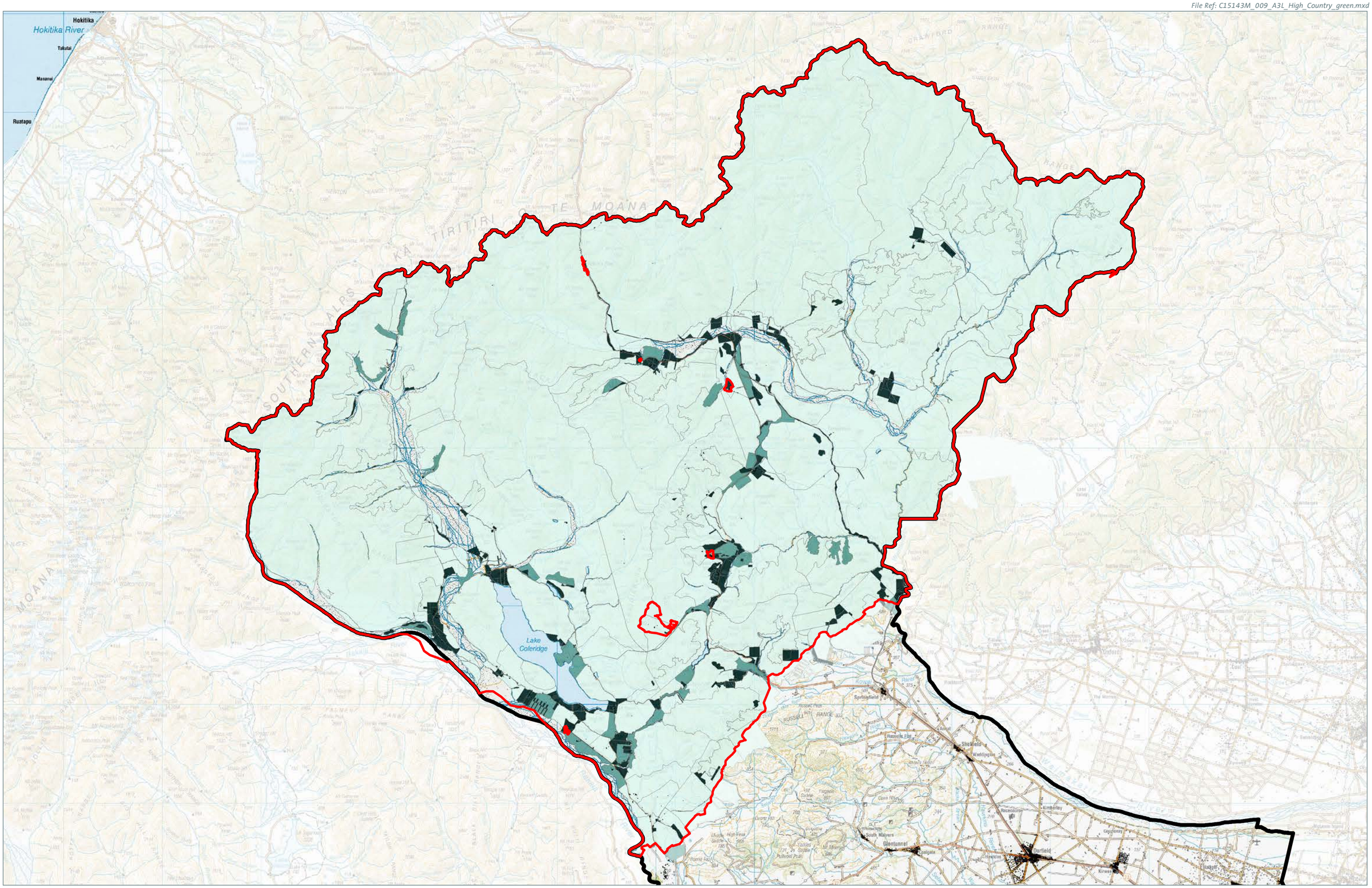
Malvern Hills Lot Sizes By Owner

Date: 14 November 2017 | Revision: 0

Plan prepared for Selwyn District Council by Boffa Miskell Limited

Project Manager: **james.bentley@boffamiskell.co.nz** | *Drawn:* AAn | *Checked:* JBe

Figure 9



Boffa Miskell
www.boffamiskell.co.nz

0 6 km
1:350,000 @ A3

Projection: NZGD 2000 New Zealand Transverse Mercator

Legend
- 0 - 120 ha
- 120 ha - 240 ha
- 240 ha +
- High Country Rural Zone
- Selwyn District
- Buildings

SELWYN DISTRICT COUNCIL RURAL CHARACTER ASSESSMENT

High Country Lot Sizes

Date: 14 November 2017 | Revision: 0

Plan prepared for Selwyn District Council by Boffa Miskell Limited

Project Manager: **james.bentley@boffamiskell.co.nz** | *Drawn:* AAn | *Checked:* JBe

Figure 10