

HOKONUI WIND FARM PRELIMINARY LANDSCAPE ASSESSMENT

Prepared For:

Hokonui Energy Limited

Contents:

PAGE

1. Introduction & The Wind Farm Proposal	3
1.1 Introduction	4
1.2 Key Wind Farm Components	4
2. The Wind Farm Site & Its Wider Landscape Setting	5
2.1 Introduction	5
2.2 Identified Values	12
2.3 Summary	16
3. Statutory Context	18
4.1 The Southland Regional Policy Statement	18
4.2 The Southland District Plan	18
5.3 The Gore District Plan	19
4. Effects Assessment	22
4.1 Effects In General	22
4.2 Effects Relevant to The Proposal	24
4.3 Assessment Method	24
4.4 Receiving Environments & Audiences	25
4.5 Viewing Sector Assessments	26
Viewing Sector Assessments: 1-9	28 - 49
4.6 Key Findings	50
4.7 Other Receiving Environments: Otapiri-Mandeville Road	52
4.8 Night-time Effects	54
5. Conclusions	56

1. Introduction & The Wind Farm Proposal

1.1 Introduction

Brown NZ Ltd has been engaged by Hokonui Energy Limited to assess the landscape and amenity effects of the construction and operation of the proposed Hokonui Wind Farm. The proposal comprises up to 83 proposed turbines that, together with internal roading, an internal transmission network, office, and switchyards, are to be located on the elevated terrain of the Hokonui Hills in central Southland (**Attachments 1-3**). At the eastern end of the hill range, the switchyard would be directly connected with Transpower's existing 220kV INV-ROX A and INV-ROX B Transpower corridors, which connect both Invercargill and Makarewa with Roxburgh.

This report provides a preliminary landscape assessment for the proposed Hokonui Wind Farm in support of the application for the Project to be referred under the Fast-track Approvals Act 2024 (FTAA).

1.2 Key Wind Farm Components

In total, up to 83 turbines would be spread across the landforms just described. At this stage, it is anticipated that each turbine will have a 'tip height' of up to 240m, comprising a tower up to 150m high – to the turbine hub – and a blade diameter of up to 190m diameter. These turbine dimensions are only indicative at this stage, but they represent the maximum height and scale of the turbines to be constructed. Irrespective of this, the turbines would be located on a series of ridges, knolls, and terraces that wrap around the physically depressed centre of the Hokonui Hills near the Otamita and Taylors Streams (**Attachments 1-3**). They would rise well above the plains that ring the Hokonui Hills on three sides.

Like the proposed turbine pads, future internal roading to and between the turbines would traverse both the elevated topography around the crest of part of the Hokonui Hills and the basin at its centre. This terrain is already criss-crossed by local roads, farm tracks and shelterbelts, and the proposed accessways to each turbine would make use of this existing network to minimise the impact of the project footprint on the existing values of the site.

At the same time, 33kV lines would link each turbine to one of two substations. The majority of these feeder lines would be underground, but a network of above-ground collector lines would also run from each group of turbines to the substations, as shown in **Attachment 4**. These substations would be located as follows:

- a) Substation "B" would be located off Otamita Valley Road, north-west of the intersection with Otapiri-Mandeville Road ("B" on Attachment 4). It would act as the electrical 'hub' for all of the B Group turbines, together with some of those within Groups A and C.
- b) Substation "A" would be sited within Reaby Downs just over 2km south of Otapiri-Mandeville Road and over 7km west of the entrance to Dolamore Park ("A"). This substation and switchyard would draw electricity from most of the A Group turbines and approximately half the C Group turbines. In turn, it would provide a direct connection with Transpower's adjoining INV-Box B corridor; and would be part of the proposed 220kV circuit that runs from the "B" substation, via "A", to a double-

circuited 'Tee' ("T") to the south-east – comprising a series of poles that connect the wind farm with the INV-Box A corridor.

Both substations would be located within the main body of the Hokonui Hills; however, the tee connection would be located within the range's eastern foothills – off Waimuru Road, near the Southern Field Days facility west of Gore.

Although this preliminary landscape assessment still largely focuses on the potential effects associated with Hokonui Energy's proposed wind turbines, the effects of the proposed transmission corridors and substations are also addressed in this report.

At this stage, that assessment has been informed by:

- A visit to the site and all surrounding areas undertaken on the 26th March 2025;
- Desktop analysis of the characteristics and values of the various landscapes found within and around the wind farm site; and
- A desktop assessment of the effects that the wind farm would have on those characteristics and values employing Google Earth and Maps.

A further, more in-depth, landscape, visual amenity and natural character assessment will be completed if the Project is referred to the EPA, and submitted with the substantive application for the Hokonui Wind Farm.

2. The Wind Farm Site & Its Wider Landscape Setting

2.1 Introduction

Located south-east of Meridian's existing White Hill Wind Farm near Mossburn, the proposed Hokonui Hills Wind Farm would be located south of the small townships of Balfour and Riversdale, and west of the much larger rural township of Gore. Its network of turbines and roading would traverse rolling terrain that is covered in a mixture of open farmland and pine forest blocks currently 'bookended', to both the east and west, by rising peaks and ridges that help to physically, and to a certain extent, visually, contain the subject site. To the south, the site is also contained by the extensive native forest of the Dunsdale Recreation Reserve, which climbs up from the plains south of the Hokonui Hills towards a line of east-west aligned high points around the Hedgehope TV transmitter and the proposed wind farm. Consequently, the proposed wind farm would be both spread across the Range's outer peaks and slopes, which fall into the aforementioned reserve, together with a broad matrix of open farmland that is spread right around the Hokonui Hills.

Even so, the Dunsdale Recreation Reserve, its forested 'tail' and hill country north-west of the Otapiri Gorge (running through to near Dipton), and elevated landforms around Kelvin Peak and Dolamore Park (at the eastern end of the range, near Gore) would also combine to create a sizeable physical buffer area around parts of the subject site.

The *Southland / Murihiku Regional Landscape Study*, prepared in 2019 by Boffa Miskell Ltd for Environment Southland, together with the Gore, Invercargill, and Southland District Councils, and Te Ao Marama Inc to describe the landscape values of the Southland Region. It is noted that the landscape study has not been adopted by any of the relevant Councils, nor has it been through a public consultation or Schedule 1 RMA process. Moreover, it is not informed by any cultural advice on values or matters of importance to Ngāi Tahu ki Murihiku. However, the report has been used for the purposes of this preliminary landscape assessment to provide a basis for the wider landscape setting of the proposed wind farm site.

The report provides a broad overview of the Hokonui Hills and helps to 'place' the Hokonui Hills as a geological entity within the broader context of the Southland Region, between Nightcaps and Gore – as shown in Figure 2 from BML's report, overleaf (with the proposed wind farm site superimposed on it):

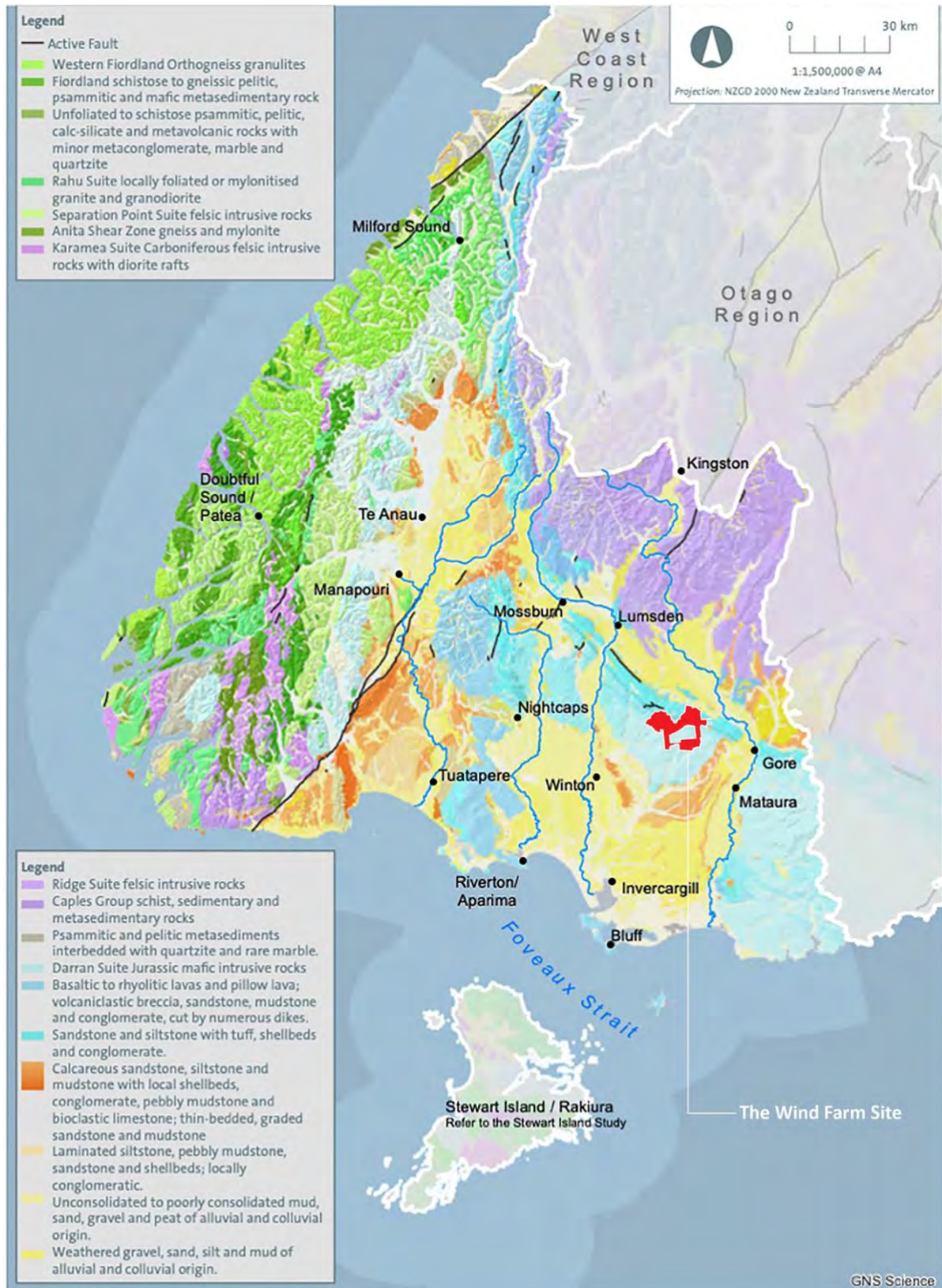


Figure 2: Geology Map. Boffa Miskell, 2018.

The report then summarises the Hokonui's key landscape features and characteristics (Character Area 6) associated with the range, as shown overleaf. This summary is provided below (*italic text*). The Hokonui

Wind Farm (excluding its 220kV connection with the INV-ROX A line) would be located within the Hokonui Hills shown as Area 6:

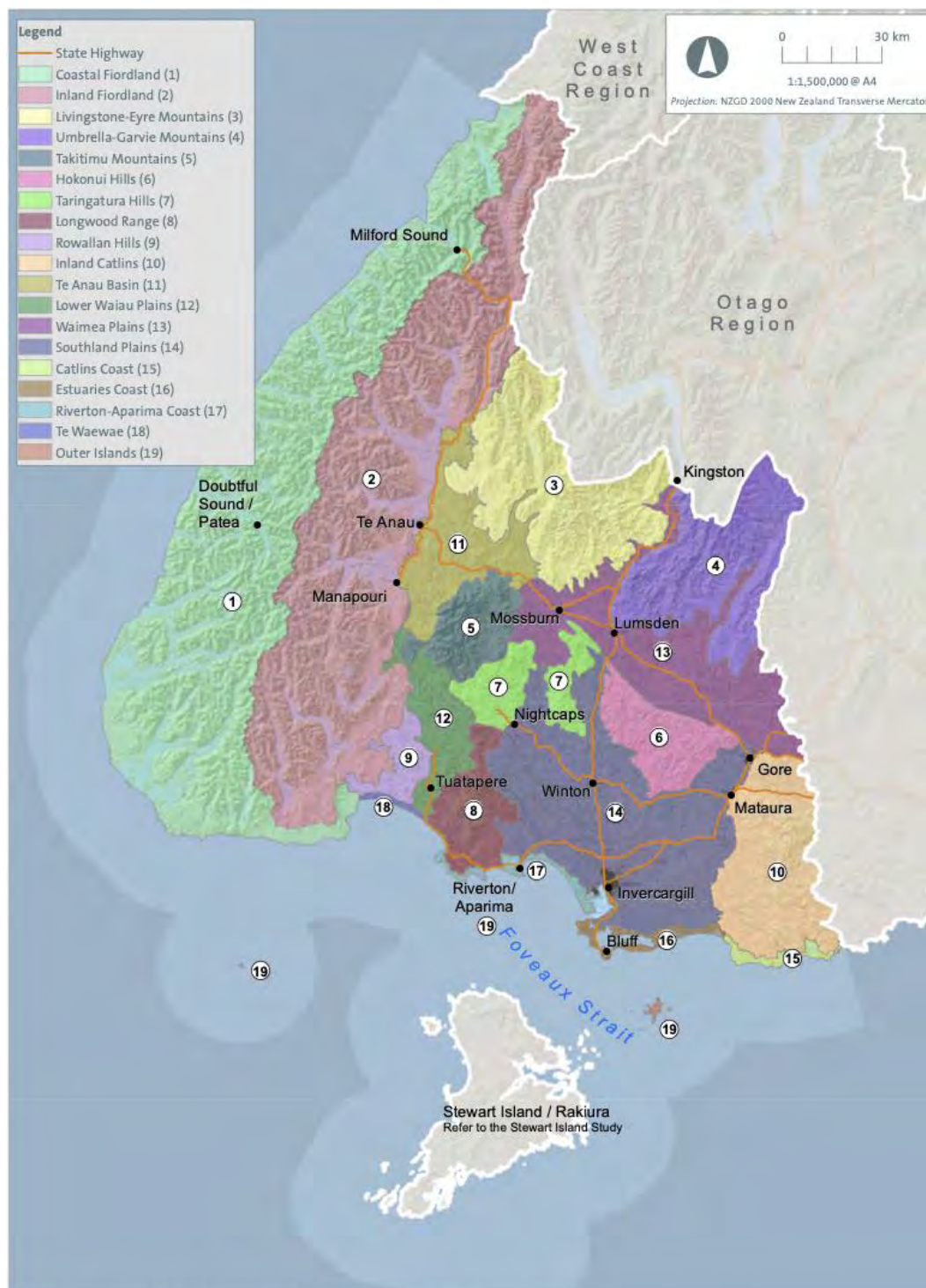


Figure 5: Overview Map of Character Areas. Boffa Miskell, 2018.

4.0.6 HOKONUI HILLS CHARACTER AREA / ŌROKO - HOKONUI - ŌTAUPIRI

GENERAL DESCRIPTION

The rolling Hokonui Hills are a striking feature in the Southland landscape, being highly visible from several State Highways. The range separates the Waimea Plains (north) from the Southland Plains (south) character area. The hills form part of the Southland Syncline which is one of most important geological features in New

Zealand - a strong line of ridges and valleys which cut across the landscape from Fiordland, along the south side of the Waimea Plains, south of Gore and into Otago. The Waterfall Range is particularly expressive of the Southland Syncline.

The Bastion, Ben Bold and Ship Cone/Whakaoma are prominent visual features of the Hokonui Hills. Several rivers originate from the Hokonui Hills, including the Makarewa River which is the largest tributary of the Oreti River, and the Ōtamatea River which flows in an easterly direction into the Maitai River. There is a mixture of pastoral land and remnants of native forest and shrubs. The hills have a long history of use and change, pre-human forest cover having been removed in many areas by natural and deliberate burning (Boffa Miskell Ltd, 1997).

There are some extensive indigenous forest areas still remaining in this area, both on public and private land. Public conservation land includes Dunsdale Ecological Area, Hokonui Forest and Scenic Reserve, Croydon Bush Scenic Reserve, The Cone Forest, Glenure Scenic Reserve, Otapiri Scenic Reserve, Caroline Bush Scenic Reserve and Wadsworth Scenic Reserve. Within the Hokonui Forest is the Dunsdale Ecological Area which protects the type of forest and hill country which was once more widespread in the region (Boffa Miskell Ltd, 1993). Refer to Figure 11 for the extent of the Hokonui Hills Character Area.

LANDFORM

Geologically, the Hokonui Hills are very important. They are formed on rocks of Triassic and Jurassic ages. The hills form part of the Southland Syncline. A dominant feature of the Syncline is the highly legible pattern of the ridge and valley landscape. The sedimentary rocks that the syncline is made up of were compressed by tectonic forces, uplifted along the line of the Livingstone Fault, and broken up into a landscape of so called strike ridges. The ridges, such as the Hokonui Hills, tend to be tilted up on edge, and softer mudstones eroded more extensively. These edges can be followed from the Takitimu Mountains through to the coast at the Catlins. They are a dominant feature of the Southland landscape and most obvious along the Murihiku escarpment, where the Hokonui Hills meet the Waimea Plains to the north (Department of Conservation, 2000).

The Hokonui landform varies from softly, rolling hills to steep, strongly ridged hill country reflecting variety in underlying rocktypes (Boffa Miskell Ltd, 1997). The height of the range varies from 50masl to 757masl. Bare Hill in the Hokonui Hills is listed in the Geopreservation Index as a site of international importance. It is a world class example of zeolite facial burial metamorphism. Other features listed as nationally important include the Jurassic fauna (particularly marine fossils) and the Hokonui strike ridges.

The more rounded southern parts are formed from sandstones and siltstones, whereas the strong ridges of the northern parts towards Dipton and Josephville are of older rock types. These rocks, formed deep under water and were later lifted up and folded (Boffa Miskell Ltd, 1993).

LAND COVER

The land cover of the hills reflects historical uses and change. Paddocks on the lower slopes provide good grazing, with native forest, extensive in places, and shrublands on steeper land and gully or stream sides. There are some large areas of native podocarp forest, in particular on the eastern and southern aspects, much of it providing valuable protection for soil cover and water management.

The higher areas are predominantly tussock grasslands much of which has been oversown with introduced grasses. There are commercial pine forests of small to moderate size near Dunsdale. Dunsdale is also a stronghold for some threatened plants. Characteristic of the Hokonui landscape, especially in the northern part are the rocky outcrops and the shrub vegetation growing on them (Boffa Miskell Ltd, 1993).

Croydon Bush/Haumuri Scenic Reserve is a substantial native forest area remaining near Gore. It is an important remnant of the once extensive forests on the Hokonui Hills. The reserve also contains grassland and shrubland communities. It supports a range of successional communities that show recovery from fire and

logging with kahikatea (*Dacrycarpus dacrydioides*) and matai (*Prumnopitys taxifolia*) being the dominant species (Department of Conservation, 2000).

LAND USE

Pastoral and arable farming is the dominant land use in the Hokonui Hills area, especially on the lower slopes. A variety of other land uses including forestry and mining contribute to the remaining mosaic of activity in the Hokonui Hills. Soil and water conservation are improved through the remnant native vegetation within public conservation land.

Both Croydon Bush/Haumuri and Dunsdale provide for easily accessible backcountry recreation for day-use and passive enjoyment of the forest remnants. A variety of recreation opportunities, such as rock climbing and hunting, are possible in smaller reserves around the area (Department of Conservation, 2000). The Otapiri Gorge is a popular “day-drive”. It brings the visitor into the heart of the southern Hokonui, with the road following the Otapiri Stream.

The Hokonui have a long history of use and change - from early fires which allowed tussock grassland to replace forest, through Māori settlement and early European mining, flax collection and timber clearance to more recent forestry, farming and recreation (Boffa Miskell Ltd, 1993).

KEY CHARACTERISTICS

- The rolling Hokonui Hills are a striking feature in the Southland landscape.
- The hills form part of the Southland Syncline which is one of most important geological features in New Zealand.
- The Waterfall Range in particular is recognised as being particularly expressive of the Southland Syncline.
- The Bastion, Ben Bold and Ship Cone/Whakaoma are prominent visual features of the Hokonui Hills.
- Croydon Bush/Haumuri Scenic Reserve provide a substantial native forest area near Gore, together with a number of other conservation areas, in particular the large Hokonui Forest and Scenic Reserve on the southern slopes.

Looking more closely at the parts of the Hokonui Hills that would be utilised for the proposed wind farm, the following panoramas – all taken within the site – help to explain its character (**Attachment 5**):



Viewpoint 1: Looking towards Waimea Hill and the Waimea Stream flats from a farm track on the northern side of the Hokonui Hills



Viewpoint 2: Looking from the same farm track near Waimea Hill towards the western Hokonui Hills



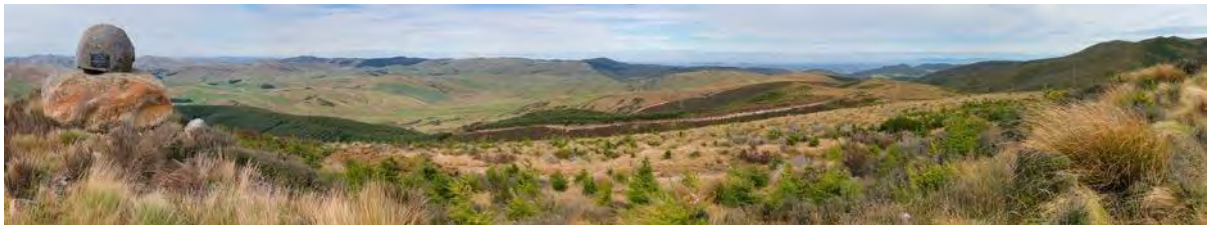
Viewpoint 3: Looking towards the centre of the Hokonui Hills from the same farm track north of Otamita Stream



Viewpoint 4: As for Viewpoint 3, north of the Otamita Stream looking to the south-west



Viewpoint 5: As for Viewpoints 3 and 4, approaching the Otamita Stream



Viewpoint 6: Looking from Bare Hill near Otamita Valley Road towards the 'internal' slopes of the Hokonui Range to the south and south-east



Viewpoint 7: Looking from a farm track south of Otapiri-Mandeville Road back into the basin at the centre of the Hokonui Hills - to the north-east and east



Viewpoint 8: Looking from an elevated farm location north-east of West Peak within the Dunsdale Recreation Reserve (near the Makarewa Falls Track) – looking to the north and north-east



Viewpoint 9. Looking from an elevated farm location west of Pukemaire (The Cap) out across the Dunsdale Recreation Reserve



Viewpoint 10. Looking from Otapiri-Mandeville Road (near Dolamore Park Road) back towards the centre of the Hokonui Hills to the south-west and west

These photos reveal the following patterns at play across the Hokonui Hills:

- The steeper peaks and ridges running along the northern edge of the Hokonui Range are generally more uplifted and distinct as a series of sharply defined, peaks and interconnecting ridges. For the most part, they are very open and are dominated by a mixture of pasture, tussock remnants and scrub, although some stands of young to mature pines, and harvested forest blocks, are also apparent around and west of both Otamita Valley Road and Bare Hill. Stands of native shrubland and forest are also found at the eastern end of the range, within and around Dolamore Park and East Peak. Even so, most of the farmland between these two ends of the Hokonui – anchored by a series of high points, from Ben Callum and North Peak south of Balfour to Waimea Hill and the small Waterfall Range near Mandeville – remains very open, which helps to articulate and highlight the distinctive profile of some of the Hokonui Hill's renowned 'strike ridges'.
- The southern side of the Hokonui Hills is largely blanketed in native forest cover, with patches of shrubland and scrub 'petering out' into farm pasture and landholdings, firstly near the Otapiri Gorge Road north of Otapiri, then near Dipton at the western end of the range. Regardless, the forested area of the Dunsdale Recreation Reserve is extensive, climbing up from the river flats and stream valleys around Glencoe, Dunsdale and Otapiri Gorge to meet a line of peaks and ridges near Ben Bolt, Lora Peak, West Peak and Pukemaire (The Cap) – from west to east. The high terrain around these peaks generally marks the point of transition into farmland spread across the centre of the Hokonui Hills, together with the production pine blocks of Overton Forest to the west, near Lora Peak. South of this high ground, the tracts of native forest already described descend steeply into river gullies and stream corridors that fall towards the plains below. These are anchored by the larger catchments of Coal Creek, Lora Stream, the Makarewa River and the Dunsdale Stream.
- At the centre of the Hokonui Hills, a series of streams – from the Otapiri and Taylors Streams in the west, to the Ruhtra and Otamita Streams at the centre of the Hokonui, and the Waterfall and Boundary Creeks closer to Gore – have 'hollowed out' the centre of the range to create an elongated basin between the peaks and ridge just described. Aligned generally on an east-west axis, this meandering basin-valley is also denoted by a road network that follows it, starting with Matthews Road near Dipton, then the Otapiri-Mandeville Road, and finally the Dolamore Park

Road at the range's eastern end. Both this sequence of roads and streams near it are enclosed by a landscape that is most notable for its broad expanse of open pasture, frequently intersected by shelterbelts and pockets of both shelter and amenity planting near the farmsteads that also dot the central Hokonui landscape. This farmland transitions into pockets of remnant tussock and scrub on the basin's more elevated margins, together with pine forest, scrub and patches of native forest in places, as already described. In a similar vein, the local topography trends from softer, more rounded, alluvial landforms near the centre of the basin and its lower stream courses, into the steeper slopes and ridges that define the margins and skyline of the range.

As a whole, the Hokonui Hills retain their distinctive geomorphological structure, but the massed forest and sub-alpine tussocklands that would once have carpeted their hills have, for the most part, long succumbed to farming, and, to a more limited degree, production forestry, activities. The latter will become an even more obvious component of the Hokonui Hills landscape near Waimea Peak with the imminent conversion of the large farm (Glen Islay) depicted in the photos for Viewpoints 1-4 to yet more pine forest. And with much of the range's farmland also dotted with farmhouses and sheds, tracks, fencing, shelterbelts, and the area near Dolamore Park Road also traversed by the existing 220kV line running between Northern Makarewa and Roxburgh, most of the range has a distinctly modified and developed rural character – especially evident down its northern flanks and through the centre of the Hokonui Hills.

The proposed wind farm would be located within this modified landscape, which contrasts with the sizeable bush and forest remnants found within the Dunsdale Recreation Reserve and Dolamore Park (merging with the Croydon Bush - Haumuri Scenic Reserve) closer to Gore (**Attachment 6**). These remnants are located south and east of the proposed wind farm site, outside its physical compass, although the scale and ridgeline location of the proposed turbines implies that there would be some level of visual interaction between the proposal and parts of the Dunsdale Recreation Reserve, in particular.

2.2 Identified Values of the Hokonui Hills

BML's 2019 *Southland / Murihiku Regional Landscape Study* identifies the Hokonui Hills as a Visual Amenity Landscape (no.5), but not an Outstanding Natural Landscape (ONL) or Feature (ONF) – as shown in the report's Figure 25, overleaf. BML's description of Visual Amenity Landscapes describes them as all comprising:

..... landscape features in their own right, each containing a range of biophysical, sensory and associative values. In recognition of the extra quality which VALs possess, such landscapes express important sensory attributes that contribute to their visual amenity which are recognised within the community. Accordingly, this requires both 'sensory' and 'associative' attributes to rate at least 'HIGH'.

At p.255 of the report, Visual Amenity Landscapes are also summarised as comprising landscapes that are “*distinctive, recognised & valued by the community for its contribution to the amenity and quality of the environment*”. In accordance with *Te Tangi a te Manu* (the NZILA's landscape assessment guidelines, 2022), the Hokonui Hill's core characteristics and values are described under three headings (p.206-208):

- a) Biophysical landscape attributes;
- b) Sensory (or perceptual) landscape attributes; and
- c) Associative Landscape attributes.



Figure 25: Overview map of ONF/L and VAL. Boffa Miskell, 2018.

BIOPHYSICAL

- The Hokonui Hills/Ōtaupiri-Hokonui-Ōroko form part of the Southland Syncline, one of the most significant structural elements in New Zealand geology (Department of Conservation, 2000).

- *Bare Hill is listed in the Geopreservation Index as having international importance as an example of zeolite facial burial metamorphism (Geological Society of New Zealand, 1998).*
- *Hokonui Forest represents a remnant of the once extensive podocarp-hardwood forest which occupied this area.*
- *Many threatened plant species are located on private land (Department of Conservation, 2000).*

SENSORY

- *The folded landform of the Southland Syncline remains clearly legible, particularly along its northern edge adjoining the Waimea Plains between Mossburn and Gore/Maruawai with strike ridges forming prominent bluffs in the southwestern hills.*
- *Hokonui Forest retains a high level of naturalness along the southern edge of the Hokonui Hills with much of the remaining area managed as working rural farms.*
- *The folded landform of the Hokonui Hills forms a memorable landmark and skyline which separates the Waimea and Southland Plains.*
- *Part of a coherent working rural landscape which includes a mosaic of agriculture, forestry and extensive native vegetation within Hokonui Forest.*
- *Prominent 120-metre-high mast on Hedgehope Hill defines a prominent man-made land mark, located to the south of the more striking open skyline along the Waterfall Range ONF.*

ASSOCIATIVE

- *Strong Māori associations including obtaining mahinga kai from the Hokonui forests, including Kukupa/kereru, weka/ kaka and tui after traveling hundreds of kilometres (Gore District Council, 2017) and mythology associating the taniwha, Matamata with the creation and distinctive profile of the hills.*
- *Old Hokonui Whisky originated from this area which was made and sold illegally in the area in response to the Distillation Prohibition Act of 1865.*
- *Recreational hunting of fallow deer occurs in Hokonui Forest Park.*

In effect, the Hokonui Hills' geomorphological values remain intact and important, but their vegetative, ecological and habitat values are much reduced and depleted across most of the range. Consequently, even though BML's study attributes the Hokonui Hills a 'high' rating for their biophysical, sensory and associative values – and they clearly remain a key landmark for the Waimea and other plains around them – the range is not identified as being 'outstanding' in any one dimension and is unable to meet the 'sufficiently natural' threshold for ONL or ONF status. I agree with BML's findings in relation to the values and overall significance of the Hokonui Hills.

Notwithstanding this, several NZ Geopreservation Inventory sites of 'national significance' are identified across the Hokonui Hills, together with one site – Bare Hill – that is considered to be 'internationally significant' – as shown overleaf. Moreover, the Hokonui Hills are, in addition, identified in Schedule 10 (G8) of the District Plan as a "*Bare Hill zeolitised tuff zone, Hokonui Hills*", that contains 'rough heulandite and analcime-bearing Late Triassic tuffs' which are part of the Southland Syncline, a world-class geological feature.



BML's *Southland Regional Landscape Study* describes those sites within and near the proposed wind farm site as follows (from west to east):

Otapiri Stream Triassic stratotype:

Holostratotype of Otapirian Stage. Diverse fossil faunal assemblage. Type locality of endemic Otapirian fauna. Nationally important exposure of Triassic-Jurassic boundary.

- *Nationally Important. Unlikely to be damaged by humans.*

Taylor's Stream / Otapiri Valley junction Jurassic fossils:

Historically important Aratauran (Jurassic) locality with significant ammonoid, bivalve and brachiopod fossil fauna.

- *Nationally Important. Unlikely to be damaged by humans.*

Ben Bolt Jurassic fossils:

Richest and most diverse Aratauran (Jurassic) fossil fauna in New Zealand.

- *Nationally Important. Unlikely to be damaged by humans.*

Bare Hill zeolitised tuff zone, Hokonui Hills:

Section through heulandite and analcime-bearing Late Triassic tuffs in the Southland Syncline; a world class example of zeolite facies burial metamorphism.

- *Internationally Important. Unlikely to be damaged by humans.*

Otamita Valley Rd Sequence:

Stratigraphic section through Taringatura Group, with well exposed sedimentological features at various horizons.

- *Nationally Important. Could be improved by human activity.*

Otamita Stream Triassic fossils and stratotype:

Stratotype of New Zealand Otamitan Stage (Triassic). Very well-preserved fossil material.

- *Nationally Important. Unlikely to be damaged by humans.*

Hokonui Hills Strike Ridges:

Some of New Zealand's most distinctive strike ridges and trellised drainage pattern.

- *Nationally Important. Unlikely to be damaged by humans.*

The key point in relation to all of the above is the relatively confined nature of most of the sites listed in the Geopreservation Inventory, often within low-lying stream courses and valleys, with just the Ben Bolt and Bare Hill sites potentially affected by the ridgetop placement of wind turbines. Even so, the physically limited nature of both sites implies that it should be relatively easy to 'work around' them. Much further to the east, even though the 'Hokonui Strike Ridges' comprise the largest of the identified sites spread across the range, they occupy elevated terrain that extends into and around Dolamore Park, well east of the wind farm site.

Overall, therefore, it appears that any physical effects in relation to the Geopreservation Inventory's sites can be avoided or minimised.

2.3 Summary

To summarise, the following are some of the key landscape values associated with the Hokonui Hills in general:

- The Hokonui Hills have highly variable levels of appeal and naturalness from a landscape standpoint, with their greater value concentrated along the range's southern to south-western flanks and at its eastern end – physically outside the wind farm site, but visually connected to it. Overall, the Hokonui Hills have a moderate level of naturalness, although such values are heavily biased towards the Dunsdale Recreation Reserve and Makarewa Falls, together with Dolamore Park. Regardless, the Hills retain sufficient biophysical, sensory and associative value, across their wider sequence of uplands, to be identified as a potential Visual Amenity Landscape.
- The Hokonui Hills make a significant contribution to the identity of both the eastern-central Southland District and Region, and the Gore District.
- Parts of the Hokonui Hills, notably Dunsdale Recreation Reserve and Dolamore Park (together with the Croydon Bush - Haumuri Scenic Reserve), offer significant recreational opportunities within a largely natural setting. However, these lie outside the physical scope of the proposed wind farm. Within parts of the Dunsdale Recreation Reserve, including the Mataura River and Falls (and their margins) remain important landscape features that have cultural and recreational significance.
- The same forest to sub-alpine areas on the sides and margins of the Hokonui Hills are also recognised for their ecological values, with some areas containing nationally threatened species (such as like *Olearia Hectorii*), while also supporting habitats for a range of native avian species.

- The range's strike ridges are also a distinctive characteristic and feature, although these are concentrated towards the north-eastern end of the Hokonui Hills and are strongly associated with the high ground within and framing Dolamore Park.

Focusing much more directly on just the proposed wind farm site, as the panoramic images in Section 2.1 show, most of the land within the proposed wind farm site is used for pastoral farming at present. This includes land on the edge of the Dunsdale Recreation Reserve and Makarewa Falls, while cut-over land previously employed for pine forestry – near Bare Hill – and land that has been much more recently converted from dairy farming to production forestry is found closer to the northern margins of the range. In effect, most of the broad basin that the wind farm would be physically located within and around is part of the wider 'working' rural landscape already described. Although the bald profile and geomorphology of the hills and ridges which ring that core basin remain reasonably distinctive – often accentuated by the native forest and bush outside the subject site, it is neither as distinctive and natural, nor as aesthetically and recreationally appealing, as the likes of the reserves found nearby, or even the Waterfall Range's strike ridges.

Having said this, a few individual features, like Mt Peel, North Peak and Waimea Hill, all within the wind farm site, are still quite prominent – the first of these due to its strongly apical form. Moreover, the uplands around the edge of the site still contribute to the general 'uplift' of the Hokonui Hills and their contrast with the plains, terraces and foothills of a series of lower-lying river valleys that surround them.

Even so, the site in totality reveals landscape values that are much more modest than those associated with the southern to south-western margins of the Hokonui Hills – from Hedgehope Hill and its broadly forested margins to Otapiri Gorge Road – or even the Waterfall Range. This, of course, reflects the way in which farming and forestry, in particular, have progressively changed the inherent character of most of the range over many decades.

3. Statutory Context

3.1 The Southland Regional Policy Statement

The Southland Regional Policy Statement sets out to establish a high-level policy framework for the Southland Region that also helps to translate the Resource Management Act 1991 (RMA) and various National Policy Statements into more focused provisions at the district level, within district plans. Objectives and policies relevant to the Hokonui Hills include the following:

Objective LNF.2 – Identification and management of locally distinctive and valued natural features and landscapes

Southland’s locally distinctive and valued natural features and landscapes are identified, and managed so that subdivision, use and development is consistent with their values.

10.3 POLICIES

Policy LNF.2 – Identify, assess and manage locally distinctive and valued natural features and landscapes

To identify and assess Southland’s locally distinctive and valued natural features and landscapes, and manage adverse effects, in particular significant adverse effects, from subdivision, use and development in a manner consistent with the values identified.

Policy LNF.3 – Identify, assess and manage natural features and landscapes of cultural significance to tangata whenua

To identify, assess and manage natural features and landscapes of cultural significance to tangata whenua as either outstanding natural features and landscapes or locally distinctive and valued natural features and landscapes, depending on the values associated with them.

3.2 The Southland District Plan

The Southland District stretches from the Tasman Sea and South Westland National Park to just west of Gore, with an eastern boundary that bisects the Hokonui Hills just west of Dolamore Park – running down Otamita Gorge Road from Mandeville (just outside the District) then along Reaby Road at the outer edge of the range. Addressing all of the area west of this boundary, the Operative Southland District Plan (2017) opens with a series of overarching Strategic Directions, which include the following:

SD – Strategic Direction Overview

Strategic directions are required to be consistent with:

4. *Fostering the use and development of natural and physical resources whilst protecting the natural values that have been elevated to matters of national importance by the Resource Management Act 1991 and those matters of national and regional significance by National and Regional Policy Statements;*

In addressing the Southland District’s **Natural Features and Landscapes**, the District Plan states that, “two tiers of landscapes are identified in the District Plan: Outstanding Natural Features and Landscapes and Visual Amenity Landscapes.” It goes on to state that these have been identified via five studies of Southland and the Te Anau area, although BML’s 2019 *Southland / Murihiku Regional Landscape Study* is not included in this list, and has not in its own right, been through any Schedule 1 RMA process. Consequently, the Visual Amenity Landscape covering the Hokonui Hills that is identified in BML’s report has no formal status in the Southland District Plan and the provisions relevant to Visual Amenity Landscapes do not apply to this

Project. Consequently, the only relevant policy of the District Plan's Natural Features and Landscapes chapter is NFL-P3 as follows:

NFL-P3

Avoid, remedy or mitigate adverse effects of subdivision, land use and development on the District's natural features and landscapes that have not been assessed by Council for landscape values.

These provisions must also be read alongside the provisions of the other chapters of the District Plan. This includes the *Energy, Infrastructure and Transport* section which is particularly relevant to the proposed Hokonui Wind Farm and contains the following provisions, which very largely endorse and support the development of renewable energy resources. Acknowledging that renewable energy projects may result in effects that cannot be mitigated, Policy EM-P8 seeks the provision of:

.... offsetting measures or environmental compensation where any residual environmental effects of renewable electricity generation activities cannot be avoided, remedied or mitigated.

Explanation: *The adverse effects from renewable electricity generation activities should as far as possible be avoided, remedied or mitigated. However, where there are any residual environmental effects, consideration should be given to offsetting measures or compensation which benefits the environment and community affected. The Regional Policy Statement contains principles in relation to biodiversity offsets and other references to offsetting measures and environmental compensation which are to be implemented.*

In addition to these district-wide provisions, the proposed wind farm site is entirely located within the **General Rural Zone**, and this chapter of the District Plan contains a number of slightly more specific objectives and policies, including the following:

GRUZ-O2

Maintain amenity values, including rural character.

GRUZ-P2

Manage subdivision, land use and development in a manner that maintains or enhances amenity values, including rural character and landscapes.

Explanation: *Subdivision, land use and development should be sympathetic to rural character and amenity values, and enhance these where possible.*

The dominant character of the District's rural working landscapes includes reasonable separation between dwellings to maintain privacy and a sense of openness, the clustering of dwellings with other farm buildings and structures

3.3 The Gore District Plan

The Gore District embraces the eastern end of the Hokonui Hills, including Dolamore Park and Croyden Bush, together with the small rural settlement of Mandeville directly north of the range and the much larger town of Gore, to the east. Although the proposed wind farm would be located solely within the adjoining Southland District, part of the currently proposed transmission corridor would extend past Dolamore Park to meet the Roxburgh-Invercargill 220 kV line near Lady Charlton Road within Gore District. Some of the turbines to the west of Dolamore Park may also be visible from around Gore, Mandeville, and their surrounds.

The Proposed Gore District Plan has a structure very similar to that of the Southland District Plan, starting with district-wide matters, which include a Strategic Direction for the District, followed by zone and area-

specific provisions. Again, renewable energy generation is supported in the Energy section of the Plan, albeit with some caveats:

- ENRG-03 Effects from electricity generation activities on communities, the environment and the underlying relationship Ngāi Tahu hold with the natural environment are managed, while recognising practical constraints (eg, technical, locational, operational) from the use and development of renewable energy.*
- ENRG-P7 Avoid the location of renewable and non-renewable electricity generation activities within the following areas unless adverse effects can be mitigated:*
- 1. outstanding natural features and landscapes*
 - 2. significant natural areas*
 - 3. areas of indigenous biodiversity*
- ENRG-P9 When considering any residual environmental effects arising from the use and development of energy resources that cannot be avoided, remedied or mitigated, regard may be had to offsetting measures or compensation, including:*
- 1. measures which benefit the local environment; and*
 - 2. measures which benefit the local community affected; and*
 - 3. measures which benefit mana whenua aspirations or projects.*
- ENRG-P11 Require large scale renewable electricity generation activities to demonstrate they are located appropriately having regard to relevant land use zone, also considering the following:*
- 3. the scale, intensity, duration or frequency of the activity's effects;*
 - 4. the design and site layout of the activity and its ability to internalise effects;*
 - 5. earthworks and construction effects;*
 - 6. adverse amenity effects, including but not limited to visual, traffic generation, safety, light spill, shadow and noise effects;*
 - 7. adequate separation distances from sensitive activities and Outstanding Natural Features and Landscapes to ensure conflict and reverse sensitivity effects are minimised;*

Unlike the Southland District Plan, however, the focus in relation to **Natural Features and Landscapes** falls almost exclusively on the District's Outstanding Natural Features and Landscapes, not those identified as being Visual Amenity Landscapes or otherwise.

In relation to the **General Rural Zone**, which comes closest to physically intersecting with the proposed wind farm – though remaining a significant distance from it – the following rural amenity provisions appear:

- GRUZ-P11 Avoid activities that are incompatible with the character, qualities and purpose of the General Rural Zone, unless there is an operational or functional need for it to be located in the General Rural Zone.*
- GRUZ-P12 Require activities and development to maintain rural character, rural amenity and the underlying Ngāi Tahu relationships with the natural environment by:*
- 1. ensuring that buildings and structures are of a scale and height which is compatible with the rural character and amenity of the zone; and*
 - 2. requiring appropriate setbacks to waterways to maintain and enhance amenity values and natural character.*

GRUZ-P13 Recognise that Regionally Significant Infrastructure might be best located in the General Rural Zone, except where there is an Outstanding Natural Landscape, Outstanding Natural Feature, Significant Natural Area, Natural Hazard risk or Site of Significance to Māori.

These provisions are not directly applicable to the wind farm site, but the height and scale of the proposed turbines means that they would be likely to affect parts of the Gore District, including its General Rural Zone, Dolamore Park and associated reserves, and the settlement of Mandeville.

4. Effects Assessment

4.1 Effects In General

Assessments addressing changes to the various landscapes and environments, and the community perceptions of such change, often refer to a range of effects on visual, landscape, natural character and amenity values. The following descriptions of each type of effect are designed to help clarify their areas of commonality and difference, which, in turn, affect how they have been addressed in this report.

Visual Effects

‘Visual effects’ reflect changes to the visual composition, configuration and character of a locality or landscape, together with the perceived magnitude or scale of such change(s) – in terms of their relative legibility and prominence. However, an assessment of visual effects does not address the values (including community values) associated with such change, which are more appropriately addressed in relation to the landscape, natural character and amenity attributes of an area. Visual change and ‘effects’ are, in effect, devoid of value: they convey a sense of the magnitude of visible change that would be experienced from a photo point or viewpoint, but not the impact that this would have on the character, values and identity of the subject site and its surrounds. As such, visual ‘effects’ are no more than a stepping stone to addressing effects on landscape, amenity, and natural character values, which are ultimately much more meaningful precisely because such assessment focuses on how such changes would impact public and private perceptions of the subject landscape / environment.

Landscape Effects

“Landscape” is an all-encompassing term. The NZ Institute of Landscape Architects’ (NZILA) Charter (2010) describes “Landscape” as being “*the cumulative expression of natural and cultural elements, pattern and processes in a geographical area.*” Moreover, the Charter’s Preamble offers the following, slightly more fulsome, description of landscapes – as follows:

“Landscapes are the result of unique combinations of biophysical, cultural and social processes, evolving over time and interwoven with memory, perception and tradition. They include land, water systems and marine areas, and play a vital role in human nurture, fulfilment and in shaping individual and collective identity. Landscapes range from the outstanding and the memorable, to the familiar and commonplace”

In addition, the NZILA’s *Te Tangi A Te Manu – Aotearoa New Zealand Landscape Assessment Guidelines, 2022* (Section 4.22) identifies landscape values as comprising three ‘layers’ or types of attribute:

Physical, associative, and perceptual dimensions

The current professional practice of conceptualising ‘landscape’ as the overlap of its physical, associative, and perceptual dimensions is reflected in ‘case law’ including the following recent decision¹:

“Landscape means the natural and physical attributes of land together with air and water which change over time and which is made known by people’s evolving perceptions and associations.”

¹ [2011] NZEnvC 384, *Mainpower NZ Limited v Hurunui District Council*, (‘Mount Cass Wind Farm’), paragraph 300-301

“In keeping with the Act such a definition enables the development of landscape assessment which takes account of:

- 1. natural and physical environment: and*
- 2. perceptual; and*
- 3. associative aspects (beliefs, uses, values and relationships) which may change over time”*

Within rural areas, therefore, landscape effects relate to the modification of both the biophysical and sensory (or perceptual) characteristics and values of an environment. Often, these are addressed in terms of changes to the landforms, vegetation cover, sea / water forms, biota and land uses within a landscape, together with the visual legibility, expressiveness, aesthetic value, transient values and other ‘associative’ matters (with reference to the well-known, ‘*Modified Pigeon Bay / WESI factors*’). However, changes to the character of a landscape may also affect people’s appreciation of its ‘shared and recognised values’ and identity (reflecting the appreciation of a landscape by local communities and the public at large), together with its cultural dimensions and historical values.

Amenity Effects

Amenity Values are defined in the Resource Management Act 1991 (RMA) as:

those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.

Consequently, there is a significant overlap between amenity values and those ‘sensory’ and ‘associative’ qualities, described above, that pertain to any landscape. However, ‘amenity’ tends to focus more on locations, areas and places that are known, understood and appreciated by those who live within them or visit them – often on a reasonably regular basis. In a related vein, amenity values also relate to such factors as noise, lighting, smells and awareness of activity and movement; in effect, the fuller spectrum of sensory factors that contribute to perception and appreciation of an area’s character, pleasantness and aesthetic coherence. Inevitably, this also brings into play perceptions of identity and sense of place (evolved from the Greek concept of the ‘*genius loci*’) that reflect the more particular, even unique, qualities of a locality or environment. Concepts of familiarity, shared ownership (in a figurative sense) and pride of place are also important in this regard. Moreover, Section 7(c) which refers to “*amenity values*” incorporates “*cultural and recreational attributes*”, which often pertains to areas used for walking, cycling, coastal activities and passive recreation.

Amenity effects can also include so-called, ‘nuisance’ effects that degrade the ‘pleasantness’, ‘aesthetic coherence’ and other values associated with a particular locale. These often pertain to such matters as:

- Visual dominance or over-dominance
- Loss of open space and perceived spaciousness
- Encroachment on privacy
- Over-shadowing
- Noise.

Natural Character Effects

Natural character effects overlap with landscape effects, with emphasis on effects that impair, or otherwise alter, the naturalness of freshwater environments in terms of their biophysical attributes and perceived

character. Such variables might include a river's fairway width, its flow regime, its water clarity, human structures and modification, its context and its landscape character. These elements and characteristics are not exclusive, and the significance of effects in relation to any one factor (or more) needs to be considered with regard to the particular characteristics of the subject river and its margins. Regardless, freshwater environments that are highly natural will nearly always be much more sensitive to the effects of change than those that are already highly developed and modified.

4.2 Effects Relevant to the Proposal

Referring to the key issues identified in Section 4.1, above, it is considered that the effects of most relevance to the Hokonui Wind Farm proposal distil down to:

- 1) Landscape effects: recognising that the proposed wind turbines have the potential to affect perception of the Hokonui Hills as a whole, together with the Dunsdale Recreation Reserve and Dolamore Park more specifically. These impacts would be experienced both within the range and across the Waimea and other plains that surround it.
- 2) Amenity effects: focused on the rural character of the Hokonui Hills and their margins; and
- 3) Amenity effects: pertaining to surrounding farm properties and towns, including those spread across the Waimea Plains, extending eastwards towards Gore, southwards towards Hedgehope and Winton, and westwards towards Dipton and the Oreti River.

Although the large rural servicing centre of Gore lies east of both the wind farm site and Hokonui Hills, it appears likely that the rampart of more elevated strike ridges and other high points at and near the eastern edge of the range would significantly limit exposure of its residential areas and town centre to the proposed wind turbines. Consequently, it appears most unlikely that the proposed wind farm would appreciably affect the western outlook from the town and its amenity values.

In relation to the potential matter of Natural Character Effects, the proposed wind farm would traverse multiple stream corridors and catchments. However, most of those that are physically close to the proposed wind turbines, transmission lines and accessways are already flanked by open paddocks and areas of production forestry that have been almost entirely cleared of native vegetation. The proposed turbines and other wind farm infrastructure would not change this situation, or the values of the various stream systems within and near the wind farm site. This is the case even near the edge of Dunsdale Recreation Reserve. Consequently, any natural character effects are likely to be quite fine-grained and related to ecological values, as opposed to perceptions of the naturalness of the wider Hokonui Hills.

4.3 Assessment Method

In assessing the landscape and amenity effects of the proposal, the following steps have been followed for this assessment:

- 1) Identification of receiving environments / catchments and audiences exposed to the proposed wind turbines;

- 2) Identification of a sample of photo points / viewpoints representing those catchments and audiences, together with a range of viewing distances and angles relative to the wind farm site – to provide the platform for more detailed evaluation of the project's effects;
- 3) Determination of key factors / variables that need to be addressed in evaluating the project's landscape and other effects;
- 4) Use of photos and notes taken in the course of a site visit, together with Google Earth / Maps imagery, and assessment criteria that are described in Section 4.5, to undertake a preliminary evaluation of the project's effects for key viewpoints; and
- 5) Extrapolation of those findings to any other receiving environments, where applicable.

4.4 Receiving Environments & Audiences

Based on my site visit and ZTV (Zone of Theoretical Visibility) mapping undertaken for this project, it is considered that the main receiving environments and catchments likely to be exposed to the proposed wind turbines comprise:

- The townships of Balfour, Riversdale and Mandeville to the north of the Hokonui Hills, and Winton to the south-west;
- The broad matrix of farms around these settlements – spread across the Waimea Plains (north), around the Makarewa River (south) and up and down the Oreti River valley (west);
- The Dunsdale Recreation Reserve and Hokonui Conservation Area (including the Dunsdale Recreation Area and Makarewa Falls) directly south to south-west of the proposed wind farm;
- More elevated parts of Dolamore Park to the east of it;
- SH94, together with parts of SH1, SH6 and SH96; and
- The local road network around the Hokonui Hills – within the Hokonui Hills, on the Waimea Plains, near the Makarewa River and near the Oreti River.

In addition, the proposed wind farm would have an impact on three groups of farmhouses within and near the wind farm:

- Two farmhouses surrounded by the proposed project envelope that are not part of the wind farm site at 1077 Otapiri-Mandeville Road;
- A dwelling directly adjacent to the wind farm site at 2369 Otapiri-Mandeville Road; and
- A loose grouping of four dwellings on Waimea Valley Road near the main proposed accessway to the wind farm from the north (north-west of Mandeville).

The audiences associated with these receiving environments mainly comprise:

- o Residents of Balfour, Riversdale, Mandeville, Winton and Dipton;
- o Those living on farms spread across the Waimea Plains, around the Makarewa River, and up and down the Oreti River valley;

- o Users of SHs 1, 6, 94 and 96;
- o Users of local roads within and near the Hokonui Hills;
- o Users of the Dunsdale Recreation Area and Makarewa Falls reserve; and
- o Users of Dolamore Park.

It is important to note, however, that the large township of Gore – to the east of the subject site – would be screened from the proposed turbines by the uplifted eastern end of the Hokonui Hills. That end of the hill range, also east of the existing 220kV line between Northern Makarewa and Roxburgh, would remain free of turbines. As a result, Gore would remain separated from the actual wind farm by the intervening strike ridges of the eastern Hokonui Hills, and the foothills and bush found near both Dolamore Park – Croydon Bush and the Hokonui Forest (near the Hedgehope Mast).

Similarly, the greater bulk of the proposed transmission lines also proposed by Hokonui Energy would remain enveloped by the sequence of ridges, hills and other elevated landforms that ring the large Otapiri Stream basin and much of the wind farm site. Even so, the eastern extension of the proposed 220kV network – stretching south from near Otapiri-Mandeville Road to Substation “A”, then on to the tee connection near Waimuru Road – would traverse the foothills east of Hedgehope Peak. As a result, it would be intermittently visible from some locations near the western edge of Gore and parts of Dolamore Park.

4.5 Viewing Sector Assessment

The following assessment addresses the effects of the proposed wind farm on the following receiving environments and viewing sectors:

- Viewing Sector 1.** Balfour and Riversdale
- Viewing Sector 2.** Mandeville
- Viewing Sector 3.** The Waimea Plains
- Viewing Sector 4.** Dolamore Park
- Viewing Sector 5.** Gore
- Viewing Sector 6.** Dunsdale Recreation Area & Makarewa Falls
- Viewing Sector 7.** The Area Around the Makarewa River
- Viewing Sector 8.** Winton and Dipton
- Viewing Sector 9.** The Oreti River Corridor

The locations of these various viewing sectors are shown on **Attachment 7**. The following checklist of factors / criteria has been used in addressing the existing values of the landscape associated with each viewing sector and the effects that would be generated by the wind farm proposal:

Existing Values:

1. The general nature of the 'environment' – including any key qualities – associated with views towards the wind farm and the Hokonui Hills
2. Any key views encompassing the proposed wind farm and its wider landscape setting
3. Any key landscape features also captured in views generally in the direction of the proposed wind farm

Visibility / Prominence:

4. Viewing distance to the nearest proposed turbines & their relative elevation
5. The natural orientation of views / outlook for the receiving environment / photo point
6. Intervening elements – landforms, vegetation, etc.

Landscape & Amenity Effects:

7. Any effects in relation to the biophysical characteristics and naturalness of the Hokonui Hills
8. Any effects in relation to the Hokonui Hills's perceived naturalness, expressiveness, aesthetic value, legibility, transient values and 'shared and recognised' values;
9. Any effects related to the rural character and aesthetic coherence, 'pleasantness' and identity of the Hokonui Hills

The effects ratings in relation to each viewpoint are 'scored' in accordance with the following rating scale (Table 1), which is consistent with the 7-point scale outlined in section 6.39 of *Te Tangi a te Manu*, as shown below:

SIGNIFICANT						
LESS THAN MINOR		MINOR	MORE THAN MINOR			
VERY LOW	LOW	LOW-MOD	MODERATE	MOD-HIGH	HIGH	VERY HIGH

In relation to this scale, it is important to note that the 'guidelines' comment as follows about the magnitude and meaning of some key RMA terms that address effects:

- 6.39 - 'More than minor' can be characterised as 'moderate' or above.
- 'Minor' adverse effects means some real effect, but of less than moderate magnitude and significance. 'Minor' can be characterised as 'low' and 'low-moderate' on the 7-point scale.
 - 'Less than minor' means insignificant. It can be characterised as 'very low' and overlapping with 'low' on the 7-point scale.
- 6.42 Significant adverse effect means of major magnitude and importance. A significant effect can be characterised as 'high' or 'very high' on the 7-point scale.

Viewing Sector 1. Balfour & Riversdale



Looking from SH94 on the eastern edge of Balfour (above) and from SH94 at the northern entrance to Riversdale (below) towards the Hokonui Hills and the proposed wind farm site

Existing Values:

Within the settled areas of Balfour and Riversdale, the Hokonui Hills are largely screened by a combination of buildings, sheds and garages, fences, hedgerows, garden vegetation – and closer to both towns’ margins – a broad matrix of shelterbelts. These factors, combined with the flat nature of the terrain around both towns and the low viewing angle to the Hokonui Hills, mean that they are typically glimpsed and viewed in a piecemeal fashion, rather than as a whole. Although more legible in their entirety when viewed from outside both towns (as shown in the photos above), they are still frequently interrupted by shelterbelts and other tall vegetation, and have a relatively low profile, overall.

Although the native forest bush of the Hokonui Conservation Area is distantly visible at the centre of the range, most of the slopes and ridges that remain more exposed to both settlements (and their margins) are dominated by open pasture. Production forestry (pines and Douglas fir) are also emerging at the western end

of the Hokonui Hills, while pines have been recently planted above Waimea Valley Road. This results in a seeming merger of much of the visible hill country with the working rural landscape of the Waimea Plains at its 'foot', rather than differentiation from it. However, these changes also diminish some of the naturalness, cohesion and aesthetic appeal of the range on and around the proposed wind farm site, and this change will be exacerbated as yet more production forestry takes hold across the Hokonui Hills in the future.

Consequently, even though the range remains a feature of the otherwise largely flat, rural landscape exposed to the occupants of Balfour and Riversdale, it is assessed as having a Low-Moderate level of value, overall.

Visibility:

Viewed from most of the Waimea Plains, it is anticipated that up to 54 of the proposed turbines, and these would rise to approximately half the height of the visible range. They would also extend across approximately 40% of its length – from near North Peak, in the west, to near Waterfall Range and its strike ridges, in the east. However, when viewed from within Balfour and Riversdale, the turbines would only be fleetingly visible or glimpsed – through the shelterbelts, domestic vegetation and buildings both within and on the margins of the townships. This, combined with viewing distances of 15-17km or more from each settlement to the application site and the turbines' low angle of viewing (partly because of these distances), would limit exposure to the wind farm.

Even when viewed from both towns' margins, the turbines would appear insubstantial and lightweight, and would have a low level of visual presence and prominence, overall. Viewed from within each town, this exposure would drop to a very low level. At the same time, the proposed transmission lines would be effectively screened from this viewing sector.

**Landscape &
Amenity Effects:**

As indicated above, the proposed turbines would have quite limited visual interaction with Balfour and Riversdale's core suburban areas, and when viewed from the edge of both settlements, would be too distant to have any amenity effects. Their small-scale, skeletal profiles would 'float' above the much more solid form of the hill country under and around the wind farm, without directly affecting its landforms and the vegetation patterns evident across it. Just as important, the turbines would stay clear of the distinctive strike ridges within the (subsidiary) Waterfall Range at the eastern end of the Hokonui Hills, and they would, in the future, be elevated above a mixture of open pasture, tracts of production forestry, and small pockets of scrub that are 'part and parcel' of the working rural landscape at the centre of the range.

As a result, the wind farm's impact on the Hokonui Hill's core character and landscape values would be of a low order. Its impact on amenity values would be of a very low order.

Viewing Sector 2. Mandeville



Looking from the western edge of Balfour on Waimea Valley Road towards the Hokonui Hills and the proposed wind farm site – to the right of the uplifted strike ridges of the Waterfall Range at the centre and left of this view

Existing Values:

Again, views from within Riversdale towards the Hokonui Hills are either blocked or fragmented by the buildings and vegetation found within its suburban limits and around its periphery. The range does not rise high enough to breach most of this screening, although its serrated profile and open flanks become much more obvious around its margins – notable from SH94 and the eastern end of Waimea Valley Road.

Although some patches of native scrub and a few pines are visible near the crest of the jagged sequence of ridges that extend east of the existing 220kV transmission corridor and – in places – among the more rounded hill tops and ridges to the west, most of the Hokonui's more visible slopes remain dominated by open pasture. As for views from near Balfour and Riversdale, this results in a merger of the working rural landscape spread across the Hokonui's hill country with that spread across the planar landscape near Mandeville, at the southern edge of the Waimea Plains. This helps to expose and decipher the sequence of strike ridges and other volcanogenic landforms found across the Hokonui Hills, as part of the steeply dipping and folded, Southland Syncline. However, few other elements imbue the range with any real sense of naturalness and endemic value when viewed from Mandeville.

As a result, the Hokonui Hills are a signature feature of the landscape associated with Mandeville, but their value is ultimately limited to a moderate level.

Visibility:

Similar to Balfour and Riversdale, most of the proposed turbines would only be fleetingly and sporadically visible through a mixture of shelterbelts, domestic vegetation and buildings within and on the periphery of the township. In addition, the strike ridges of the Waterfall Range – to the left of most views from the town – would remain free of the proposed turbines, which would instead dominate the more rolling skyline to the west (right) of the existing 220kV corridor and Otamita

Gorge Road. Even so, the scale of the turbines and their 3-3.5km proximity to Mandeville would result in them being much more prominent in views from the edge of the township, especially its western and southern margins. At the same time, the steeply rising nature of the terrain near Waimea Valley Road would result in many of the turbines on those ridges closest to the town being very prominent from some locations, especially A1-A6, A11-A14, A25, and A28-A31. However, the turbines behind these same ridges would be largely or completely screened from view. The broader mass of the wind farm would be hidden from much of Mandeville.

This includes its transmission lines, which would not be visible from this viewing sector at all. Overall, therefore, the wind farm would have a variable level of visibility: typically low and intermittent from locations within the town, but of a moderate-high level when viewed from its western and southern margins.

**Landscape &
Amenity Effects:**

As for Viewing Sector 1, the proposed turbines would have a quite limited impact on the internal character and amenity of Mandeville, due to the screening afforded by surrounding shelterbelts and other vegetation, and the still relatively low angle of viewing to the centre and western end of the Hokoniui Hills. The wind farm would remain clear of the distinctive, strike ridges at the near edge of the Waterfall Range, while its turbines would also remain distinct from the broader array of more rounded landforms spread across the centre and western half of the range, and the pasture-dominated slopes above Waimea Valley Road. Again, the wind farm would remain linked to parts of the range that have more of a rural-production character – marked by the predominance of open pasture across most of the range at present and the impending emergence of production forestry across a sizable area of its northern slopes (already planted).

On the other hand, the proposed turbines would be much more obvious when viewed from the margins of the township, primarily down its southern and western sides. The turbines would also be large and visually prominent in such views, while their kinetic qualities would also draw the eyes of local inhabitants and visitors alike to the wind farm.

On balance, it is considered that the proposal would have a moderate level of effect on the character and values of the landscape around Mandeville – mainly focused on its margins and SH94 entering and leaving the settlement – but a low level of effect on the town's amenity values.

Viewing Sector 3. The Waimea Plains



Looking from Mandeville-Kingston Crossing Road (top) and Waimea Valley Road (middle and bottom) towards the Hokonui Hills and the proposed wind farm site

Existing Values:

Stretching laterally – from west to east – at the southern edge of the Waimea River / Mataura River Plain, the Hokonui Hills comprise a generally low-lying, but still clearly legible, sequence of hills and ridges that both define and contain the planar landscape stretching from Lumsden to Gore. As described in relation to views from the outer margins of Mandeville, the shorn terrain of the range is readily apparent, from the rounded profile of Mt Peel to the strike ridges found at its eastern end within the Waterfall Range (a subsidiary component of the Hokonui Hills near Otamita Gorge Road) and near Dolamore Park.

Just as obvious, however, is the merger of the pastoral production landscape of the Waimea Plains with that spread across most of the Hokonui's hill country. As described in relation to Balfour and Riversdale, more remote views also reveal parts of the Hokonui Conservation Area, while more close-up views expose the patches of shrubland or scrub spread across some of the range's steeper slopes and hill crests. Even so, most of the Hokonui Hills are now dominated by open pasture and the 'working' nature of this landscape is exacerbated by production forestry planting near the western end of the range and, more recently, south of Waimea Valley Road. This reinforces the Hokonui Hill's modified nature, at the expense of its more natural qualities, its aesthetic appeal and cohesion, and its sense of visual distinction.

Accordingly, much as the hill range is a signature feature of the Waimea Plains, its values are limited to a Moderate level.

Visibility:

Viewed from more distant locations near Balfour, Riversdale and Otama, the fuller extent of the wind farm would be visible, occupying 35-40% of the undulating sequence of ridges and hills on the top of the Hokonui Hills and having a height that is approximately one-third to half that of the range. Like the range itself, the turbines would remain relatively low down on the southern horizon and would appear much more ephemeral and insubstantial than the landforms that they rise above.

From views closer to the Hokonui Hills, both their form and that of the turbines atop them would be more readily apparent, with the fuller array of proposed turbines rising increasingly obviously above the broad profile of the Hokonui Hills. South of SH94, near Mandeville-Kingston Crossing Road and McAlister Road, such exposure appears likely to 'peak', with most of the turbines clearly visible and rising well above the skyline of the Hokonui Hills. At times, the movement of their blades would accentuate such exposure.

Closer to both the foot of the range and the wind farm – in the general vicinity of Waimea Valley Road, this situation would change with those turbines arrayed on the ridges closer to the Waimea Plains rising well above the hill range (as described in relation to Mandeville), but most of the turbines south of the outer ridge sequence would be wholly or partly screened from view. Thus, the number of turbines that are largely or entirely visible would decrease very appreciably, but those that are visible would appear much larger and be more elevated –

relative to the landforms under them. They would be more sharply etched on the immediate southern skyline.

Consequently, the wind farm's level of visibility would range from a low-moderate level in more distant views across the Waimea Plains to a moderate-high level near the centre of the Plain, and a high level near Waimea Valley Road. On the other hand, the proposal's transmission lines would not be visible from this viewing sector at all.

Landscape &

Amenity Effects:

The descriptions of effects in relation Viewing Sectors 1 (Balfour and Riversdale) and 2 (Mandeville) capture most of the qualitative changes that would accompany the introduction of the proposed wind farm to the Hokonui Hills. They also reveal some of the key factors that 'drive' its effects on landscape character and values, as well as amenity, including:

- o The effective concealment of the project's transmission corridors.
- o The turbines' skeletal profile, which would be accentuated by the larger viewing distances from more northern parts of the Waimea Plains.
- o Their height and scale, which would become much more apparent from the centre of the Plain moving towards Waimea Valley Road.
- o The turbines' kinetic-dynamic qualities would also draw attention to them, in contrast with the much more static nature of the landscape that visually frames them.
- o The turbines 'separation' from the landforms and vegetation patterns under and around them: they would not screen or otherwise diminish the nature and value of the Hokonui Hill's key 'building blocks', its geomorphological structure and the patina of farmland and paddocks spread across it.
- o The wind farm would remain different from, yet reasonably compatible with, this working rural landscape.
- o The low angle of viewing to the Hokonui Hills and the proposed wind farm from much of the Waimea Plains would limit its sense of visual prominence to dominance and any related feeling of 'imposition' on the Plain as a whole.
- o The closer one gets to the base of the Hokonui Hills (in the general vicinity of Waimea Valley Road) the more some of the A-series turbines would rise up and become especially prominent. Yet the convex landforms down the edge of the range would also screen out the greater mass of turbines (including the B and C series) set back further within it, together with the lower towers of even some of the closest turbines.

Taking these often contradictory factors into account, it is considered that the wind farm's impacts on landscape character and values would range from low for more remote parts of the Waimea Plains, to moderate near parts of Waimea Valley Road. In this regard, the highly modified, rural-production nature of most

of the landscape surrounding the wind farm effectively limits its effects on landscape attributes and values.

In relation to Amenity effects, addressing the broad matrix of farmhouses and cottages spread across the Waimea Plains, the bottom end of the effects scale would start at a very low level, for those properties more distant from the wind farm. These are frequently screened or buffered from it by intervening shelterbelts and other planting. By contrast, a number of properties close to Waimea Valley Road would be affected to a moderate level, although those closest to the road corridor are frequently oriented to the north and are (just as commonly) screened from the Hokonui Hills by a mixture of hedgerow, shelterbelt and amenity planning.

Viewing Sector 4. Dolamore Park



Looking from Dolamore Park westwards towards the centre of the Hokonui Hills and the proposed wind farm site

Existing Values:

Tucked into a valley at the eastern end of the Hokonui Hills, which is surrounded by native forest and – to the west – a series of more open peaks, Dolmore Park comprises a mixture of open space, a formal play area, and bush trails that make the most of its attractively contained setting. Framed by the aforementioned forest and peaks, the park is part of a larger area that retains the natural elements and features that would once have permeated most of the wider range. Consequently, in addition to being an important recreation area, it is also important in terms of Southland’s natural heritage values. In this regard, it complements, and is complemented by, the Hokonui Conservation Area to the south-west – beyond the Hedgehope Mast – which is anchored by the Dunsdale Recreation Area and Makarewa Falls.

The values of the park are of a high to very high order.

Visibility:

Looking westward up the valley system that carries Dolamore Park Road, most of Dolamore Park, including its campground, childrens play area and forest areas would be screened by the valley landforms and the park’s varied terrain, together with intervening bush. Only the more elevated sections of the park-reserve would possibly be exposed to a number of the C24-C26 turbines in the ‘gap’ between Kelvin Peak and the mixture of terrain and bush within the park just described. Yet, even these turbines – if visible – would appear quite remote, with just their upper masts and blades distantly apparent. Consequently, even though the movement of the blades on the three turbines just described might conceivably draw attention from some elevated parts of the park (such as the location shown above), such views would be intermittent at worst.

Parts of the 220kV transmission line running south-east of Otapiri-Mandeville Road would be visible from open spaces within more elevated parts of the park (as shown in the photo above), but not from the majority of its activity areas and tracks, which are largely enclosed by native forest.

Consequently, exposure to the proposed wind farm would be quite limited and of a low order, overall.

**Landscape &
Amenity Effects:**

As indicated above, the proposed turbines would remain entirely screened from most of Dolamore Park and very much peripheral to the bushy valley environment that it sits within. At most, they would be a fleeting distraction, not unlike cars and other vehicles moving in and out of the park environs, but the turbines that are distantly (and only partly) visible would not meaningfully alter or otherwise affect the fundamental character of the park, or its natural and aesthetic values, its feelings of intactness and remoteness, or its value as a landscape overall.

Parts of the 220kV transmission line running to the proposed tee within the INV-A corridor would also be intermittently visible from some parts of Dolamore Park. However, most of the line would be screened by intervening vegetation, with just parts of the new system emerging, set against the backdrop of the foothills rising up to Hedgehope Peak and its mast. Viewed over 7kms or more, the visually lightweight transmission line would be largely lost against that substantial 'backcloth', and would have little impact on the character and aesthetic appeal of the reserve.

Consequently, the proposed wind farm's effects in relation to the landscape and amenity values of Dolamore Park would remain at a low level.

Viewing Sector 5. Gore



Looking from SH1 as it crosses the Mataura River at the centre of Gore (above) and from Terry Road on the western edge of Gore (below) towards the Hokonui Hills and the proposed wind farm site

Existing Values:

Although the western edge of Gore offers distant views to the strike ridges and series of peaks at the eastern end of the Hokonui Range, most of Gore sits within a river valley and basin that has been etched out of the rolling terrain around the Mataura River. As a result, very few places within Gore are visually exposed to, or directly connected with, the Hokonui Hills. Those peripheral areas that are exposed to the range mainly look towards the forested sequence of peaks around, and north-east of, Dolamore Park, with the more central part of its hill country – around the proposed wind farm – screened from view.

Instead, Gore has a close symbolic connection with the eastern end of the Hokonui Hills and, in particular, the sequence of more varied landforms and native forest just described, as well as – in places – the more open terrain and skyline that frames the Hedgehope Mast. The values attached to these parts of the range include its appeal as a recreation resource, its importance from a natural heritage standpoint, and its aesthetic-scenic qualities – in part derived

from the range's contrast with the rural production landscape otherwise found between Gore and the Hokonui Hills.

Consequently, even though direct connections between Gore and the Hokonui Hills are limited, they retain significant values for the residents of this important rural servicing centre – in all likelihood, of a moderate-high level.

Visibility:

Viewed from most of Gore, the wind farm would not be visible at all, and even when looking from the town's more elevated margins, near Terry Road, the eastern peaks and ridges of the Hokonui Hills near East Peak, Croydon Bush, Kelvin Peak and – further south – Hedgehope Hill, would screen the proposed turbines. It is possible that some of the more elevated turbines west of Hedgehope Hill and the existing Hedgehope Mast might just be visible beyond both, but this would be over distances of 27km or more. Consequently, even when viewed from the town's margins, such exposure would be very limited.

Similarly, some locations on the outer western edge of Gore would be exposed to parts of the 220kV line extending through to the INV-Box A tee, including near the Southern Field Days site. But such views would be intermittent, with most of the new line screened by intervening landforms, shelterbelts and other vegetation. Even when visible, it would be closely framed by the existing Transpower corridor and set against the very substantial backdrop of Hedgehope Peak and its foothills.

Consequently, the wind farm would have a very low level of visibility in relation to nearly all of the town, but this would rise to a low level on its outer periphery closer to Waimuru Road.

**Landscape &
Amenity Effects:**

Similar to Dolamore Park, most of suburban Gore and its commercial centre would be completely isolated from the proposed wind farm by its low-lying setting, with, as indicated above, just a few elevated locations on the town's western periphery perhaps offering distant glimpses to the tops of some turbines beyond Hedgehope Peak and parts of the proposed 220kV line 'in front of it'. Further limited by intervening shelterbelts and other vegetation, local landforms, and the viewing distances to the tee interchange and wind turbines beyond it, such exposure would not result in any meaningful changes to the character and values of the Hokonui Hills landscape.

As a result, it is considered that the combined proposal would have a very low to low level of impact in relation to Gore's landscape and amenity values, with most such effects concentrated on its western margins near Waimuru Road and the Southern Field Days site.

Viewing Sector 6. Dunsdale Recreation Area & Makarewa Falls



Looking from Lora Gorge Road approaching the Makarewa Falls Reserve towards the Hokonui Hills and the proposed wind farm site

Existing Values:

Capturing most of the southern and south-western facing slopes that frame the elongated basin running through the centre of the Hokonui Hills – from near Otapiri to Waitane West – the Hokonui Conservation Area mainly comprises DoC estate that includes the Dunsdale Recreation Area and the Makarewa Falls reserve. Much larger than Dolamore Park to the north-east, it comprises a sequence of sharply dissected water catchments and ridges that fall from north to south. Covered in tracts of mature native forest and dominated by terrain that is steep, rugged, and highly variable, it is mainly visited by experienced trampers and hunters, and day-trippers to the Makarewa Falls. As such, its use is quite different to the recreational activities more commonly associated with Dolamore Park.

Nevertheless, it represents the natural ‘state’ of the Hokonui Hills prior to the advent of farming and forestry, and like Dolamore Park, is important in terms of both the particular recreational qualities that it retains and (perhaps of more significance for the local community at large) its natural heritage values. In a related vein, the forested slopes that still ring most of the southern side of the range offer respite from, and contrast with, the rural production landscapes that dominate both the landscape below the Hokonui Hills and that within its central basin.

Accordingly, the conservation area is considered to retain values of a very high order.

Visibility:

Approaching the Dunsdale Recreation Area and the Makarewa Falls Reserve (as shown above), the top of the Hokonui Hills would be crowned by the C1-C6 turbines near West Peak, with the rotating blades of some of the other C and B series turbines partly visible beyond. At this juncture, those visiting the conservation estate would clearly see the turbines just described, rising above the

skyline around West Peak, Pukemaire and – further west – the Overton Forest. However, as they get closer to the Dunsdale Recreation Area and Makarewa Falls, the turbines would sink lower behind the main sequence of hilltops and ridges overlooking the conservation area, and most of the turbines would be progressively lost from view. Even those around West Peak – closer to the Makarewa Falls – would be largely screened by the convex landforms found around both that peak and Pukemaire, to the east.

Entering the forest areas, stream valleys, and sharply dissected terrain within both reserves, the skyline of the Hokonui Hills would be largely lost from view, while the proposed turbines would be screened by the ‘rollover’ of the ridge crests higher up and the massed forest vegetation much closer at hand.

As a result, there would be a marked contrast between the higher level of exposure to the turbines experienced in the course of approaching and arriving at the conservation area – albeit with such exposure focused on a relatively small proportion of the turbines proposed – and the much more limited level of visual interaction with them from within the reserve areas. As such, the turbines would have a degree of visibility that ranges from very low within the conservation area to a moderate-high level on its margins. By contrast, the proposed transmission lines would not be visible at all from this viewing sector.

Landscape & Amenity Effects:

For those within the Dunsdale Recreation Area and Makarewa Falls Reserve, there would be very little or no awareness of the proposed turbines. Only those hunters and experienced trampers trying to climb up to West Peak and the ridgeline northwest of it – which merges with private farmland – would be realistically aware of the turbines.

However, when viewed from just outside the conservation area, amid the rolling farmland that flanks the access roads to both reserves, this situation would change. As described above, the proposed C-series turbines together with a smaller number of B-series machines, would ‘cap’ the broad swathe of forest and shrubland that is spread across the southwestern side of the Hokonui Hills, rising well above the steeply incised terrain that underpins the conservation area. Inevitably, this would provoke a sense of contrast with its natural values, its remoteness, and its aesthetic character and coherence. Some of the conservation area’s intactness and sense of relative isolation would be diminished. Although the turbines would provoke less of a feeling of contrast with the ‘working’ landscape around the access roads, the visual juxtaposition between the more natural components of the conservation area and the turbines elevated above it would be appreciable when approaching both reserves.

Taking both of these perspectives into account, considerable weight must be attributed to the much more limited effects associated with actually being within, and using, the conservation area. Even so, it is clear that the turbines would reduce some of the naturalness and other key qualities (described above) that

are fundamental to its appeal and use. On balance, it is considered that this would result in the proposed wind farm having a moderate-high level of effect on the conservation landscape's character and values.

In relation to local amenity values, the proposal's effects would be largely confined to a small number of farm dwellings on the margins of the conservation area. Within this margin, the turbines would appear large and prominent to dominant – rising well above the Hokonui Hill's skyline – but fewer turbines would be visible, as a whole, and the combination of intervening landforms, bush and shelterbelts would screen large parts of those that are visible. Even so, the sense of place and identity associated with this marginal area would be modified by the presence of the wind turbines. As a result, it is considered that the proposal would also have a moderate-high level of effect on amenity values.

Viewing Sector 7. The Area Around The Makarewa River



Looking from SH96 near Glencoe, southeast of the Hedgehope Mast, towards the Hokonui Hills and the proposed wind farm site



Looking from Hokonui School Road towards the range and the proposed wind farm site



Looking from from SH96 near Browns (below) towards the range and the proposed wind farm site

Existing Values:

Looking towards the Hokonui Hills from the rolling to gently rolling landscape around the Makarewa River and both sides of SH96, the undulating skyline of the range is mainly differentiated from the rural landscape closer at hand by the bush and forest cover associated with the Hokonui Conservation Area. Its dark colours and tones contrast very markedly with the open grassland that steps down from the edge of the range, and even the straight lines of its hedgerows and shelterbelts, so that the Hokonui Hills retain more visual presence and value – as a distinctive feature – than they do when viewed from other quadrants. This is particularly so near the eastern end of the range, in the general vicinity of Maitua and Glencoe, with the range often being substantially screened and generally having a lower profile (both physically and visually) closer to the Makarewa and Oreti Rivers.

Notwithstanding these changes and limitations, the Hokonui Hills still have significant visual presence and importance as a feature that is, for the most part, clearly differentiated from its wider rural setting. In this context, it is considered that the Hokonui Hills have a moderate-high degree of value.

Visibility:

Looking northwards from the broad catchment south-west to south-east of the Hokonui Hills, a sequence of flat to rolling pasture climbs towards the base of the range. As in relation to views from the Waimea Plains, its hill country dominates the northern horizon, with an undulating skyline. As indicated above, the form of the Hokonui Hills is emphasised by its extensive native forest / bush cover – contrasting with the open pasture that is spread across the foreground and middle distance of views towards them.

The proposed turbines would cap that array of peaks and ridges, rising above the dark tracts of forest that face southwards from near Hedgehope Peak, Pukemaire and West Peak, and a ridgeline near the Overton Forest. The B and C series turbines proposed would rise well above that line of hills and forest, while some of the turbine blades of a number of the A-series turbines could well be partly visible from more distant vantage points. They would be clearly etched on the northern skyline and frequently silhouetted against both the sunlit skies and cloud cover to the north.

Although the turbines would – like the Hokonui Hills – often be partly or largely screened by intervening ridges that affect views from the direction of SH96, and the farmland both sides of it, the turbines would still rise high enough to be obvious and have an appreciable visual presence. As a result, they would have a moderate to, in places, moderate-high level of visibility – moreso directly south to southwest of the Hokonui Conservation Area, less so near Browns (to the west) and east (near Te Tipua and Maitua).

Contrasting with this situation, the proposed transmission lines would not be visible at all from this viewing sector.

**Landscape &
Amenity Effects:**

Although views from south of the Hokonui Hills capture the broad sweep of its undulating peaks and ridges, it typically appears quite low-lying in such views. In reality, the range's elevation is much more pronounced near Hedgehope Peak, extending through to West Peak, while the mixture of forest, bush and scrubland scattered across most of its south-facing slopes helps to pick it out as a significant feature of the Southland landscape when viewed from the south. However, a series of rising landforms and ridges reduces the apparent height of the range, while the belt of extensive upland and peaks – around Hedgehope to West Peaks – would help to visually buffer the proposed turbines. Consequently, even though the proposed turbines would be clearly visible on the northern horizon, their lightweight forms and the lower profile of the hills under and around them would reduce their degree of visual presence. Moreover, throughout this broad catchment, both the hills and turbines would be framed by, and juxtaposed with, the rural production landscape that dominates all sides of the range. Only in closer proximity to the Hokonui Conservation Area would this situation change, with much more direct and symbolic juxtaposition of the (cultural) turbines with the Hokonui's (natural) landforms and forest cover becoming more obvious – as is discussed in relation to Viewing Sector 6.

Overall, therefore, the turbines would diminish some of the range's intrinsic naturalness, aesthetic appeal and coherence, and alter perception of its character and identity. However, in many views, such changes would be restricted by the Hokonui Hill's relatively low profile, especially so west of the Makarewa River, whereas to the east, the greater elevation and massing of peaks and ridges around Hedgehope Peak would create a large buffer between the wind farm site and rural landscape south to south-east of it. In this area, most of the A and B-series turbines would be screened from view, leaving a more limited number of C-series machines visible on the skyline north to northwest of the Hedgehope Mast.

More generally, though, the scale of these changes would be further limited by the wealth of rolling farmland, shelterbelts, and even the odd stand of pines within the landscape that enclose views of the range. This already diminishes the presence and significance of much of the Hokonui Hills as a natural feature and would create a more sympathetic cultural 'frame' for the turbines.

As a result, it is considered that the proposed wind farm would have a low level of effect on the range's landscape values in relation to each end of this catchment, rising to a moderate level closer to the Makarewa River at its centre. The amenity effects associated with farm dwellings scattered both sides of the river corridor would also range from a low level for more distant locations and where landforms and screen the centre of the Hokonui Hills – again on the outer margins of this viewing sector – to a moderate level for those properties more directly south and southwest of the Hokonui Conservation Area (and Viewing Catchment 6).

Viewing Sector 8. Winton & Dipton



Looking from SH6 at the northern end of Winton (above) and the centre of Dipton (below) towards the Hokonui Hills and the proposed wind farm site

Existing Values:

Looking eastwards from parts of both Winton and Dipton, the western foothill margins of the Hokonui Hills come sporadically into view, but are, for the most part, very largely screened by intervening buildings and vegetation (including shelterbelts and vegetation near the Oreti River), as well as the rising landforms around the river corridor, and ridgelines close to the hill range. As a result, it has very little visual presence and makes a limited contribution to the local landscape.

Although the Hokonui Hills remain a symbolic landmark and feature of the wider landscape around both settlements, they make a quite limited contribution to the more immediate character, values and perceptions of Winton and Dipton. Their values in this regard are accordingly considered to be of a low order.

Visibility:

Although it would theoretically be possible to see some of the B-series turbines from the eastern margins of Winton, they would remain distant and small-scale in such views, largely screened by an intervening Winton Hill and the ridges

around it. As a result, there is very little sense of connection with the Hokonui Hills – which are almost entirely screened from both settlements by intervening landforms and vegetation. Viewed from both Winton and Dipton, it would be virtually impossible to see the turbines, just as it is exceedingly difficult to clearly see the Hokonui Hills from most of the Oreti River valley. They would be effectively ‘lost’ behind the intervening valley terraces, hills and ridgelines, together with a mixture of amenity planting, riverside vegetation, and shelterbelts.

As such, the wind turbines would have a very low level of visibility when viewed from both settlements, while the proposed transmission lines would not be visible at all from this viewing sector.

Landscape &

Amenity Effects:

Both towns would remain relatively self-contained and isolated from the proposed wind farm. As a result, it would not appreciably alter the landscape character and values of either town, or its amenity values. Ratings for both would be of a very low order.

Viewing Sector 9. The Oreti River Corridor



Looking from SH96 near the Oreti River (above) and from Limehills-Browns Road west of the river (below) towards the Hokonui Hills and the proposed wind farm site

Existing Values:

Viewed from the more elevated plains landscape both sides of the Oreti River valley, the undulating profile of the Hokonui Hills is much as described in relation to Viewing Sector 7, except that the range is generally more distant and sits lower on the north-eastern horizon. It still contrasts with a rural 'working' landscape that is, in this case, less rolling and more planar (like the Waimea Plains), but the hills still have the sense of being more remote, less distinctive and legible as a coherent collection of landforms, and of less value overall, as a landmark and feature.

As a result, it is considered that the Hokonui Hills have a low-moderate level of value relative to this viewing sector.

Visibility:

Views from the slightly more elevated plain on both sides of the Oreti River, reveal views towards the Hokonui Hills very similar to those captured from the western end of SH96. The range sits low on the north-eastern to eastern horizon, with its gently crenellated series of ridges and peaks amplified by the mixture of native forest, bush and scrub cover spread across most of its flanks – contrasting with the expansive plain of pasture that otherwise dominates such views. The proposed turbines would rise well above the Hokonui Hills, but their finely wrought profiles – viewed over distances of 15-16km or much more – would result in the turbines appearing insubstantial and ephemeral. They would have much less visual substance and presence than the range that unpins the proposed wind farm.

Consequently, it is anticipated that they would appear quite lightweight and their level of visibility would typically be of a low-moderate order viewed from just east of the Oreti River and low west of it. The proposed transmission lines would not be visible from this viewing sector.

**Landscape &
Amenity Effects:**

Viewed from the Oreti River's elevated terrace margins, extending westwards, the Hokonui Hills typically appear remote and low-lying, as described above. This sense of 'detachment' is accentuated by the presence of Winton Hill, The Cone (at the western end of the Hokonui Hills), and other secondary landforms, which often hamper views of the main body of the range and reduce its profile. The proposed turbines would rise well above the Hokonui Hills, but as described in relation to the northern Waimea Plains, would have a quite fine-grained, filigree-like profile. Consequently, even though the movement of their blades would still, at times, draw attention, they would also appear distant and would not greatly affect perception of the sequence of hill country and forest that remains – to varying degrees – visible below them.

In absolute terms, the proposed wind farm would erode some of the naturalness, aesthetic appeal and other values associated with the range at present, but the significance of these effects would be limited by the way in which views towards the application site are both restricted and flanked by the landforms and forest at the western end of the Hokonui Hills – which is more prominent, other intervening landforms as described above, the low angle of viewing to the central range and the predominance of a working rural landscape around such 'viewshafts'.

As a result, it is considered that the proposed wind farm would have a low to, at most, low-moderate level of effect on the landscape values of the area around, and west of, the Oreti River. Effects in relation to amenity values would also be quite modest, reflecting the distant nature of the wind farm and its limited impact on the character and sense of place associated with this catchment, as well as the farm houses and other dwellings scattered through it. Such effects would be of a low order.

4.6 Key Findings

Table 2, below, summarises the effects ratings for Viewing Sectors 1-8. It also shows the effects ratings that are specifically attributed to Route Options A and B:

Table 2. Landscape and Amenity Effects		Effects:	
Viewing Sectors:	Visibility:	Landscape:	Amenity:
1. Balfour and Riversdale	Very Low (within each town) Low (on the outer margins of each town)	Low	Very Low
2. Mandeville	Low (within the town) Moderate-High (on the outer margins of the town)	Moderate	Low
3. The Waimea Plains	Low-Moderate (in the north of the Plain) Moderate-High (the centre of the Plain) High (near Waimea Valley Road)	Low (more remote parts of the Plain) Moderate (near Waimea Valley Road)	Very Low (more remote parts of the Plain) Moderate (near Waimea Valley Road)
4. Dolamore Park	Low	Low	Low
5. Gore	Very Low (most of Gore) Low (on the town's western margins)	Very Low (most of Gore) Low (on the town's western margins)	Very Low (most of Gore) Low (on the town's western margins)
6. The Dunstable Recreation Area & Makarewa Falls	Very Low (within the recreation area) Moderate-High (on its margins)	Moderate-High	Moderate-High
7. The Area Around The Makarewa River	Moderate (generally) Moderate-High (south to southwest of the Hokonui Conservation Area)	Low (the western & eastern ends of this viewing sector) Moderate (closer to the Makarewa River)	Low (the western & eastern ends of this viewing sector) Moderate (south to southwest of the Hokonui Conservation Area)
8. Winton & Dipton	Very Low	Very Low	Very Low
9. The Oreti River Corridor	Low-Moderate (just east of the Oreti River corridor) Low (west of the Oreti River)	Low to Low-Moderate	Low

All of the effects ratings identified sit between a Very Low level and Moderate-High level, with none reaching the level of being 'Significant', with reference to common RMA terminology. Importantly, the ratings for all local towns, including Gore, are at the lower end of this scale, and this is even the case for the area actually within the Hokonui Conservation Area and Dolamore Park, although the proposed wind farm would have a much more pronounced effect on the approach roads to both the Dunstable Recreation Area and Makarewa Falls Reserve. In saying this, it is acknowledged that the proposed turbines would be very substantial structures that would appear up to half as high as the Hokonui Hills in places, and much taller than the existing Hedgehope transmission tower. Their kinetic-dynamic qualities would also draw attention to them, in contrast with the much more static nature of the landscape that surrounds and visually frames them.

At the same time, the Substation "A" to Tee ("T") transmission line would extend out of the Hokonui Hills, towards Gore and, in part, Dolamore Park. Yet, this line would lie 'in the shadow' of the existing INV-Box A transmission corridor when viewed from the direction of Gore and even its Southern Field Days 'campus', while views from the direction of Dolamore Park and Croydon Bush would be both distant and, for the most part, fragmented. Viewed from all other external viewing sectors, the proposed transmission

corridors would be both physically enclosed and visually screened by the rising ridges, peaks and saddles on the outer edge of the Hokonui Hills, ringing its Otapiri Stream basin.

A range of other factors would also limit the project's effects, and these are summarised as follows:

- o Notwithstanding their size, both the turbines and 220Kv towers would still have a relatively lightweight, skeletal profile.
- o They would 'float' above the more solid mass of landforms and vegetation within the Hokonui Hills, rather than sit 'in front of' and disrupt the range's existing landscape patterns. Indeed, some may see them as having a sculptural quality, although any such perceptions have not been addressed in this assessment.
- o The turbines' skeletal profile would be accentuated by the larger viewing distances from more remote parts of the receiving environments that surround the Hokonui Hills. These include parts of the Waimea Plains, the large catchment stretching both sides of the Makarewa River, and the terrace landscapes found either side of the Oreti River.
- o Landforms at both ends of the Hokonui Hills, and around them, already diminish the range's visual presence, and would, in turn limit that of the wind farm on them. This intervention is most marked near the western end of the Hokonui Hills and the Oreti River corridor (including Winton and Dipton), and in the 'shadow' of both Hedgehope Peak and the Waterfall Range – limiting the wind farm's exposure to Mataura, Gore, and Dolamore Park (among other locations).
- o Shelterbelts, stands of pines, amenity planting and other vegetation within the rural landscapes around the Hokonui Hills also contribute very appreciably to the relatively low profile of the range in many views towards it. This is more obvious in relation to longer-distance, low-angled views across the Waimea Plains and other 'terrace' landscapes in the range's vicinity, but planting around most rural towns and homesteads also limits exposure to the Hokonui Hills. It would also constrain views towards the proposed wind farm.
- o The low angle of viewing to the Hokonui Hills from most surrounding receiving environments would also help to lower the visual signature of the wind farm, limiting its visual prominence to dominance and any related feeling of 'imposition' on those surrounds.
- o Conversely, more close-up views of the wind farm would often be restricted by the convex profile of the ridges and peaks at the outer edge of the Hokonui Hills, and the forest across its southern flanks. Although some turbines would rise up more sharply in such views (for example, when looking from Waimea Valley Road and the access roads to the Hokonui Conservation Area), the greater bulk of proposed turbines – away from these marginal areas or on the other side of the range – would be screened from such views.
- o Most of the Hokonui Hills landscape is – like that of its surrounds – anchored by rural production activities, structures, elements and patterns, which would, to a degree, complement the wind turbines and other wind farm elements proposed.
- o Most of the proposed transmission network would comprise 33kV lines that are located underground, while most of the 33kV to 220kV towers and lines carried through the Hokonui Hills would be screened by the range's peripheral landforms.

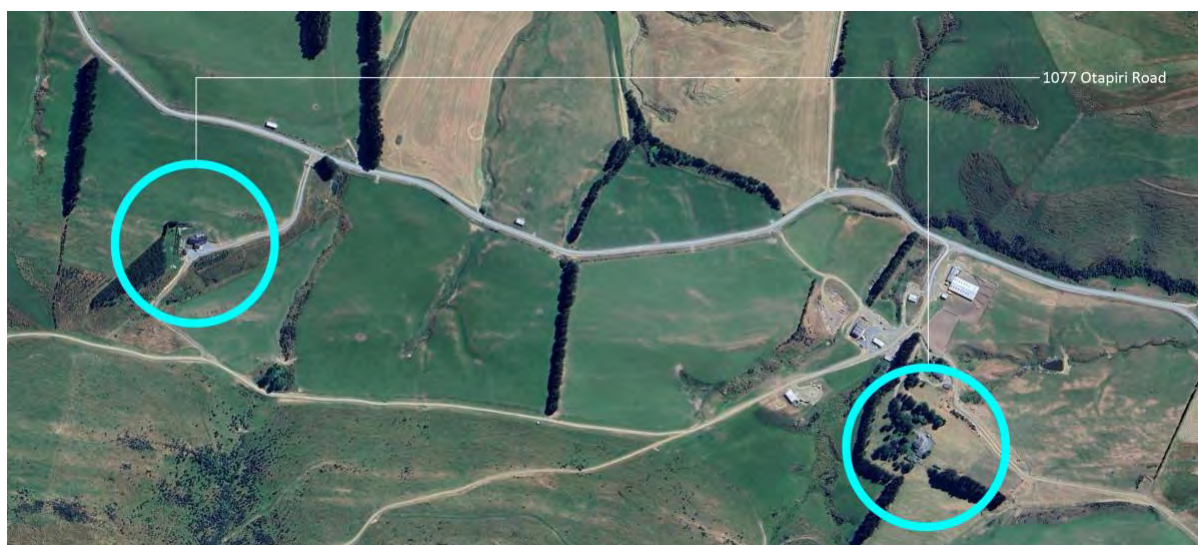
4.7 Other Receiving Environments: 1077 and 2369 Otapiri-Mandeville Road

All of the receiving environments described and assessed above are located around the periphery of the Hokonui Hills. However, two residential 'nodes' are located within the basin at the core of the proposed wind farm, and are not part of the current project. These comprise:

- The Evans property and its two dwellings at 1077 Otapiri-Mandeville Road, inside the rings of A, B and C-series turbines that are proposed; and
- The Maddoc property and a single dwelling at 2369 Otapiri-Mandeville Road, which lies close to the western edge of the B-series turbines and the wind farm as a whole.

These properties have not been visited to date, although the following factors are noted in relation to them:

The Evans Property:



- o The primary Evans residence would be located some 2.0km from the nearest turbine (C24) on an elevated ridge to the southeast, while the other C-series turbines would wrap around both dwellings from east to southwest – terminating near West Peak. Additionally, however, they would be exposed to the A-series turbines arrayed on a series of ridges on the northern side of the valley that Otapiri-Mandeville Road follows (some 2.4km or more away), while the wind farm's B-series turbines would be spread across rising ground 3.8km or more to the west.
- o The primary residence is the more elevated of the two dwellings owned by the Evans family and is oriented to the northeast – both across and down the valley described above. It would be partly screened from the C-series machines by shelterbelts and amenity planting in the dwelling's immediate vicinity, while that same vegetation would screen it almost entirely from the B-series turbines (to the west) and approximately half the A-series turbines (to the north).
- o The second residence lies west of the main farm property and its sheds, and is partly enclosed already by mature shelterbelts to the west and north. It is further buffered from the proposed

turbine sites – partly at present – by planting following a nearby water course, as well as both sides of the dwelling – to the southeast and west. The rising valley slopes around this dwelling would also help to screen it from more distant turbines.

Taking these various factors into account, it is considered that the Evans family would still be very aware of the presence of the proposed wind farm, both via more static views from near both dwellings, and also in the course of daily activities on their farm and travelling to and from it. As a result, it is considered that the proposed would have a moderate-high level of effect on their amenity values.

The Maddoc Property:



- o The Maddoc residence lies within a valley corridor that is flanked by a mixture of rising landforms, shelterbelts and stand of bush that rise up around it.
- o It is further enclosed by massed tree planting to the immediate north, northwest and southwest of the dwelling, as well as tall hedgerows around its remaining boundary.
- o The nearest proposed turbine would be located approximately 3km north-east of the dwelling, with others sited both north (B-series) and east of it (C-series).

It therefore appears that even though the Maddocs would be fully aware of the presence of the proposed wind farm, and would pass much of it in the course of driving and from their dwelling, it would have little or no impact on their house and its immediate curtilage. As such, it is considered that the wind farm would have a low to low-moderate level of impact on the family's amenity values.

4.8 Night-time Effects

In March 2020 the Civil Aviation Authority of New Zealand (CAA) released an updated policy for Lighting and Marking of Wind Turbines.² The purpose of this policy is to ensure that consistent conditions and limitations are imposed on installation of aviation obstacle lighting on wind farms when determinations are made under Civil Aviation Rules. Section 5 of The Policy states as follows:

“the following minimum conditions and limitations are to be included in all determinations (Heights referenced below are from ground elevation to the nacelle, plus vertical blade height):

- 1. Selected individual turbines at wind farms with turbines over 60 m high will be required to have lighting.*
- 2. Turbines between 150m and 315m high will require a secondary backup light and an array of 3 intermediate low intensity lights at a distance of half the nacelle height.*
- 3. The above does not address wind turbines of more than 315 m of overall height. For such wind turbines, additional marking and lighting may be required as determined by an aeronautical study.*
- 4. The highest turbines, those at the extremities of the site, and other turbines around the perimeter of the site will be lit to enable pilots to identify the extent of the windfarm. The spacing between lit turbines will not exceed 900m along the perimeter, and the flashing should be coordinated between all the lights in the wind farm so that they flash simultaneously.*
- 5. Lighting will be medium intensity red as defined in Rule Part 77, Appendix B10, i.e. an effective intensity of not less than 1600 candela of red light, and will flash between 20 and 60 times per minute.*
- 6. The obstruction lights shall be located on or above the top of the nacelle, shall be visible from all directions, and may be shielded below the horizontal plane.*
- 7. Obstruction lights at intermediate levels will not be required for turbines less than 150m.*
- 8. The painting of turbines with obstruction marking will not be required. The rotor blades, nacelle and upper 2/3 of the supporting mast of wind turbines should be painted white, unless otherwise indicated by an aeronautical study*

The wind farm aviation lighting for the Hokonui Hills proposal will be required to comply with the most recent CAA policy, with the overarching aim of ensuring that obstacle lighting is visible from 3 nautical miles (5.6 km). In particular, this suggests that flashing medium-intensity hazard lights, as described above, would likely be required for the highest turbines and some of those around its periphery – as proposed in **Attachment 8**. Modern LED lights, (such as the Orga L550 medium-intensity and L92 low-intensity lights) utilise the latest optical technology, with their precision-engineered, reflective prism optics, providing a highly accurate light beam which ensures light is emitted in a tightly focused beam that limits the upward and downward spread of lighting outside the cone required by the CAA. This helps to minimise light pollution, and would result in beams that are cast generally well above the plains and river terraces which surround the Hokonui Hills.

Even so, the lights would remain apparent in more distant views, creating a string of red lights, both flashing and constant, that ring the crest of the central Hokonui Hills. Inevitably, this lighting has the

² *Lighting and Marking of Wind Farm Turbines, Level 4 – Group Management Policies and Procedure*, Civil Aviation Authority, 2 March 2020

potential to affect the relative solitude, rural nature and 'dark sky' qualities of the night-time environment within and around them. Theoretically, it also has the potential to generate effects related to both light spill and glow (halos) that are, in turn, evident from local towns, farmhouses and other rural dwellings, local highways and roads, local reserves, and the general rural area around the range.

However, any such effects would be limited by the change in elevation between the lights atop both the proposed turbines and the range, and the plains, river terraces, farmhouses and towns below them. As such, the potential for downward reflected light to affect local dwellings or to generate glare that bothers the human eye appears to be of a low order. The highly directional nature of the proposed lights should also limit sky glow, while the proposed aviation hazard lights would not match the level of change to the night-time environment that is more commonly associated with motor vehicles' headlight sweep, domestic lighting or even road corridor lighting. Furthermore, the proposed hazard lighting would have a limited impact on landscape values *per se*, simply because most of the application site and its surrounds are shrouded in darkness at night-time.

Taking all of these factors into account, it is considered that any effects generated by the obstacle lighting that is anticipated to be required for the wind farm would be of a quite modest and low order overall.

5. Conclusions

Sections 4.6, 4.7 and 4.8 of this report summarise the proposed wind farm's effects on the basis of the information provided by Hokonui Energy Limited to date. These have contributed to the following conclusions, which focus on key provisions of the Southland District Plan:

In relation to Strategic Direction 4: the proposal would balance the use of natural and physical resources with the protection of the natural values of the Hokonui Hills, and would also afford a balance between the *"maintenance and enhancement of natural features and landscape values"* with their *"continuation as predominantly a working rural environment"*.

In relation to NFL-P3: Inevitably, the presence of turbines up to 240m high atop the Hokonui Hills, together with the proposed electricity transmission corridors through them, would erode some of the range's naturalness, aesthetic appeal and other qualities. The wind turbines, in particular, would clearly contrast with most of what is around them, especially in terms of their height, form and kinetic qualities. Nevertheless, they are more lightweight than other structures, and would 'float' above the landscape, allowing its landforms, vegetation cover and stream courses to remain visible and to 'breathe' underneath them. They do not impose the sort of more fundamental and enduring (often permanent) changes associated with the transition from a rural landscape into a suburban or urban one, or from open pasture and bush into pine plantations. In this regard, it is considered that the proposed wind farm would integrate appropriately with the Hokonui Hills – to a greater degree than other changes that are also occurring across parts of the range at present.

In relation to EM-P8: Any residual environmental effects that cannot be avoided, remedied or mitigated, would be offset or compensated for.

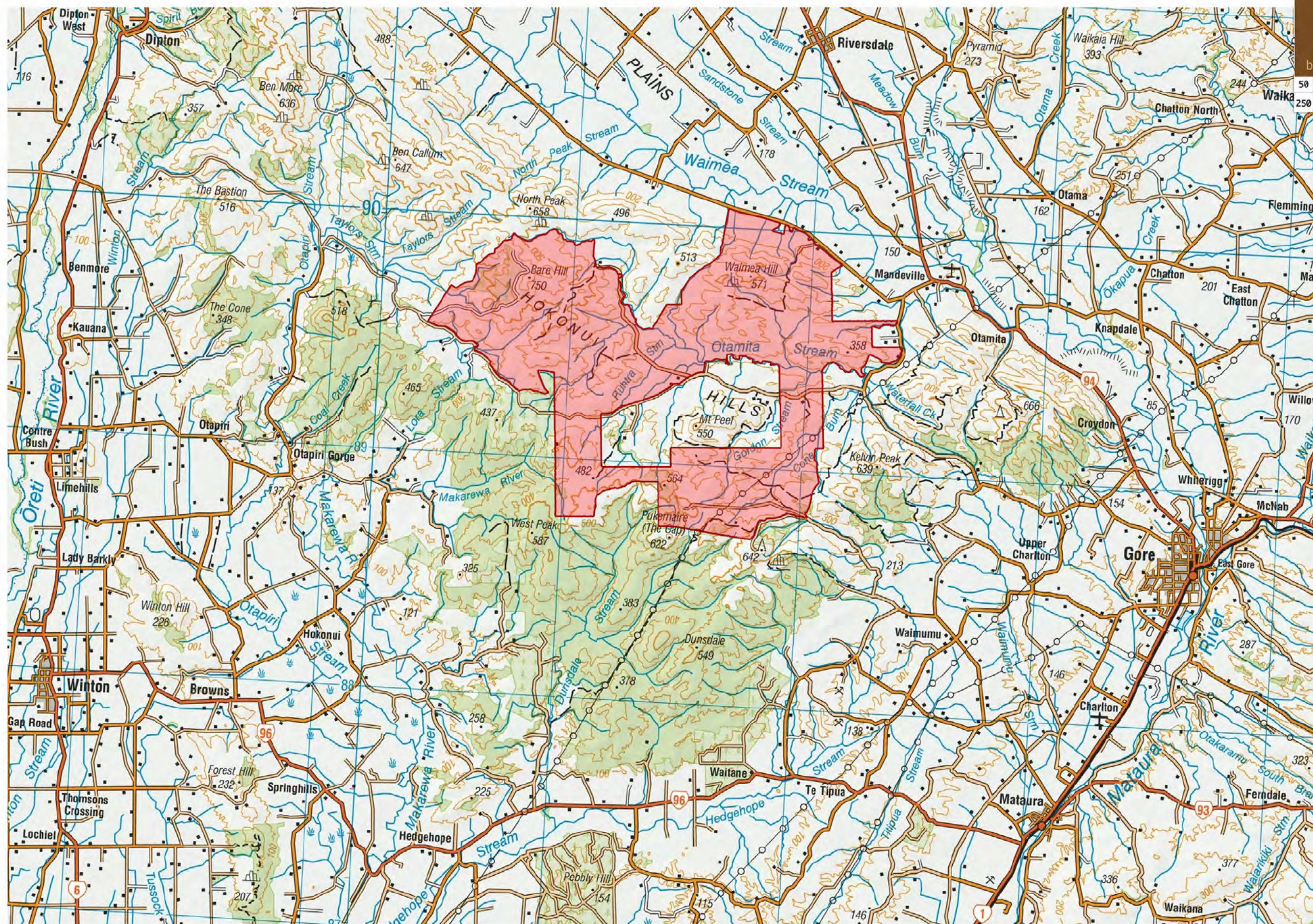
In relation to GRUZ-O2 and GRUZ-P2: the proposed wind farm would be quite sympathetic to the rural character and amenity values of the Hokonui Hills and those parts of the Southland District that surround them for the reasons set out in relation to NFL-P2.

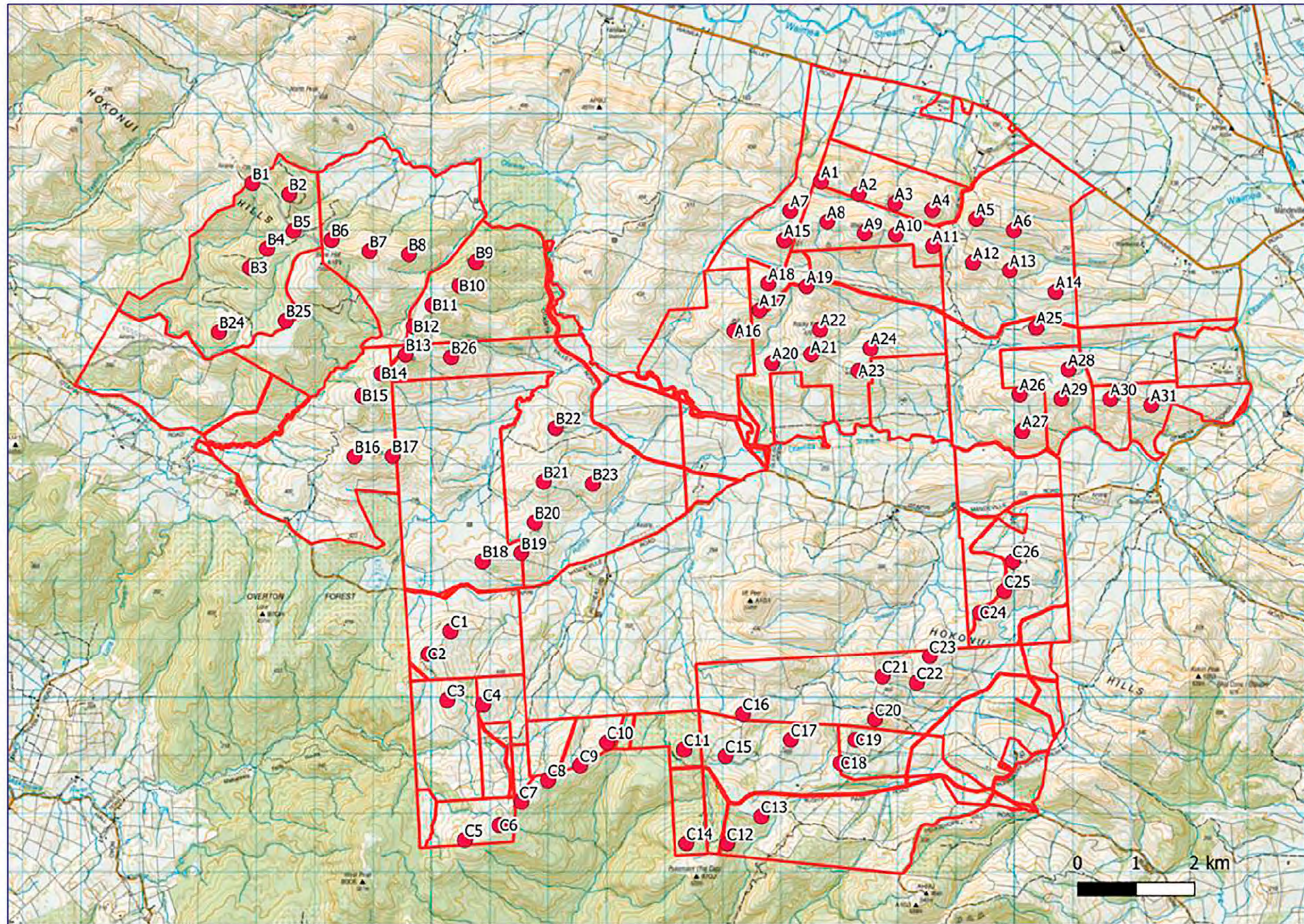
Based on both this preliminary assessment of effects and my review of the proposal against key district plan provisions, it is considered that the Hokonui Wind Farm would be acceptable from a landscape standpoint, as well as in terms of its amenity effects.

Stephen Brown

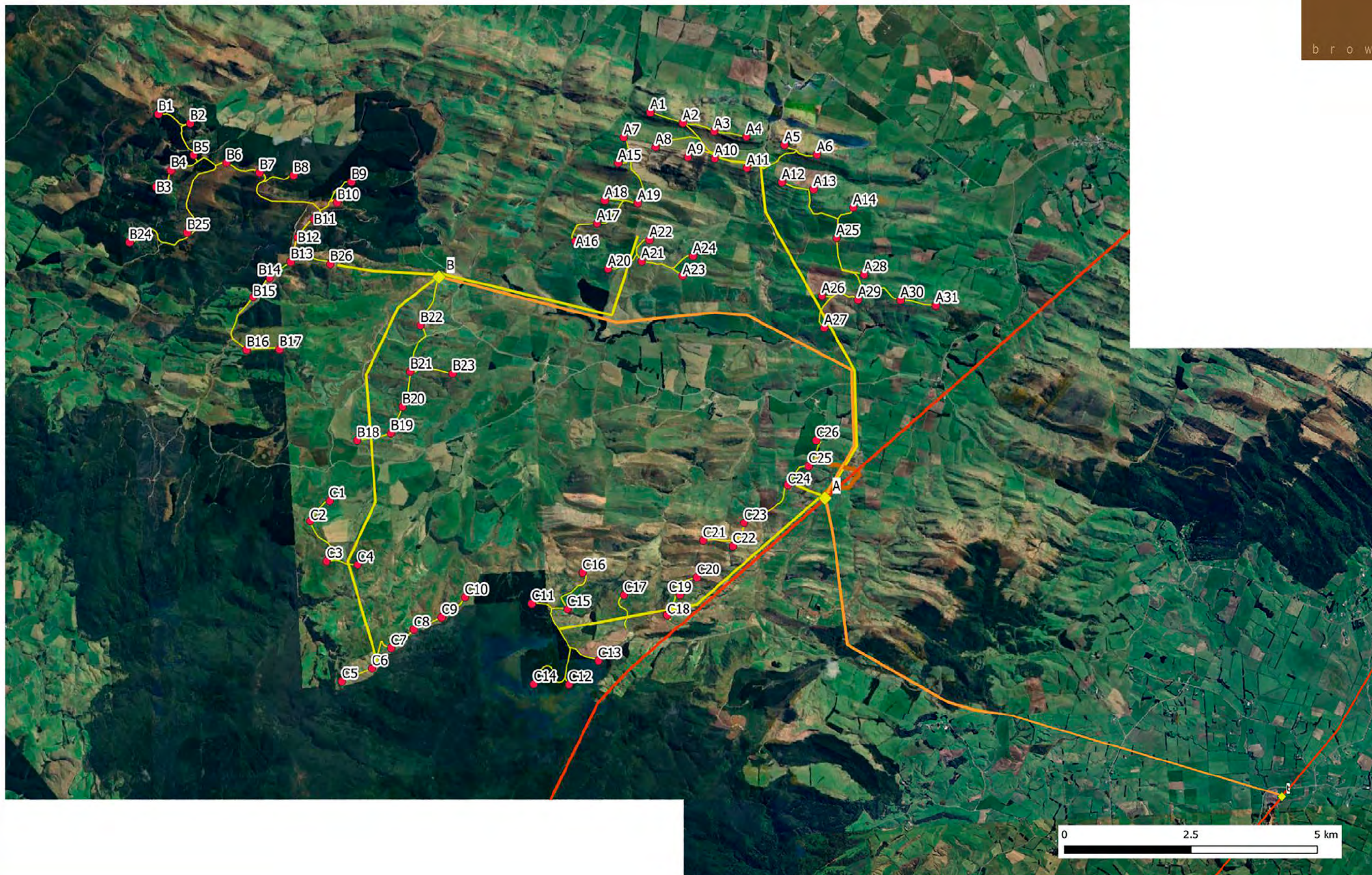
BTP, Dip LA, FNZILA

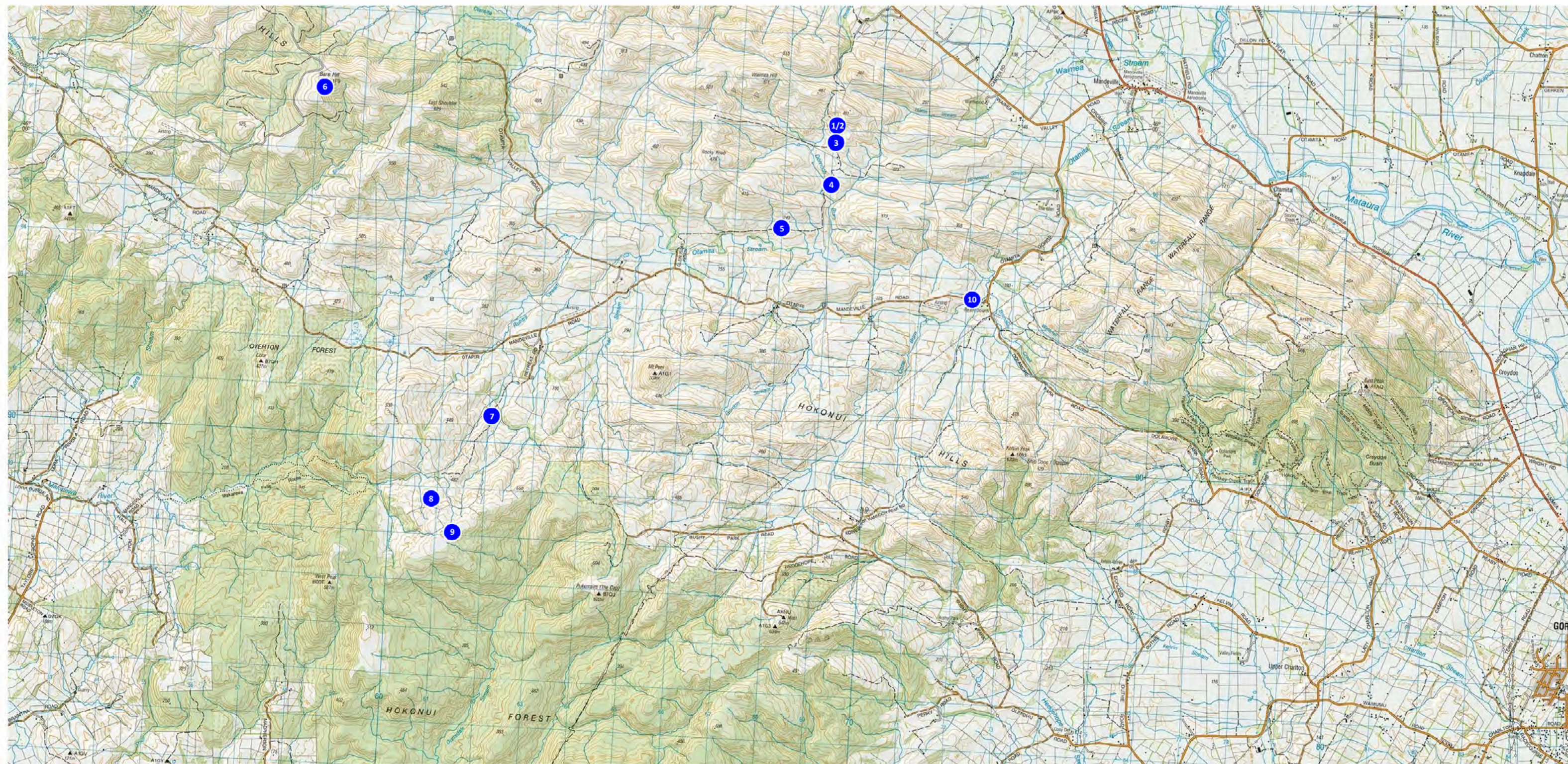


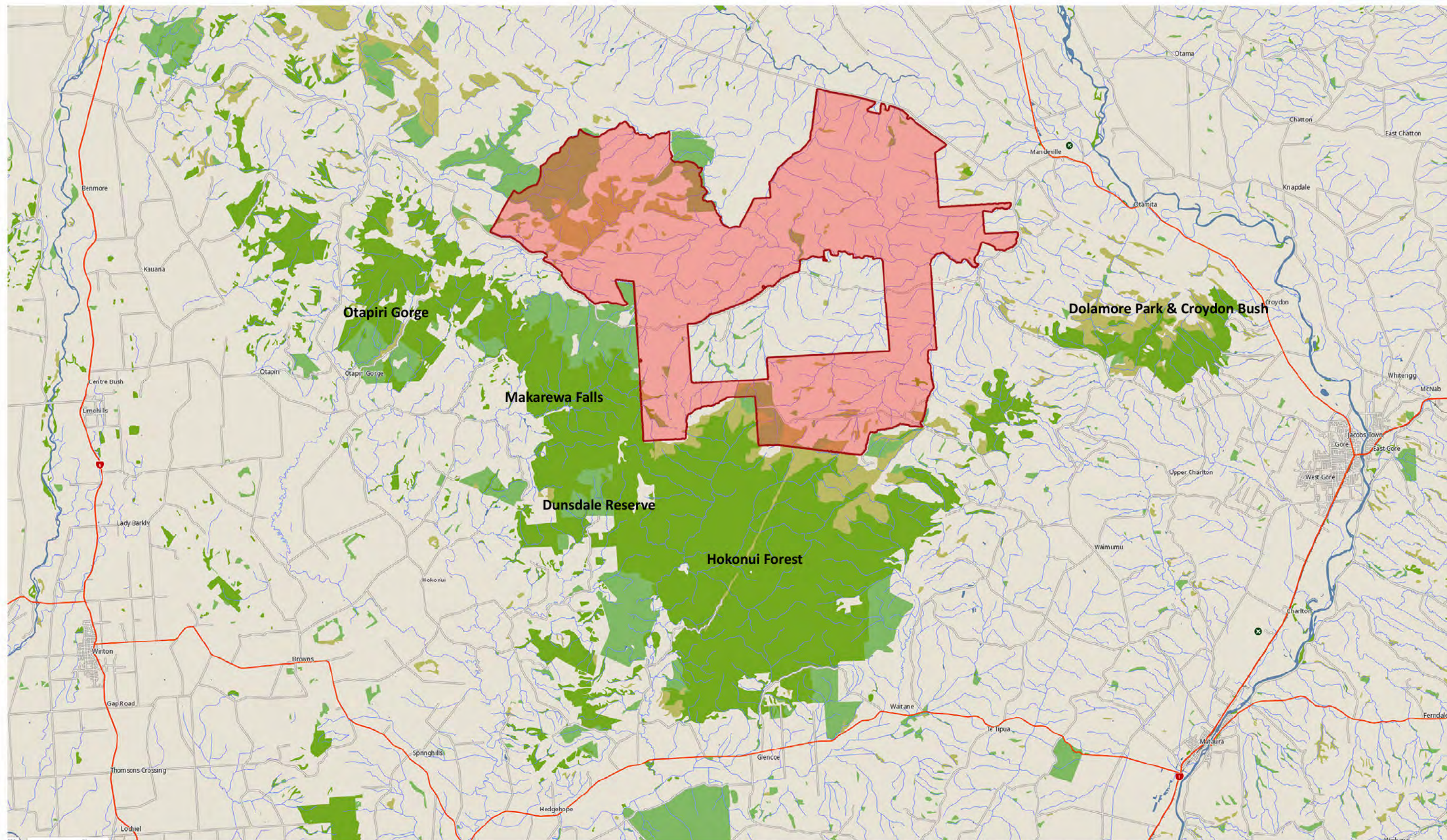


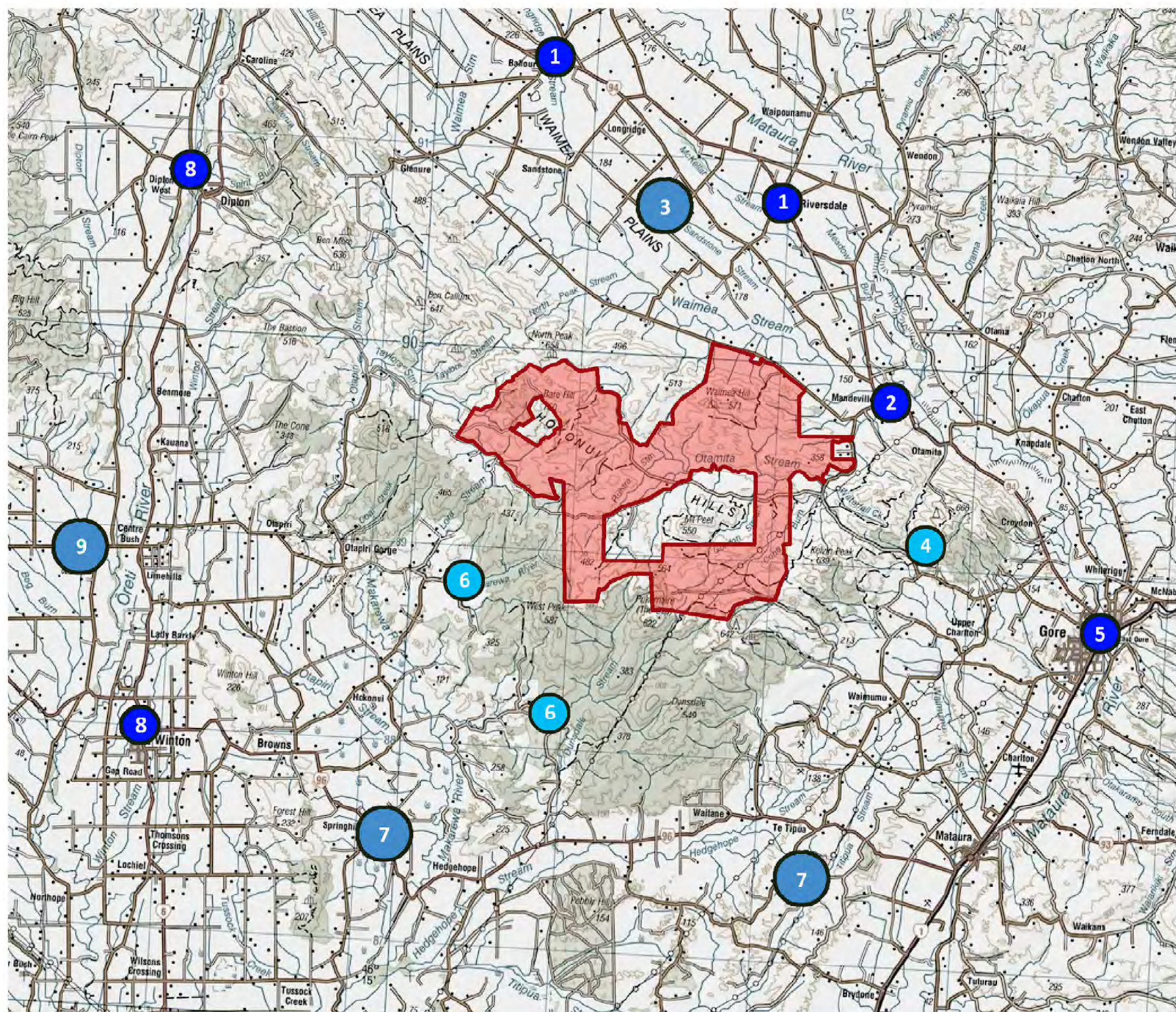












KEY:

- 2 towns & settlements
- 4 conservation areas, reserves & parks
- 7 large rural catchments