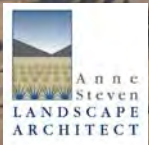


**PEER REVIEW OF LANDSCAPE ASSESSMENT
OUTSTANDING NATURAL LANDSCAPE OF THE UPPER CLUTHA PART
OF THE QUEENSTOWN LAKES DISTRICT**



**for the
Queenstown Lakes District Council
Anne Steven Landscape Architect
June 2014**



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Note: All Photos in this report have been taken by Anne Steven

Peer Review
Queenstown Lakes District Landscape Classification
June 2014

1 Introduction

This report is a peer review of a landscape classification study of the Queenstown Lakes District (QLD) carried out by Marion Read of Read Landscapes, completed in March 2014. The review relates only to the Upper Clutha part of the district which is outlined in Fig. 1 (see over page).

I have carried out landscape assessments in the QLD since 2001, most of which have been in the Upper Clutha part of the district. I have considered the landscape classification of sites in at least 25 different assessments relating to various proposals for dwellings and subdivision for lifestyle or farming purposes. Five of these have involved careful consideration of where the boundary of outstanding natural landscape is relating to the Clutha River corridor and the Grandview Range/eastern basin area; the remainder being so clearly well within one class or another that delineation was not necessary.

This work is preparatory to the review of the District Plan due in 2014/15 in particular the Rural General Zone. Landscape classification in the operative plan only applies to the Rural General Zone. The Resource Management Act 1991 (RMA) requires the protection of outstanding natural landscapes and natural features (ONLs and ONFs) from inappropriate subdivision, use and development (s6b). In order to manage landscape change to meet this provision, ONLs and ONFs need to be identified. To date this has been by way of Environment Court (EC)(generally regarded as binding) and council hearing/commissioner (not binding but generally regarded as fixed) decisions as specific development applications have been put forward, rather than by comprehensive district wide assessment such as that carried out for the adjoining Central Otago and Waitaki Districts. This has resulted in a piecemeal approach to assessing landscape over time and space by a number of different landscape architects each with their own methodology

(although this has usually been based on the application of what is known as the Pigeon Bay factors).

“Landscape lines” have been drawn on maps for parts of the district contained in Appendix 8 of the operative District Plan following various decisions. However the last update was in April 2010. For the Upper Clutha part of the district, the map only covers the area around Glendhu Bay, Dublin Bay, Wanaka and the mouth of the Cardrona Valley. There are only three fixed lines shown around Roys Peninsula, in the Clutha River Outlet/Dublin Bay vicinity and beneath the Mt Alpha fan at Hillend. Clearly there is some work to be done to determine landscape lines for the Upper Clutha part of the district. There have been several Environment Court decisions that have resulted in further “fixed” lines and other assessments have been carried out related to resource consents and policy documents, which provide further information on landscape classification. Marion also refers to the landscape lines map drawn up by three parties in 2001 (Lakes Landcare Group, Upper Clutha Environment Society and QLDC). These have in part been “tested” through landscape assessments for private development applications (Council hearing level only). The adjoining Central Otago and Waitaki district assessments provide information about landscape class on the north and eastern district boundaries.

Marion refers in her introduction to the proposed amendments to the RMA in 2013 which had included a requirement by district and regional councils to carry out identification of ONLs/ONFs. The reforms are now on hold pending the national election and it is unknown whether or in what form they may continue. However the council has decided to proceed with the process of identifying ONL/ONFs. A district wide assessment will enable objectives and policies to be made that cover the issues and management challenges relating to all the types of ONL and ONF, which vary considerably in character (for example, rugged high rainfall Main Divide forested valleys compared to the dry outwash terraces of the Clutha River).

By identifying all ONL/ONF in the plan via mapping linked to clear objectives and policy, council staff, land owners and members of the

community will have certainty around the landscape status of specific parcels of land and the expectations for landscape change.

2 Scope of Study and Assumptions

This review is for the Upper Clutha part of the district only as shown in Fig. 1.

The review is of the methodology used by Marion Read to determine the location and extent of outstanding natural landscape and of the landscape lines she has identified and mapped showing the extent of what is in her opinion ONL and an ONF and the reasoning underpinning her assessment.

This study does not include a review of the efficacy or appropriateness of the tripartite classification model (ONL/VAL/ORL) in the current district plan. Rural general zoned landscape that is not ONL or an ONF is assumed to be what is currently classed as VAL and no further classification is attempted.

The map at Appendix 8B (which is out of date being April 2010) is considered to be a base line, but is of limited utility because it only shows delineation of the ONL line for three isolated areas. The majority of the district is not mapped. The three “fixed” landscape lines and any other lines arising from EC decisions since 2007 although in principle are binding, are regarded as reviewable for the reasons Marion puts forward in paragraph 1.3 (p3). However I agree with Marion that they should be regarded as fixed unless there is very good reason to change them. The dashed indicative lines are regarded as reviewable.

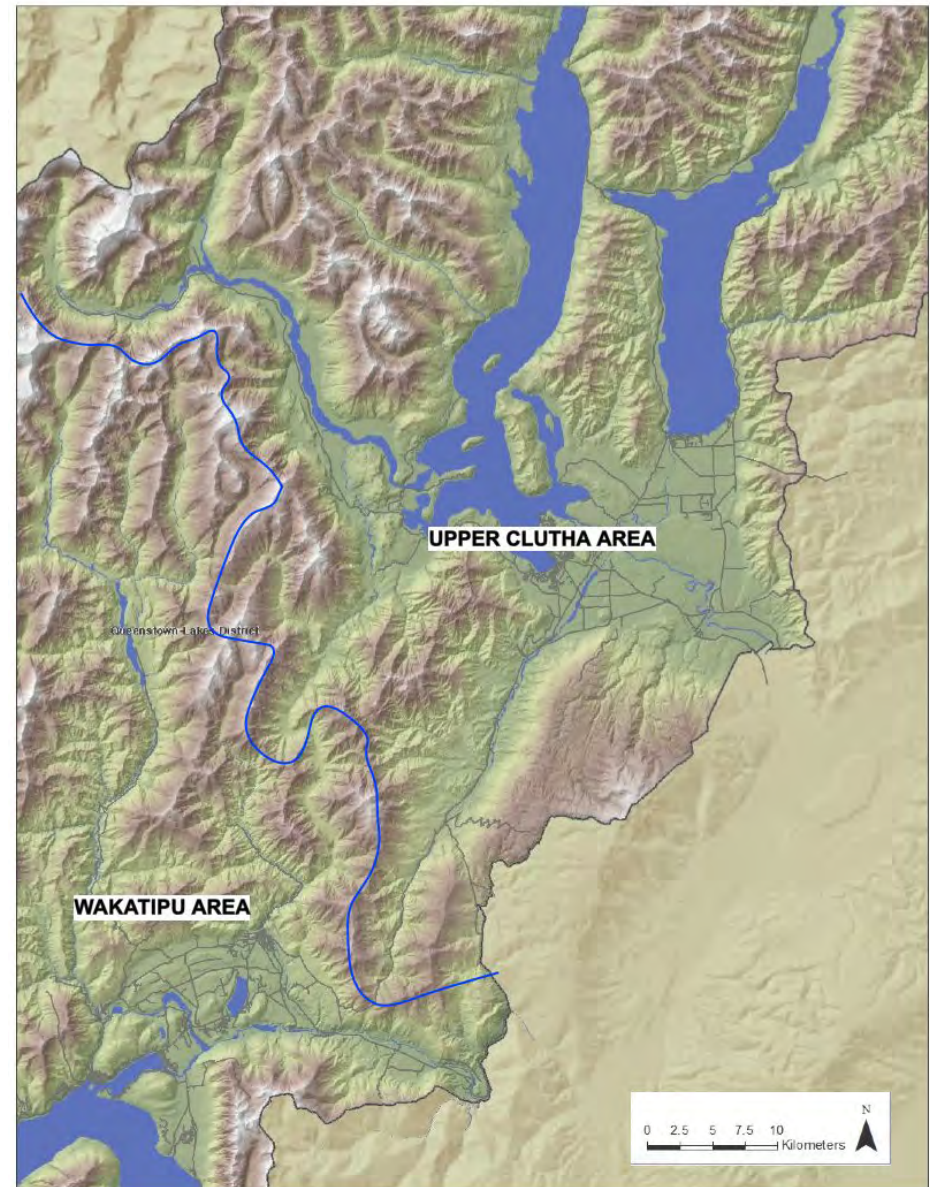


Figure 1. Study Area
Upper Clutha part of Queenstown Lakes District

3 Methodology

Marion's approach to assessment has been to build on the existing findings rather than undertake a methodical area-wide assessment from first principles. She has assessed only the middle and eastern areas of the Upper Clutha part of the district on the assumption that the western and northern parts are all unquestionably ONL.

Her assessment is an expert approach and has been based on field work, desktop analysis and reference to various studies, reports, evidence and decisions addressing landscape classification.

Marion's methodology for identifying the ONL and ONFs is based on:

1. assuming that the existing lines and any other lines in the district arising out of EC decisions are in principle correct
2. assuming the mountainous areas generally, the Cardrona Valley, all areas south and west of Glendhu Bay/Fern Burn and Roys Peninsula, and all areas north of a line approximately through The Peninsula–Hawea–Johns Creek all qualify as ONL (as there is no analysis of these areas)
3. identifying areas of landscape character similar to those already identified as ONL and denoting these as ONL, extending the existing "landscape lines" to separate these areas from other landscape – a "matching like with like" approach. The premise is that the areas of similar character are likely to have the same values that support ONL status.
4. confirming the ONL status with reference to natural character and to the "Pigeon Bay criteria" which as she correctly states are not criteria but aspects of landscape which should all be considered when making an evaluative judgement¹.

¹ The list of **factors** was originally compiled by Lucas Associates and Frank Boffa in the 1993 Canterbury Regional Landscape Study, and they were termed "perspectives" although they also referred to them as criterion

5. assuming the tri-partite classification of landscape in the current district plan as the classification framework. The landscape in the Rural General zone that is not ONL is classed as Visual Amenity Landscape (VAL) although no Other Rural Landscapes (ORL) have been identified. In line with the current District Plan, the classification of landscape has not been applied to zones other than Rural General.

In her report she has provided a brief written landscape analysis and evaluation of different geographical parts of the basin (which are not landscape units), working clockwise from Glendhu Bay/Roys Bay, Maungawera, Lake Hawea, Hawea Flat, Lagoon Valley and down to the southern district boundary at Sandy Point, then back through the Luggate area past Mt Barker to Hillend. For each section she has provided one or two 1:50 000 topo map-based inserts of the area in question showing any existing classification lines, and an aerial photo of the area showing what is in her opinion the location of the line separating ONL from the remainder of the basin landscape.

4 Discussion

4.1 General

I agree with Marion that identification of ONL needs to be underpinned by transparent cogent (and reliable) reasoning², is particularly where it is for a district plan review process.

Landscape assessment to determine ONL in New Zealand is characterised by an absence of a commonly used definitive methodology. The approach Marion uses is broadly consistent with the approach that has been used by most practitioners to date - spatial multi-factor analysis and reasonably objective landscape characterisation (including natural character analysis) followed by critical evaluation of each landscape character area under the

² Paragraph 2.1.3 p4

ONL factors to determine whether a standard of outstanding-ness is reached. This final step in the methodology remains a subjective judgement, albeit a well informed one.

Marion's approach is considered to be efficient and sufficient at this stage, bypassing the usual area-wide assessment such as has been carried out in Central Otago and the Waitaki district. The reason for this is that landscape lines have already been drawn and are mapped for parts of the district, although less so in the Upper Clutha part, and there have been a number of EC decisions establishing where ONL is. Other districts such as Central Otago and Waitaki did not have this history of piecemeal more detailed landscape analysis and classification prior to undertaking their ONL assessments.

4.2 Existing Lines

It is agreed that existing ONL lines should on principle be regarded as fixed. The notation on the Appendix 8B plan is that *"The boundaries are fixed and not subject to change or further analysis"* with respect to the solid lines. However if there is very good reason found to change them as a result of current more comprehensive analysis, then this should be put forward. There is also room for fine tuning the line. In any case there are only three areas on the 8B map that have been determined, with much of the basin as yet undetermined (by Environment Court findings). It is noted that the 8B plan is dated April 2010 and there have been Environment Court deliberations on ONL since then, as well as other pre-2010 decisions that have decided on ONL, as follows:

- C055/2009 Bald Developments Ltd decided that the project site was part of ONL, on the broad ice scoured lower shoulder of the north end of the Pisa Range, between Dead Horse and Sheepskin Creeks
- C432/2010 Parkins Bay UCTT et al v QLDC decided that the whole area of the lower Fern Burn valley is ONL, rather than VAL nested within ONL.

- C73/2002 followed by W88/2006 confirmed the line around the Cardrona valley mouth basically follows the change in slope between steeper mountain slopes and gentler basin floor, and the upper boundary of the RL zoned Mt Barker Rd lifestyle properties
- 185/2003 on the Gunn Rd subdivision at Albert Town recognised the site as VAL but adjacent to the ONL of the Clutha River
- C20/2005 Sutherland-Folliss v QLDC recognised the site as VAL but on the transition to the ONL of Lake Hawea and its margin referring to the Gladstone Gap as having more natural character as part of that.

To defend or challenge the location of a line, or at a broader level whether ONL status is justified or not, would require as Marion says, an analysis of the assessments undertaken especially their spatial comprehensiveness, and the context in which they were undertaken and who they were undertaken by (some assessments are carried out by landscape architects familiar with the district with a history of assessment in various parts of the district; others have not had this level of involvement in the district and come in relatively "cold").

Council level hearings have heard evidence and established ONL lines in the Maungawera Valley and Dublin Downs area, Hospital Creek/Hawea Flat/Lagoon Valley area, and along the Clutha River between The Outlet and Sandy Point. These are regarded as fixed in principle but subject to refinement or review.

4.3 Coverage

Areas south, west and north of the areas Marion has focused on would by and large be readily recognised as ONL, being mainly mountain lands including Mt Aspiring National Park and other public conservation lands (refer Map 1 in Appendix). However there have been no environment court cases relating to these areas I am aware of challenging ONL status. This area does contain considerable areas of modified landscape, for example the floor of the Matukituki valley, and they should be looked at.



The Matukituki valley floor is extensively modified for pastoral farming (Feb 2014)

4.4 Reference to Assessments in Adjoining Districts

Marion has not referred to the landscape classification of adjoining districts, and identified where ONL lines are located at the district boundaries. Waitaki and Central Otago districts have both carried out district wide landscape assessments to determine landscape classification and identify ONLs and ONFs. Landscape classes are shown on the operative planning maps for these districts. Maps 2A-2C in the Appendix show the location of these ONLs.

The western boundary is with Westland District. I could not find a district wide assessment for this district and there are no landscape classes shown on its operative planning maps. It is unlikely the adjoining landscape to the west would not be all ONL as it is all Main Divide landscape within Mt Aspiring National Park.

4.5 Landscape Character Approach

Marion's assessment has been based partly on the assumption that areas of landscape character similar to areas already identified as ONL would also be ONL.

Whilst there is merit in this approach and it seems expedient, I can also see shortcomings.

The Upper Clutha basin has areas of starkly different landscape character and for some character types there have been no "binding" decisions about ONL lines. An example is the Clutha River corridor lands – flat basin floor outwash and alluvial terrace lands rather than upstanding rugged glaciated schist bedrock mountains and hills; dryland cushionfield grassland and kanuka woodland rather than range lands vegetation including forest and subalpine/alpine communities. These areas would therefore not be captured by simply looking for like character. They need to be identified on their own merits.

Second, landscape characterisation is not an evaluative process. It is a valid basis for evaluation, and areas of similar character still need to be evaluated for outstanding-ness. They would however all be sufficiently natural to be a contender for outstanding-ness.

Landscape characterisation also provides a useful spatial basis for determining the extent of ONL (i.e., where the landscape lines should be drawn).

Marion has not included in her report an explicit landscape characterisation of the district with supporting mapping and descriptions, coupled by explicit assessment of naturalness to identify contending areas for outstanding status. This may be contained in her working material.

Explicit demonstration of assessment based on a spatial framework will be necessary in due course to be able to robustly defend determined ONL extent as the plan review process proceeds (especially at the hearing stage). This would involve selecting an appropriate spatial framework as the basis for evaluation. This is discussed shortly.

4.6 Graphic Presentation

Presentation of the landscape line between ONL and VAL on 1:50 000 topo map bases and on aerial photography is sufficient. High resolution aerial

photography of the quality in Marion's report provides a good clear base for showing the line in my opinion and gives a high level of certainty about where the line is. The abstract district plan maps for Waitaki and Central Otago are not helpful in determining exactly where the ONL line is. The 1:50 000 topomap based Appendix 8B is much more helpful but is still not accurate enough in my opinion. An aerial base at 1:25000 or greater scale in complex areas is necessary in my view to be able to have certainty about the line location.

Whilst recognising that "landscapes" do not suddenly stop and start spatially, it is important in my opinion to be as accurate as possible in locating the ONL line so ambiguity about landscape class is minimised at a site level. Locating the boundary on a defensible line is the best way to do this, such as the perimeter of a readily perceived landform.

The location of the line also needs to be sensible in a practical sense ideally to avoid potential cases of a proposal straddling the line. Landform edges would be the best basis for this especially ridgelines; or perhaps a legal boundary.

4.7 Selecting an Appropriate Spatial Framework for Analysis

There are at least two spatial frameworks established for the Upper Clutha part of the district I am aware of. Copies of the maps illustrating these are included in the Appendix 4.

In 1993 Earl Bennett carried out a Visual Landscape Assessment to provide guidelines for managing visual change. His analysis of landscape was based on geologic/geomorphic land form units (eg, fans, terraces, deltas, moraine, Cardrona's "badland" terraces and hills, roche moutonnees).

Lucas Associates in 1995 prepared an Indigenous Ecosystems spatial framework for the Upper Clutha basin, based on Land Types (prepared by Ian Lynn, a geomorphologist). This is a similar framework to Bennett's. The individual landform components are grouped together into Land Types – an identifiable entity of associated landforms that together form a distinct unit

at a larger scale. The land typing approach readily allows for scaling up and down. This was for the purpose of understanding the natural diversity of the district as a basis for planning and managing ecology but it was seen as equally valid for landscape planning.

Landscape characterisation defining Landscape Character Areas (LCAs) is another approach. Here the landscape is divided into areas of homogenous visual character. This character may overlap several different landforms and include only parts of landform units. It is strongly based on geology/geomorphology and vegetation but also refers to cultural elements (patterns of land use mainly, and types of structures present). It can also be readily scaled up and down. This analytical approach enables levels of natural character to be determined, as different levels of naturalness are inherent in different LCA's and are usually consistent across the LCA.

This approach was used in the Central Otago Landscape Study by LA4 (Mary Buckland). The LCA was termed a Landscape Unit, based on areas of consistent character but largely defined by landform edges. These units were defined at a fairly coarse level. Units with a common theme were grouped into Landscape Character Categories. For example, Landscape Character Category A was Mountain Ranges and contained 10 Landscape Units one of which was Pisa and Dunstan Mountains, another the Kakanui Range, which in themselves contained areas of different character (not analysed). These units formed the basis of analysis for outstanding and significant amenity landscapes, which was too coarse. For example the Lindis Pass area being lumped together with Lindis Peak and the Grandview Range was not assessed as being outstanding because the quality assessment was averaged out over the whole area. Subsequent to the hearing on Plan Change 5, it was separately distinguished as ONL.

Another approach is to identify visual catchments, which was the approach in the Banks Peninsula (Boffa Miskell) study and in the Waitaki (Densem) study. These tend to be coincidental with physical catchments, being contained by skyline ridges which also contain a watershed. This relies more on perception of landscape at a broad scale although again it can be

scaled up and down depending on the structure of the landscape. Such units of landscape can contain areas of different landscape character and the interaction between those areas is part of the overall perception of the nature and quality of that landscape unit and the values placed on it.

This is similar to a “places” approach which I have used in the past (eg McCarthy application). This is identifying parts of the landscape that are perceived to have a degree of spatial integrity and inner cohesion, often about a central focus, such as a river, and a sense of self i.e. the “place”. When moving through an area, you can sense when you move from one “place” to another. Visual catchments formed by containing landforms such as ridge and spurs, or scarps, are strongly influential in defining “place” but different places can also be sensed on more open areas. There is overlap of places with other places. This is at a minimum in landscape with strong and large ridge and gully or basin forms where views into other areas are limited or generally not possible, and is greatest in open areas where long views are possible. A place-based framework is also hierarchical eg the Upper Clutha basin is a “place” that can be perceived, as is the Luggate township area within that.

So what is the best framework for determining areas of landscape that qualify as ONL? The framework has to be able to distinguish between areas of different levels of natural character or naturalness (a concept discussed further below) and has to be able to enable the raw line between ONL and other landscape to be found.

As an ONL has to first be of sufficient degree of natural character it would seem that a framework that distinguishes areas on the basis of naturalness, which is in turn on the basis of landscape character, is the most appropriate framework.

This would need to be undertaken at a reasonably detailed level to enable ONL to be defined with a high degree of certainty.

4.8 Naturalness

For landscape to qualify as ONL, it must first be determined to be sufficiently natural to be a contender for outstanding-ness.

It is widely accepted that natural landscape is not synonymous with or limited to landscape with untouched landforms and indigenous vegetation and intact indigenous ecosystems. They may include exotic fauna and flora, cultural elements (such as fences, roads and buildings) and human impacted ecosystems. Many landscapes that have been assessed as ONL include pockets of landscape that are highly modified, for example Coronet and Remarkables Ski Fields, and Mt Cook village and homestead areas of pastoral leases in the Mackenzie Basin; or they include large obvious cultural elements such as highways or railways.

There is a widely accepted method of assessing naturalness of a landscape:

- i. the extent to which natural elements are present (natural landforms, rock, soil, flora and fauna, water bodies)
- ii. the extent to which the processes at work are natural (such as tectonic, glacial, erosion, hydrological, climatic effects, ecological succession and interaction)
- iii. the extent to which the elements occur in natural patterns (such as patterns of natural distribution, succession and regeneration, cycles of erosion and stabilisation, dynamic hydrologic processes)
- iv. The extent to which natural elements, patterns and processes are legible; and the degree to which non-natural elements, patterns and processes are present and legible (degree of modification and human influence).

It is also recognised that the reference is natural character, not ecological naturalness; and, being more perception based, context is important. If this were not the case, areas that people value highly often within their daily environment that still look natural and appear to function naturally but are in fact quite modified and influenced by human activity would have to be

missed out. These areas often have elevated significance because they are set within landscape that typically has a lower level of natural character, and they are often the most vulnerable. An example in the Upper Clutha basin might be a moraine scarp with relict short tussock and grey shrubland, suffused with sweet brier and pest broom, and with a 4WD track across it, surrounded by cultivated paddocks. These are good plantation sites, for Pine or Douglas Fir thus vulnerable to change. The Hawea River would be regarded as “natural” by most people even though its flow is controlled by releases of water through the dam. Most of the mountain lands enclosing the Upper Clutha basin and forming the Cardrona valley have been considerably modified through pastoral practices, yet it is expected that most people would see them as at least moderately and more likely highly natural in character, especially compared to the obviously less natural farmlands of the basin floor.

It is also recognised that the greater the relative dominance of indigenous elements and natural ecological, geomorphic and hydrologic processes over exotic elements and processes induced by humans the higher the level of natural character.

A recent work³ defined natural character like this:

The degree or level of natural character within an environment depends on:

- 1. The extent to which the natural elements, patterns and processes¹ occur*
- 2. The nature and extent of modification to the ecosystems and landscape/seascape.*

³ *Natural Character and the NZCPS 2010 — Summary of Discussion and Outcome of a National Workshop* October 2012, New Zealand Department of Conservation
This definition is a slightly adapted version of the definition from the Ministry for the Environment’s ‘Environmental Performance Indicators for Natural Character’ 2002 workshop

The degree of natural character is highest where there is least modification

The effect of different types of modification upon natural character varies with context and may be perceived differently by different parts of the community.

There are no absolute scales of naturalness; landscape is too complex for that. Naturalness is seen as a continuum from pristine (wilderness areas) to urban. Naturalness scales and graphs have been developed in various forms by practitioners.

The 7 point scale presented by Dr Michael Steven⁴ in his Parkins Bay evidence, in itself derived from academic works, I think is a useful one:

Very High (Pristine)	High	Moderately High	Moderate	Moderately Low	Low	Very Low
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However each category needs typifying in the context of the Upper Clutha rural general zone:

Very High (Pristine)	Mt Aspiring National Park; head of the Hunter Valley Elements are overwhelmingly natural (there is the odd hut) and indigenous, very isolated and diminutive man made patterns (such a track or clearing), overwhelmingly natural processes (only very occasionally human induced process such as clearing a track)
High	Top of the Pisa Range; Young Range Elements and processes are overwhelmingly natural and

⁴ Paragraph 17 Landscape Evidence of Michael L Steven Oct 2009

	indigenous but there are noticeable effects of human activity on patterns such as pastoralism modifying indigenous vegetation communities. Elements such as vehicle tracks and old fences are present
Moderately High	Grandview Range above Glenfoyle Elements remain predominantly natural but there is an increased frequency of man made elements such as fences and tracks; there is greater presence of exotic species but indigenous species retain visual and structural dominance. Patterns are predominantly natural with some unnatural eg, sheep camp effects. Processes include human –induced ones such as grazing, fertiliser spread, and spraying of shrubland.
Moderate	West side of Maungawera valley Elements remain predominantly natural and there is of mixed exotic/indigenous origin eg kanuka patches, exotic pasture, conifers. Patterns are a mix of natural and man made eg kanuka patches, pest broom in gullies and cultivated straight edge fields. Processes are more obviously controlled by man – cultivation, woody plant control but there are still numerous examples of natural processes at work.
Moderately Low	Basin floor non irrigated farmland Elements are almost all natural but almost entirely exotic; relict indigenous. Patterns are almost entirely man made – patchwork of paddocks Processes are mainly controlled by humans such as cultivation and type of plants growing; still relies on natural rainfall.
Low	Irrigated Cooper dairy farm

	Elements are almost all natural but entirely exotic. Man made elements are obvious however (pivot irrigator). Patterns are entirely man made – circular pivot layout of paddocks. All processes including soil water are managed. There are no natural surface processes operating such as vegetative regeneration and succession, erosion and land building processes.
Very Low (tend to be small localised areas)	Wanaka Airport Area Large proportion of elements are man made. Remaining natural elements are mainly exotic. Patterns are almost entirely man made. Some processes are natural but most are controlled by humans, eg grass mowing, cultivation.

The next question is at what point along the scale can a landscape be considered sufficiently natural to be able to be called a “natural landscape”? I agree with Dr Steven that landscapes that exhibit moderately high to very high levels of naturalness can be regarded as “natural landscape”.⁵ In my opinion there needs to be a greater presence of natural indigenous elements than exotic ones, a predominance of natural patterns, and most processes operating should be natural (not induced by humans). The type and especially the patterns of vegetation are the strongest indicator of naturalness in my view.

This is consistent with the Long Bay EC case para 135 which set out the criteria for a “natural” landscape:

- relatively unmodified and legible physical landform and relief
- the landscape being uncluttered by structures and/or obvious human influence
- the presence of water
- the presence of vegetation especially native vegetation and other ecological patterns

⁵ Paragraph 73 Landscape Evidence of Michael L Steven Oct 2009

4.9 Outstandingness

An outstanding landscape is one that exhibits exceptional elements and attributes, so that it stands out from other parts of the district. This is not an easy matter in a district that has a diversity of landscape character and where its scenic beauty in general, particularly the lakes, rivers and mountains has long been admired and revered.

The factors to be considered when assessing for outstanding-ness are:

Natural Science – presence of rare, unusual, distinctive, and/or highly representative and excellent/classic examples of landforms at a district level, expressions of geology, geomorphic processes, indigenous vegetation communities and ecological processes, water bodies and hydrologic processes. The stronger the indigenous component and the greater the level of intactness of landform and process higher the natural science value. A high level of landscape legibility - a strong expression of formative and on going processes in landform and vegetation – is also a key attribute underpinning outstanding-ness. Regular or seasonal presence of wildlife is a transient factor that can enhance outstanding quality, as can be seasonal events such as waterfalls after a storm or presence of snow.

Aesthetic – high levels of distinctiveness, coherence and unity (typically inherent in a high level of naturalness), vividness - strong visual patterns and rhythms especially in changing light and weather conditions, striking contrasts and juxtaposition (especially with water), dramatic features. High legibility is also an aesthetic factor, related to preferences for landscapes that can be “read” easily for wayfinding. The higher the level of perceived naturalness the higher the aesthetic value generally. Distinctive, highly legible and coherent landscape underpins sense of place – a strong sense of place is considered a high value. Sounds and smells are also contributing factors such as birdsong and movement of water.

Cultural/Associative – historic significance; significance to tangata whenua; visual significance due to location; and existing expressions of value though legal status (eg reserve), significant features inventories (such as geopreservation sites) and media (the arts, writing, popular and promotional media) and known recreational and “treasured places”. These factors have been previously referred to as referred to as “shared and recognised” values.

It is not necessary to be outstanding in all three areas. The third set of factors may be of limited relevance. Given that at least a moderately high level of naturalness is a prerequisite, in my view the fundamental factors determining outstanding status are the aesthetic factors. This is consistent with the view that ONLs should be obvious to most people and should not require any specialist knowledge. It is less likely a landscape that has average or low aesthetic quality - no strong visual character or striking features and lacking a high level of naturalness, coherence and unity - would be awarded outstanding status unless it had some particularly special natural science values as well. However, a natural looking landscape area with no special natural science values but with high aesthetic values could rate as outstanding. Generally, special natural science values tend to go hand in hand with high aesthetic values. However enhanced understanding and appreciation of what you are looking at, especially natural science factors, does in turn increase your positive feelings and appreciation of the importance of a place. It is not necessary for a landscape area to be highly visible or well known to be outstanding. Many outstanding wilderness areas are seen by few people.

Cultural factors tend to enhance outstanding-ness already determined by the first two sets of factors and in some cases may be the third factor that lifts a landscape area over the threshold. It also takes into account the context of a landscape area or feature.



Outstanding Natural Landscape of Dublin Bay, Roys Peak, and Harris Mountains

5 Review of proposed ONL Boundaries

5.1 Methodology

The methodology I have used in this review to examine the Upper Clutha landscape for outstanding-ness is as follows:

1. Identify existing landscape lines and identified ONLs in the QLD and in adjoining districts
2. review my own previous assessments and identify all areas I have assessed as ONL before
3. identify all areas with moderately high, high or very high natural character and map them. This shortcuts the landscape characterisation process. Ideally, a more methodical district-wide description and analysis of the landscape should be carried out to identify LCAs which can then be assessed for naturalness to provide a subset of LCAs for evaluation for ONL status.
4. consider the natural science (to the extent of my knowledge) and particularly the aesthetic factors to judge which of the more natural LCAs could be regarded as outstanding. Visual significance is also a cultural factor able to be considered. The full range of natural science factors and cultural/associative factors would require considerable background research to establish which is not within the scope of this study.
5. examine the landscape broadly identified as ONL at a detail level to establish a sensible boundary which may not coincide with the landscape character boundary. Boundaries need to be easily identified, permanent and defensible. Good boundaries are edges of well defined landforms or legal boundaries or perhaps a road. Changes in vegetation cover and land use are not such a good boundary as they can change over time.
6. Map findings on aerial imagery from Google and the QLD Mapping website at a scale of 1:25000 (A3). On these maps I show existing ONL lines including in adjoining districts, the lines Marion proposes, and the lines where I assess them to be. The relevant areas of

natural character are also identified as are areas that are not Rural General Zoned.

7. Compare the lines I have identified with Marion's lines and the reasoning put forward; revise opinion where appropriate.

6 Discussion on Proposed ONL Areas

The discussion on the ONLs to follow is broadly set out in the same format as Marion's except I start with Roys Peninsula and Waterfall Creek and discuss Parkins Bay and Glendhu Bay near the end; and cover the Outlet on the journey north around the Basin.

Photos to illustrate the ONL line are included. The plans are contained in the Appendix.

Roys Peninsula

I concur with Marion that this feature is an ONF and that the delineation is as she has shown it. Having said that, my view is that ONFs are really to apply to isolated exceptional natural entities surrounded by more modified lands, such as Mt Iron. In this case if it were not an ONL Roys Peninsula would still be part of the ONL. The classification is only of relevance if different policies are going to apply, which they do in the current plan.

Waterfall Creek Area (see Plan Waterfall Creek)

I agree with Marion's line down Waterfall Creek Road and along the lake shore including the QEII covenant area. The land to the east is more modified than natural and in character is more like Rippon and the RL zoned areas.

West of the Creek there is a broader lake margin of high naturalness.

My view is that Waterfall Creek is the transition area from being near town to heading out into the country.

The road and/or Creek provide a good solid permanent boundary. The indicative boundary seems arbitrary, as there is similar landform types both sides, similar vegetative character, and it follows a fence line in part.

The ONL continues around the lake margin including the QEII Kanuka covenant area. The lake is ONL so the margin of the lake is also ONL. The extent of the foreshore reserves (generally back to a road) makes a logical boundary.

Mt Iron (see Plan Albert Town)

I agree with Marion that virtually the whole of the Mt Iron form that is zoned RG should be an ONF. Mt Iron, and Mt Barker, are classic and highly accessible examples of roche moutonnee forms. They are excellent examples of an ONF - isolated strongly defined entire landforms able to be perceived in one view as a distinct natural entity and set island-like within other non-ONL landscape.

The ONF boundary should extend to the extent of the DOC reserve however to keep things simple from a management perspective rather than cutting off the southeast corner. This area includes well defined natural moraine landform (not alluvial terrace) and short tussock grassland with Kanuka and grey shrubland that is an integral part of the natural character of the Mt Iron reserve.

I do not think that the northwest appendage extending into the residential area should be included. It is not public land like the southeast corner, and it is not really experienced as part of the Mt Iron area. Its kanuka cover was also burnt off and it is possible a different vegetation cover might follow. I show the boundary encapsulating the larger Kanuka patches that are continuous with those over Mt Iron.

Consideration might be given to including the wall of the meltwater channel with its relict shrubland extending around to the Andersons Road roundabout as this has potential to be a distinctive natural entry portal into

town. Its naturalness is highlighted by its immediate context of residential areas and state highway.

It is unfortunate that other zoning has been placed over its northern and western flanks, compromising the protection of this impressive landform through earthworks, non-local plantings and buildings. Much of this is occurring within a kanuka woodland framework however and the overall form is still legible. Consideration should be given to extending the ONL status over the whole form rather than being limited by zoning. The effect of that status can be dealt with through the zone policies.

The Outlet Area (see Plans Lake Wanaka Outlet and Albert Town)

I generally agree with the boundary Marion has determined as it encapsulates the most natural areas that are also the setting for the lake and river, back to the first main ridge or horizon seen from the lake or within the river corridor; and including landforms connected with lacustrine or fluvial action. The line she has selected east of Outlet Road however lies behind the crest of the ridge form somewhat and includes mainly modified areas including a residential complex and numerous pine trees rather than kanuka.

Conversely I do agree that a portion of the Douglas Fir plantation of Sticky Forest be included as this is the local high point and the north face of it is part of the lake landscape. This area has the potential to revert to Kanuka when the trees are felled.

I also agree that the open space area of Peninsula Bay be included, to include all of the moraine ridge and its Kanuka cover. The boundary of the open space is a logical line for landscape management.

On the north side of the river, my view is that the line determined by C14/2007 is not quite correct. It is limited to the very top of the immediate river scarp and misses more natural areas of moraine behind with grey shrubland and short tussock, some within public conservation land. Indigenous vegetation on the basin floor is significant as it is within the

acutely threatened Land Environment category and a Priority 1 to protect. It includes At Risk and possibly threatened species. Short tussock grassland is now an uncommon vegetation type on the basin floor.

The natural character has high amenity value especially in the context of proximity to Wanaka and Albert Town. It is compromised by the Deans Bank bike track, but not sufficiently to outweigh the indigenous vegetation value and natural character values.

A further major omission are the terraces of outwash and the mouth of the Dublin Bay meltwater channel with cushionfield and a large remnant of short tussock grassland, now one of the only two larger area left on basin floor outwash. Curving away from the river is a distinctive scarp, the west wall of the meltwater channel with considerable grey shrubland and Kanuka cover.



Terraces of outwash under remnant short tussock, native shrubland and cushion/mat plant communities – highly characteristic but now a rare landscape character type in the district (April 2014)



Wall of meltwater channel with grey and kanuka shrubland, viewed from Dublin Bay Road (April 2014)

These are strong structural elements of the landscape, and with the more natural vegetation cover even in its modified form are highly representative of the dominant natural landscape character of the basin floor (large and expansive outwash plain, river-cut terrace and planar scarps, terminal moraine under short tussock grassland, grey and kanuka shrubland and cushion/mat plant communities). These areas are significant for the reasons in the previous section. *Pimelea pulvinaris* is a notable At Risk species on the outwash, along with *Leucopogon nanum*, and *Raoulia parkii* and *R. beauverdii*. This landscape character type is now rare in the basin.

Legibility is excellent with a display of terraced forms and clear form of the channel. Although degraded the indigenous cover is more or less continuous.

This land is viewed by large numbers of people from SH6, the Fishermans Access (which goes through the middle, and from the Deans Bank conservation area, highly popular with mountain bikers. It is one of the larger basin floor areas left of a more natural character and is contiguous with the river corridor and Hawea River reserve. Together with the terraced

landforms on the east of the Hawea River, the historic fluvial activity at this confluence can be readily appreciated.

We agree that the Hawea River confluence area is outstanding although Marion considers it an ONF rather than ONL.

Hawea River Corridor (see Plans Albert Town and Hawea River)

Marion assesses the Hawea River as an ONF. I do not consider it reaches the standard of outstandingness as a natural feature or as river landscape, except for the lower section between Newcastle Road and the Clutha River which is within conservation area. It does appear a highly natural river and there is important basin floor threatened environment native vegetation along its margins, but it is not so spectacular or impressive, it does not contain any highly impressive features such as large horseshoe bends, and its associated landforms are not of the scale, clarity and impact as those of the larger Clutha River. The neighbouring landscape along its length between Hawea Dam and Newcastle Road is predominantly lifestyle and farmland including exotic forestry and recent intensive dairy farm development with large centre pivot irrigators. Moreover its flows are heavily influenced by human activity (flow is controlled through the dam) and it has two artificial waves in it for kayakers.

There is provision for preserving its natural character under s6a of the RMA and it is my view this would be the more appropriate provision to use.

Hawea Terminal Moraine Scarp (see Plan Hawea River and Hospital Creek)

The very well defined and instantly recognisable scarp face of the Hawea terminal moraine may be justified as an ONF for its clarity and visual prominence. It still retains a moderately high to high natural character and has potential to become more natural with regeneration of shrubland. It is vulnerable to tree planting and further tracking. It is a dominant feature appreciated from the Hawea River track and SH6.

Camp Hill (see Plan Hawea River)

Camp Hill is another distinctive isolated hard rock “island” within the highly modified pastoral farmland of the Hawea basin floor. It has a dense kanuka-grey shrubland cover. It is as natural looking and well defined as Mt Iron but on a smaller scale. Part of it is conservation area. It is a prominent feature visible from Camphill Road and the Hawea River track. These features are a highly representative element of the Upper Clutha Basin floor landscape.

I consider it would be an ONF.



Camp Hill as seen from Camphill Road (June 2014)

Speargrass Creek Hill (see Plan Hawea River)

There is a particularly striking and distinctive hill above Speargrass Creek, seen from SH6 at close range and from more distant viewpoints such as Mt Iron and Deans Bank. It has a reasonably natural appearance of rough grassland and patches of kanuka and grey shrubland. It could justifiably in my opinion be worthy as an ONF.



Striking hill form above Speargrass Creek viewed from SH6 (June 2014)

Clutha River Corridor (excluding The Outlet) (see Plans Clutha River Corridor and Glefoyle)

We largely agree that the Clutha River and its associated fluvial landforms is a natural feature/landscape and that the river landscape corridor is outstanding. I consider the Clutha river corridor of landscape to be an ONL rather than an ONF as it is far too big. It is not a discrete entity able to be seen in one view. It is a landscape in its own right. Even though it cannot be seen entirely in one view the Clutha River itself might be regarded as an ONF because it is a discrete element with special qualities, in the same way the islands are regarded as ONFs in Lake Wanaka.

The river corridor contains exceptional landforms with a very high degree of legibility, and significant native vegetation communities. Aesthetic values are particularly high (as the photo on the front cover demonstrates). With

the bike trails now along both sides, this corridor now has a high public profile and level of appreciation.

Marion has followed the very edge of the enclosing scarp on the true left, whereas I believe that the more natural tussock grassland portion of outwash plain above, an important representative element of the upper Clutha landscape should also be part of the ONL. I do not know the extent of indigenous dominated grasslands remaining and the boundary needs to be ground-truthed. I have drawn it in part around the QEII covenant area on the Cooper property. The homogeneity of cover up to and over the scarp on the north side is an important part of its landscape quality, emphasizing naturalness especially as nearby land is developed for intensive dairying.

I have considered at some length whether to include the large pivot irrigated terrace on the Cooper farm at the upper end. The opinion I gave in my evidence for Corbridge Downs was that it was not, and this is what I have shown on the Plan. This is because it is a large highly modified area and it is contiguous with modified (now highly modified) dairy farm land over the basin floor adjacent. The river scarp continues as a distinct natural element around behind it viewed from Mt Iron but it is further away from the river and struggles to sufficiently contain the irrigated paddocks such that they too could be seen as part of the ONL from within the river corridor. However the river corridor as a whole is strongly contained by a continuous scarp on the true left and it is justifiable to stand back and think of the ONL as the entire corridor. This would be consistent with the way river landscapes should be managed for natural character under s6a in my opinion.

If the Cooper paddock were to be included, then the one at Luggate which is in fact smaller, may also have to be included, to be consistent. However the scarp runs away to the west here and merges with bedrock slopes behind Luggate thus a wider area of modified and built up lands in addition to the pivot irrigated paddocks would need to be included.



View from Mt Iron over the Clutha River corridor to the Cooper paddocks (in 2012)

Adjacent to the Lake Mackay Station irrigated paddocks is a large lower terrace with homogenous cover of mixed indigenous-exotic grassland-mat plant cover including at risk species such as *Pimelea* and *Raoulia* spp. and kanuka woodland contiguous with that within the river corridor. It is of very similar character to other terraces within the river corridor and there is no reason why it should be excluded. It is a major landform created by the river that should be part of the ONL. As can be seen from the photo on the front cover, it is an integral part of the natural landscape of the river (the northern part of this surface can be seen at the left of the photo). There is a clear terrace scarp that separates it from the irrigated area.

It is possible the upper northwestern portion of the true right lower terraces – upstream of Stevenson Road - could be justifiably excluded because of the development that has and is likely to occur here due to the Poplar Beach subdivision. One property has already been planted out in exotic trees and the area has been largely cultivated in the past although a large swathe of Kanuka remains. There are several dwellings consented for these lots. The lots on the south side of Stevenson Road have not been developed yet and are in fact on the market again.

The enclosing scarp would remain as part of the ONL however in my view. It is a prominent, continuous and well defined landform with a largely natural appearance. It balances the scarp on the true left, and together they tell a story of land shaping processes.

It is my opinion that the entire Clutha River corridor is treated as an entity as an ONL. On that basis the Cooper irrigated paddock should probably remain within the ONL along with the natural scarp. The Poplar Beach lots should also remain as ONL.

Downriver of the Red Bridge, our ONL lines generally coincide. Due to recent cultivation for intensive pivot irrigated development, I would not include the small indent Marion shows just east of Luggate.

I would also include any contiguous natural outwash areas left next to the river, such as Kanuka covered outwash.

The Hydro Generation Zone is irrelevant now Contact Energy has given up plans for developing hydro resources on the Clutha River and is disposing of its lands.

Dublin Bay and Mt Brown (see Plans Hawea River and Maungawera Valley)

Dublin Bay

The ONL established in C14/2007 should stand, as it encompasses what I regard as the “lake landscape”, the lake being part of the wider ONL and thus its landscape margin also being part of that. The line chosen follows the first main horizon seen from the surface of the lake at various points in Dublin Bay/Stevenson Arm.

Mt Brown/Maungawera Valley

I do not consider the northeast side of Mt Brown to generally reach the threshold of being sufficiently natural in character to be able to being considered for an ONL. I assess the landscape character over the northeast side to have moderate naturalness which puts it just below the threshold I have set. The area closer to the summit has more natural character and could be considered for ONL status but in my view there is nothing exceptional, distinctive or unique in the origins or nature of the landform,

the vegetation cover or its visual appearance. Mr Rewcastle's impression that the landscape characteristics blur the boundary suggests a lack of distinctiveness and that the character is in fact broadly similar over the Mt Brown slopes towards the highly modified valley floor. Being highly visible and being a local lower level skyline are not worthy grounds for ONL status on their own. The area is not of similar character to the mountainous areas of Mt Brown and Mt Burke and it is not associated with the lake. It is contiguous with the lower valley sides and floor area which is not ONL due to the homogenous level of modification for more intensive farming (dominance of a patchwork of cultivated paddocks for cropping and high producing pasture, linear shelterbelts, buildings and structures, vineyard).

It is also preferable to use a permanent landform boundary for ONL rather than changes in vegetation and landuse.

My assessment is that the ONL line follows the crest of the hill from one end to the other so that the skyline and full southwest lake face is ONL.



East flank of Mt Brown viewed from Maungawera Valley Road (June 2014)

Mt Burke-Mt Gold-Mt Maude (Maungawera Valley)

Marion has brought the ONL line some way out across the more modified part of the Maungawera valley floor on Mt Burke Station, beneath Mt Gold.

This includes a lower hill spur between Mt Gold and Mt Maude, on the true left of Quartz Creek east branch and the lower gentler ice moulded hill and moraine country about Quartz Creek and the Quartz Creek corridor out across the fan with its stringers and patches of dense kanuka. Typically it is the less intensively grazed areas of open exotic grassland interspersed with gullies and patches of kanuka shrubland, as the immediate backdrop to the patchwork of cultivated paddocks. Cleared areas through burning and/or spraying reduce the coherence and visual quality, as do several tracks and fence lines and there are some unnatural cultivated paddock shapes. Due to the amount of pastoral development including cultivation this area has a moderate natural character generally with some more natural areas, thus teetering on the threshold for consideration for ONL. It is not a case of being encapsulated within ONL as with the Fern Burn – this area is contiguous with the more modified valley floor. These lower more modified areas do not in themselves have sufficiently high visual values in my opinion nor any special natural science values I am aware of to justify ONL status, not do they particularly contribute to the outstanding quality of the steeper more rugged and more naturally vegetated mountainous areas behind. I do not think they are more similar in character to the rugged mostly wooded and much more natural mountainous areas behind. It is my view they are read more as part of the gentler “tamed” lands of the valley floor.

The following is an extract from the landscape assessment for these lower lands in the Conservation Resources Report for Mt Burke Station

Evaluation

LU1 is essentially a cultural landscape where there is visual harmony between farming patterns and the underlying natural landform.

completed in 1999:

Evaluation – Landscape Unit One

	High	Mod-High	Moderate	Mod-Low	Low
Intactness					
Coherence					
Distinctiveness					
Visibility					
Significance					

I do not agree that the degree of enclosure and dominance of the Peninsula and mountains to the north are comparable to the Fern Burn situation and warrant the inclusion of the more modified areas as ONL. On that basis the whole valley floor would need to be included. The degree of enclosure is not the same as with the Fern Burn and the valley floor area is considerably larger.

My assessment is that the ONL includes the lake face of the spur on the true right West Branch of Quartz Creek (being lake landscape), the steep faces above the lower rounded shoulder between the two branches; and the East Branch Quartz Creek catchment – the crest of the spur here providing a solid landform boundary line. The edge of the areas Marion outlined did not follow a strong landform boundary line except in the eastern part where there is a clear juncture between valley floor paddocks and rolling hill. My line coincides with the identification of significant inherent value (SIV) in the tenure review assessment although it must be recognised that the purpose of this assessment was different; and that there are other areas that were not recognised for SIV that are undoubtedly ONL: such as the Hawea Faces of Mt Burke.

We agree on the narrow kanuka-clad shoreline around the Quartz Creek fan; and the obvious ONL line around the southern base of Mt Maude including reaching down to the Lot 6 dwelling area on Dublin Downs.



Lower hills in front of Mt Gold are moderately natural due to extensive shrubland clearance and some cultivation (June 2014)



Lower hills in front of Quartz Creek valley are more modified and are not of similar character to the rangelands behind (June 2014)



Assessed ONL line in Quartz Creek area .

I was tempted to exclude the pine covered hill with housing areas on it immediately above the highway at the Hawea Dam. There are 5 building areas present here and an obvious zig zag road. A large spread of mature pine trees covers its lower slopes. There is little of visual merit visible from the highway below. However from further away, eg Lake Hawea foreshore reserve viewpoints, this shoulder (Round Hill) reads as an integral part of the mountain side and there is no clear basis for omitting it. I agree therefore that the line should continue around the base of the mountain slopes.



Round Hill when viewed from a distance appears as an integral part of the ONL of Mt Maude (June 2014)

Lake Hawea (see Plan Hawea-Mt Grand)

We generally agree that the ONL of the Lake Hawea basin includes the southern lake margin of terminal moraine between Hawea township and Gladstone/Johns Creek. I would not include land behind the crest of the moraine however as it is not part of the lake's landscape setting and it has no significant natural or visual values warranting its inclusion. Whilst I can understand the rationale of including the terminal moraine landform as a whole as the basis for ONL, I do not think is its sufficiently uncommon, legible or an impressive enough example to warrant ONL status on a landform basis alone. Conversely I would include the small hillock of moraine next to Gladstone as it is part of the lake setting.

Grandview Range – Hawea to Lagoon Valley (see Plans Hawea-Mt Grand and Hospital Creek)

We generally agree on the ONL line around the base of the range from Lake Hawea to Lagoon Valley. At a detail level I would exclude the small development nodes at each valley mouth.



Camerons Hill and fan reads as part of enclosing hill slopes (June 2014)

I agree that the line be extended out to include the Cameron Gully fan and Camerons Hill (and also a portion of highly modified basin floor). This is a distinctive “island” of ice-sculpted rock emerging from the flat floor. The juxtaposition of intensively developed farmland on the steeper Cameron Gully fan and much more natural hill face contributes to the outstanding character of this part of the basin. An alternative might be however to make McCarthys Hill an ONF and take the ONL line around the base of the hill slopes, missing out the fan. However the steeper fan reads as part of the backdrop of mountain lands from Gladstone Road, for example.

In my work for the McCarthy application (RM 070222 2007), and also for Wright (RM 110095) and Shea (RM 130202) I analysed the landscape of Hospital Creek fan and the Hawea Flat area. I maintain that the ONL should include the true left side of Hospital Creek fan down to about the 370m contour. The fact it is highly developed is not a reason to exclude it, as the Cameron Gully Creek fan has been included. The Hospital Creek fan is more steeply sloping than the basin floor areas and can be discerned as a separate landform. It is an impressive classic fan form. It is directly associated with Hospital Creek and its natural processes. The juxtaposition of the smooth open broadly curving fan paddocks with the particularly rugged and visually dramatic Hospital Creek catchment is important to the overall quality of the range landscape, each character type enhancing the other. The fan is a visual apron to the views of the range itself. In my view this “scene” is of high visual quality and particularly memorable; and the fan paddocks, the small rocky hill to the right and the catchment read as a “landscape”. Mt Grandview is also of particular importance being the peak supposedly from which the Upper Clutha basin was first viewed and recorded by a European. This arrangement of fan directly in front of the catchment is directly viewed from Camphill Road travelling east, a busy local road and also from the equally busy Kane/ Gladstone Road, which is also a main road between West Coast and Otago. In my opinion, the view east from Camphill Road is one of the most attractive and impressive views in the basin; and the view from Windmill Corner up the fan into the rugged catchment is another impressive and memorable view of high visual quality.

Regarding the rocky hill terminating the terminal moraine backing Hawea Flat, I maintain that only the north and east sides of it warrant inclusion in the ONL. These are the more natural areas containing rocky bluffs and native vegetation remnants and are more visually distinctive. The remaining western side is not distinctive in form or appearance as Marion acknowledges at 3.7.3.1. It is often difficult to visually distinguish from the hill face behind. The top of it is highly modified, with cultivated paddock.



The view up the fan to Hospital Creek is one of the most impressive in the basin (without water as a feature) (taken 2007)

Grandview Range – Lagoon Valley to Sandy Point (see Plans Lagoon Valley-Crook Burn and Glenfoyle)

Marion has assessed the entire remainder of the Grandview Range as being worthy of ONL status, running the landscape line around the juncture of change in slope between hillside and basin floor.

My assessment is that the ONL stops at Lagoon Creek valley and Bluenose Peak. This is consistent with the Central Otago district landscape assessment and classification, with the hill country adjoining to the east being classed as Significant Amenity Landscape. The ONL line in COD stops at the head of Grandview Creek behind Mt Grandview. The character of the QLD portion of the Grandview Range is similar to that in the COD.

Whilst sufficiently natural to qualify, I do not consider this hill range (it is generally around 1000m or lower) to have any special natural science attributes or visual qualities to be regarded as exceptional or highly representative within the district, especially compared to the mountain ranges. Only two small areas were identified as having conservation value for ecological or landscape reasons through the tenure review of Glenfoyle and Sandy Point pastoral leases which incorporate all this country, one area being the summit area of Bluenose the other being an area of kanuka shrubland and rock outcrop in Crook Burn.

In my opinion, the ONL boundary goes up a vertice of the face above the reservoir at the head of Lagoon Valley, follows the ridge to the juncture with steeper more rugged country then drops into Lagoon Creek where it follows the true left ridge crest up to Bluenose.

This line coincides with a perceived “bend” in the range separating the Hawea Flat/Hawea basin area from the Lagoon Valley/Glenfoyle area, emphasized by the change of experience of landscape from the relatively elevated Kane Road area more open to the south to the lower Hawea basin enclosed by the moraine wall.

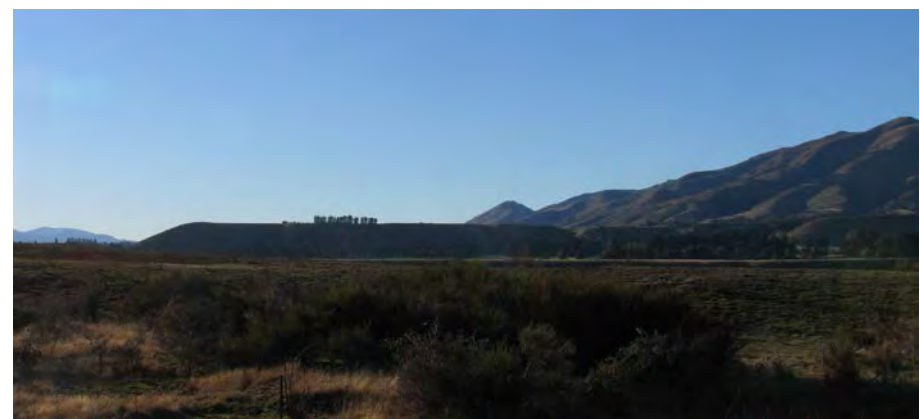
Glenfoyle Terrace Scarps (see plan Glenfoyle)

I assess the river-cut scarps on Glenfoyle Station to be worthy of ONF status. Marion also recognised these as being notable for both their strong visual simplicity and their native vegetation, and notes their striking visual contrast and high legibility, however she does not see them as independent natural features within the visual amenity landscape.

These scarps are as large and well defined as the Clutha River corridor scarps. They are reasonably intact with a natural appearance including a fairly homogenous cover of low producing grassland, relict tussock and shrubland, the latter is regenerating (Kanuka, grey shrubland). Their arcing structure echoes the river flow path and together with their sharply defined planar form enabling understanding of how they came to be, imparting high legibility to the landscape. These are highly visible from

many public places in the vicinity particularly the highways, heralding arrival in the Upper Clutha Basin. In late afternoon sun, the pattern of light and shadow creates a scene of high visual quality.

The middle scarp turns sharply to run north as the impressive planar sidewall of the Lagoon Valley meltwater channel. This too is an impressive natural feature but the vegetation cover is overwhelmingly exotic and managed within cultivated paddocks over this landform so it is not natural enough as landscape to be able to be considered for ONL.



Views of the Glenfoyle terrace risers from Wanaka-Cromwell Road (June 2014)

North End of Pisa and Criffel Range (Luggate Area)(see Plans Pisa Range-Luggate and Mt Barker-Hillend)

Marion has adopted the Environment Court ruling in the Bald Developments case C055/2009 which decided the site (at least) was outstanding pastoral landscape. Evidence given by Di Lucas was that all the landscape from the base of the hill to the range summit is ONL.

My opinion is that the middle lands of ice-scoured bedrock and moraine veneer is not sufficiently natural. Like the northeast side of Mt Brown, there is a balance of very modified cultivated farmland in paddocks with unnatural patterns of vegetation clearance lying on the smoother moraine veneer lands between very natural incised wooded gorges. This country is not as impressive as other parts and is not a major part of the backdrop generally seen from the basin floor areas to the north. The rock bluffs and Kanuka woodlands around the base of the hills, next to SH6, are very natural with high visual appeal however.

I assess the lower margin of rocky outcrops and kanuka woodland to be an area of ONL, between the district boundary and Luggate township; and, generally, the steeper slopes, bluffs and mountain lands above the farmed plateau to be ONL. This is consistent with the assessment in the Central Otago district. The hill slopes of Criffel Station closer to Mt Barker are considered too modified and scarred by tracking and fence lines to be able to be part of the ONL, being contiguous with modified lands below. Their topography and vegetation is also rather non-descript. The lumpier ice scoured rocky terrain with a greater coverage of Kanuka woodland between the impressive Luggate Creek gorge and Alice Burn is considered natural and striking enough to be ONL.



View of Pisa Range between south boundary and Alice Burn from Kane Road, showing ONL line



Pisa Range viewed from Watkins Road showing assessed ONL line (June 2014)



Pisa and Criffel Ranges viewed from Ballyntyne Road showing assessed ONL line (June 2014)



Pisa and Criffel Range viewed from Dublin Bay Road showing assessed ONL line (June 2014)

Mt Barker (see Plan Mt Barker-Hillend)

I agree with Marion that Mt Barker is an ONF. Whether it connects to the Criffel Range ONL or not is a minor issue. Generally however it is my view that an ONF is a discrete entity.

Hillend/Cardrona Valley (see Plan Mt Barker-Hillend)

The ONL boundary has been previously indicated between Mt Barker and the Alpha fan. The RL zone provides a defensible boundary west of Mt Barker. As the Cardrona Valley is accepted as ONL, it makes sense that the ONL line crosses at the mouth to the valley. Around Hillend the appropriate line is around the base of the mountain sides, consistent with the line further west.

Cardrona River

I concur with Marion that the Cardrona river corridor between Hillend and the Clutha confluence is not ONL or ONF, for the reasons she has outlined.

Fern Burn and Matukituki Valley (see Plans Fern Burn-Motatapu and Middle Matukituki Valley)

The classification of the modified farmland floor of the lower Fern Burn valley leading into Glendhu Bay as part of the wider ONL of the surrounding mountain lands was decided in 2010 (C432/2010).

The court ruled that it did have a landscape character that was not ONL but was too small an area to separate out. The judge said at paragraph 52 “*At a district level smaller landscapes may nest within a larger landscape. But there comes a point where that no longer applies. Care needs to be taken by local authorities not to divide a landscape into its units (which is acceptable in itself – although preferable in the reverse order for analytical purposes) and then to treat units as landscapes.*”

Assessment of the landscape was not unanimous however, with all three landscape architects in the first council hearing assessing the modified area as being a separate VAL and dissenting opinion continuing in the EC hearing.

This matter has been traversed in other cases. In C75/2001 (paragraph 7) this same issue was explored with respect to developed river flats on the Dart and Rees Rivers, which one party asserted were VAL within ONL. It was ruled that the areas were too small to constitute a separate landscape. Decision C3/2002 also established the principle that a valley is appreciated as a whole landscape - “*When evaluating a landscape one does not look at the one part – say the valley floor- in isolation. A valley floor is only a floor because there are walls.*”

The recent EC case on the Nevis valley landscape in the Central Otago district (ENV-2011-CHC-64) was partly around whether the more modified valley floor areas could be separately identified as a Significant Amenity Landscape (SAL) within surrounding much larger ONL. My evidence for that case was that it was not a separate landscape and this eventually agreed by all parties (rather than a court ruling).

There is no doubt the mountain lands surrounding the lower Fern Burn and the Motatapu River valley are worthy of ONL status, however whether to include the floor as ONL is perhaps still debatable. It is a case of being on the cusp of being able to separate out different landscapes, perhaps the point at which a valley becomes a basin. An analysis of the degree of enclosure of the various valleys and basins may suggest there is a formula of physical enclosure that can be applied to determine at what point a valley floor is wide enough relative to the enclosing sides to be a separate landscape. The Fern Burn ratio is about 1:4.1; the middle part of the Matukituki valley is about 1:4.51 (it is wider but is enclosed by bigger higher mountains); whilst the East Branch on Mt Aspiring station is about 1:9.3. Maybe it is that where the ratio drops on average below 1:4 the floor can be regarded as a separate landscape.

At this stage I adopt the EC ruling that the Fern Burn is ONL and on that basis the Matukituki valley is also ONL. It may be that the policies for ONL recognise these encapsulated landscapes of more modified pastoral character.

The floor of the Matukituki valley is also very modified with low natural character, having being developed through drainage, cultivation and fencing for more intensive deer, cattle and sheep farming. These highly modified flat floor lands contrast strongly with the often intensely rugged and steep roche moutonnee and mountain lands, supporting a much more natural cover including remnants of beech forest. The modified area is larger than the Fern Burn area, but it is also dominated by larger mountains, the spectacular large roche moutonnee form of Glendhu Station/Rocky Peak, and the large braided Matukituki riverbed. In my opinion, this valley is an outstanding natural landscape as a whole. It is “read” as a whole valley landscape. It is also a frequently viewed landscape being the entry into Mt Aspiring National Park.

Makarora (see plan Makarora)

There is a similar area of very modified valley floor at Makarora that is larger than the Fern Burn area. However it is zoned RL. Following the principle established in the previous section however, this valley landscape is read as a whole, as an outstanding natural landscape.

Remaining Mountain Valleys

The remaining areas of the Lake Wanaka and Lake Hawea basins, the Motatapu River valley, the Hunter Valley and tributary valleys, and the Dingleburn and Timaru Creek valleys are all considered to be obviously ONL. They do contain small areas of more modified landscape associated with pastoral farming but these are overwhelmed by the much larger areas of more natural and mountainous landscape so that these areas read as highly natural landscape. They have particularly high aesthetic values with high levels of coherence and intactness, strong visual patterns and rhythms and many striking and vivid elements. The two lakes are a key elements

contributing to ONL status with striking juxtaposition effects. Much of the area is public conservation estate with many tramping routes and walks, expressing high cultural value.

The Islands

I agree that all the islands in Lakes Hawea and Wanaka are part of the outstanding natural landscape of these lake basins. They are discrete entities - being islands – but being fully within ONL, I do not see the need to identify them separately as ONFs unless there is a good policy reason to do so. They are all part of the public conservation area.

7 CONCLUSIONS

Overall there is considerable agreement between Marion and myself as to where the ONLs and ONFs are within the Upper Clutha part of the district.

The key areas where we do not come to the same conclusion are:

- around Albert Town
- the classification status of the Clutha River corridor (ONF vs ONL) and whether to include the Cooper dairy paddocks
- whether the Hawea River is an ONF or not
- whether the northeast side of Mt Brown is ONL or not
- the position of the boundary on Mt Burke station at Quartz Creek
- whether to include a part of Hospital Creek fan or not
- whether the Grandview Range south of Bluenose is ONL or not
- whether the table lands on the northern end of the Pisa Range are ONL or not

Marion has not referred to adjoining landscape assessments in the Central Otago and Waitaki districts. This partly explains the lack of agreement on the Grandview and Pisa Ranges.

These areas can also be regarded as areas of some uncertainty (to greater or lesser degrees) as to where the line should be.

I have also concluded additional features are ONFs:

- Camp Hill
- Speargrass Creek hill
- Glenfoyle terrace risers
- The scarp face of the terminal moraine at Hawea Flat

At this stage the methodology that Marion and I have used is sufficient and appropriate to identify ONLs and ONFs. However it is my view that a

comprehensive explicit methodology setting up a spatial framework for analysis and evaluation is going to be necessary to defend the areas proposed as ONL and ONFs. Natural character analysis will be an essential component. A landscape characterisation approach is considered the best approach for this framework and it should build on the existing land units frameworks already developed for the district.

When selecting boundaries for ONLs the line needs to be practical and defensible and readily recognisable on the ground. Landform perimeters are usually the best line to use such as a ridge or slope juncture. Legal boundaries are also a good choice in some cases.

Where lakes and rivers are part of the ONL there landscape margins in the rural general zone are automatically included. This will assist in meeting the provisions of s6a of the RMA which focuses on preserving natural character, one of the fundamental qualities for ONL. The nearest main landform horizon generally defines the outer or landward edge. Where more open it may be some 200-300m back depending on the specifics of the location.

Presentation

It is recommended that the ONL line and ONFs be identified on high resolution aerial photography as well as the 1:50 000 topo map as a base. 1:25000 I have found a useful scale for deliberating on the location of the line but in some areas a larger scale may be required for certainty. The aerially based data could be held in council offices and be available via the mapping site on the QLDC website. They could also be made available as a set on a hard drive for purchase or downloadable as data sets for GIS etc.

Buffers

One way to alleviate anxiousness about getting the ONL line in the right place is to consider employing a buffer in the adjoining rural landscape (classed currently as VAL).

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Map 1. Conservation Lands in and Around Queenstown Lakes District

Map 2A. Adjoining Outstanding Natural Landscape (Northeast)

Map 2B. Adjoining Outstanding Natural Landscape (East)

Map 2C. Adjoining Outstanding Natural Landscape (Southeast)

Map 3. Landscape Units (landform units) of the Wanaka-Hawea-Makarora area *from Planning for Landscape Change: Visual landscape Assessment prepared for Queenstown-Lakes District Council Earl Bennett Feb 1993.*

Map 4. Land Types/Ecosystems of the Queenstown lakes District (Upper Clutha part) *from Indigenous Ecosystems: An Ecological Plan Structure for the Lakes District A Report for the Queenstown-Lakes District Council Lucas Associates 1995*

ONL Plans

Waterfall Creek

Lake Wanaka Outlet

Albert Town

Hawea River

Clutha River Corridor

Maungawera Valley

Hawea-Mt Grand

Hospital Creek

Lagoon Valley-Crook Burn

Glenfoyle

Pisa Range-Luggate

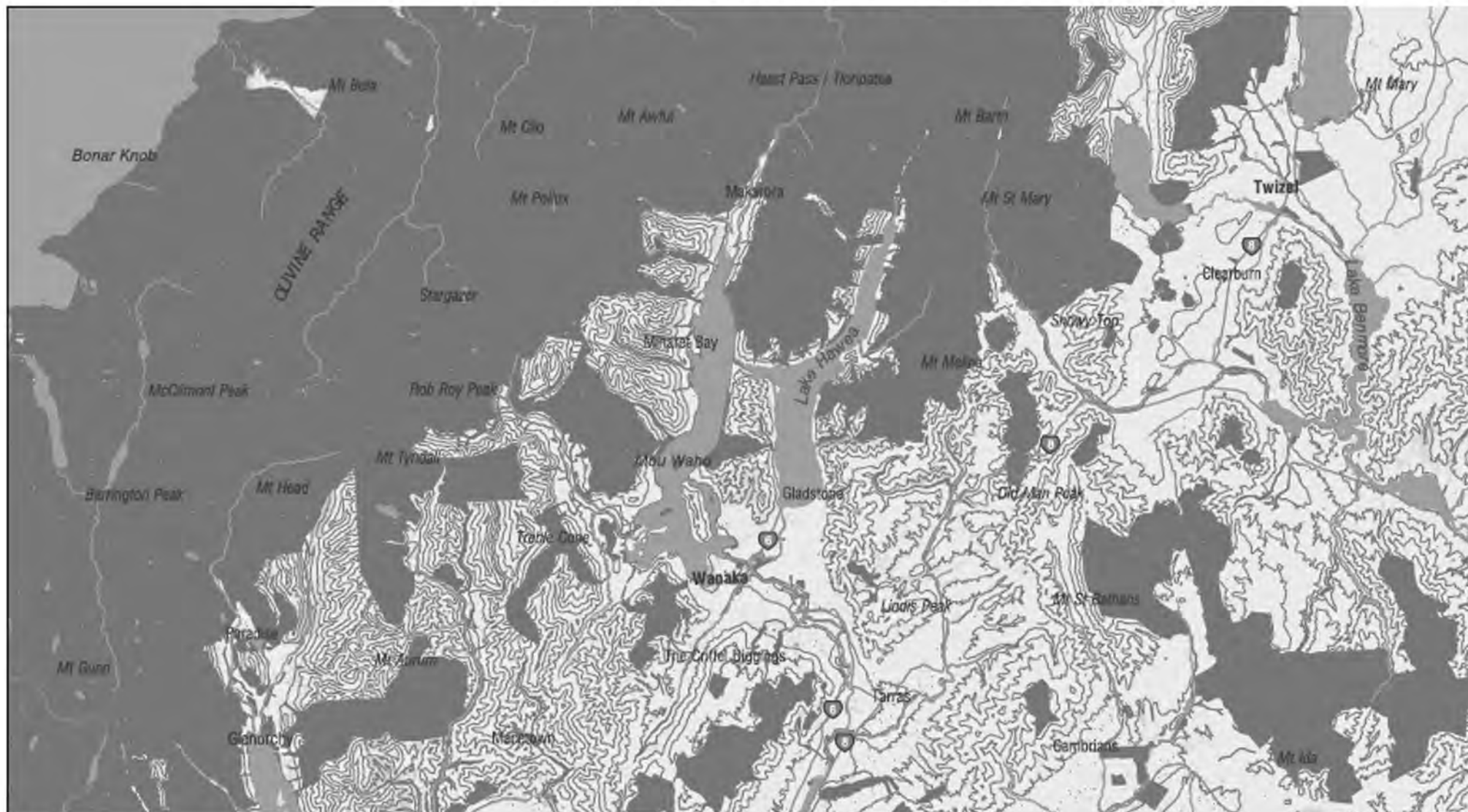
Mt Barker Hillend

Motatapu-Fern Burn

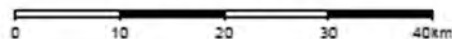
Middle Matukituki Valley

Makarora

PUBLIC CONSERVATION AREAS



Scale: 1:500,000



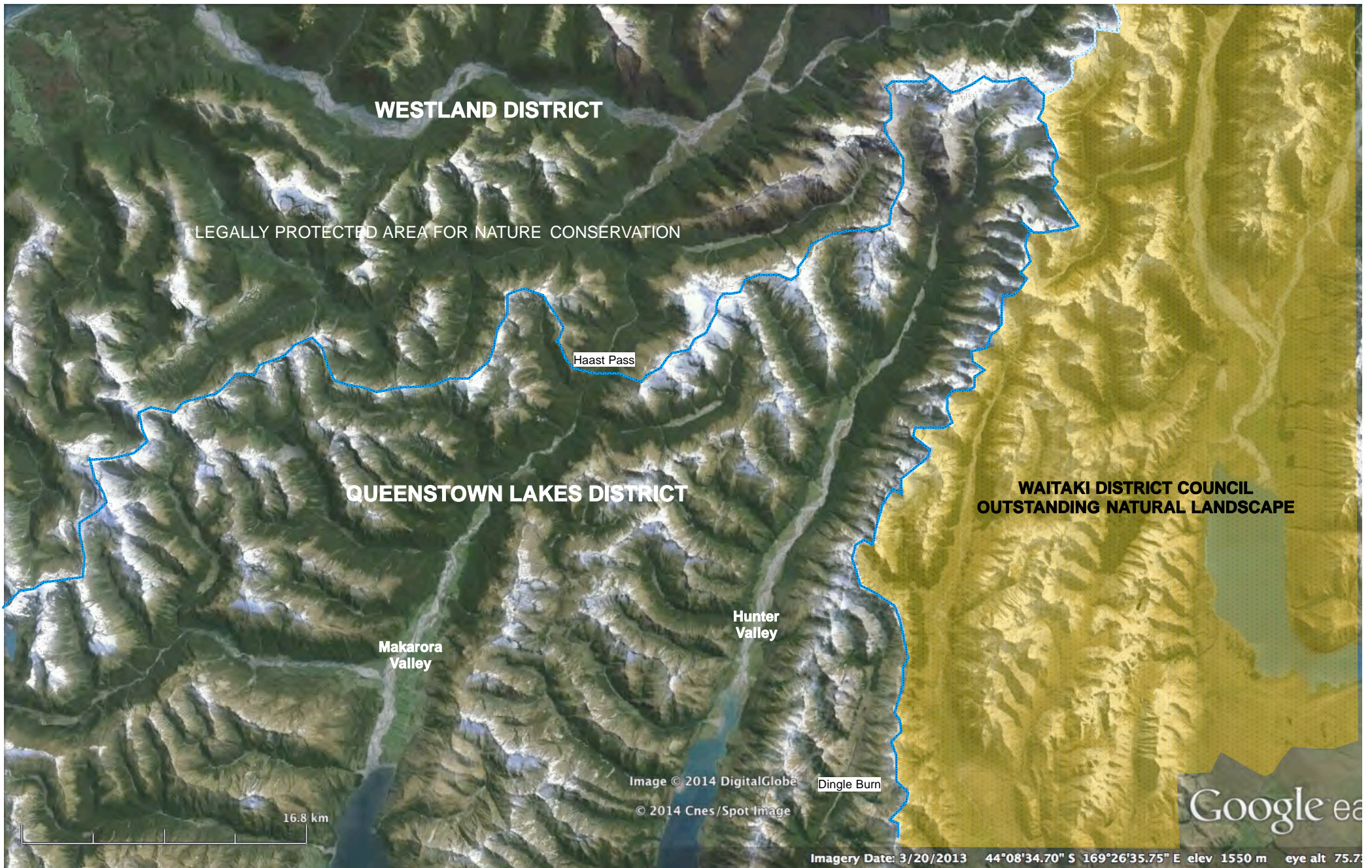
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Printed: 08:49:24 AM Thu, 19 Jun 2014



WESTLAND DISTRICT

LEGALLY PROTECTED AREA FOR NATURE CONSERVATION

Haast Pass

QUEENSTOWN LAKES DISTRICT

**WAITAKI DISTRICT COUNCIL
OUTSTANDING NATURAL LANDSCAPE**

Makarora
Valley

Hunter
Valley

Dingle Burn

16.8 km

Image © 2014 DigitalGlobe
© 2014 Cnes/Spot Image

Google

Imagery Date: 3/20/2013 44°08'34.70" S 169°26'35.75" E elev 1550 m eye alt 75.7



WESTLAND DISTRICT

LEGALLY PROTECTED
AREA FOR NATURE
CONSERVATION

WAITAKI
DISTRICT
COUNCIL
outstanding
natural
landscape

LAKE WANAKA

LAKE HAWEA

CENTRAL OTAGO
DISTRICT
COUNCIL
outstanding
natural
landscape

Image © 2014 DigitalGlobe

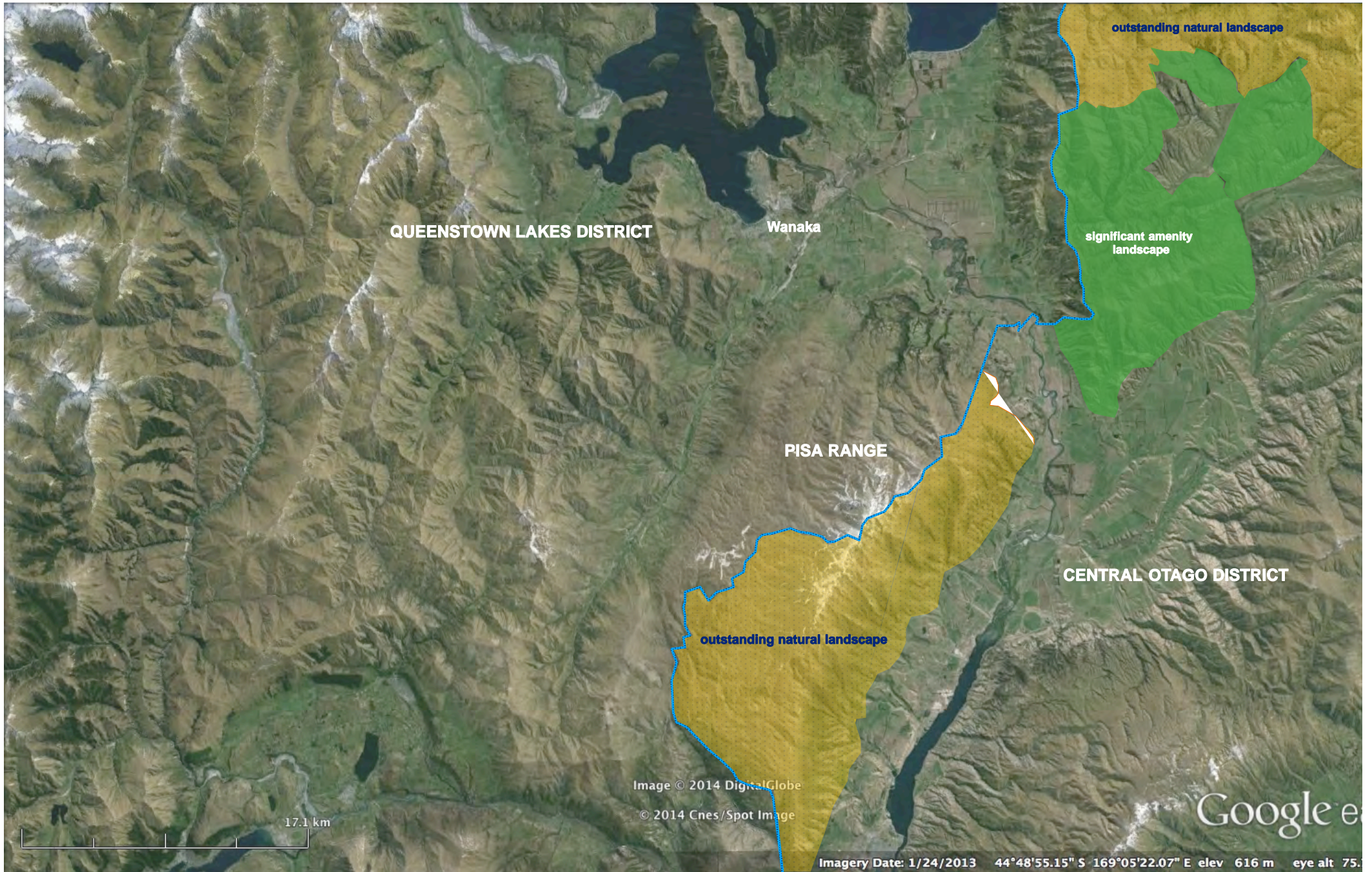
Hawea Basin

significant amenity
landscape

Google earth

17.5 km

Imagery Date: 12/22/2012 44°27'40.26" S 169°08'59.93" E elev 199 m eye alt 75.73 km





scale 1:250 000



Queenstown Lakes District Land Types / Ecosystems

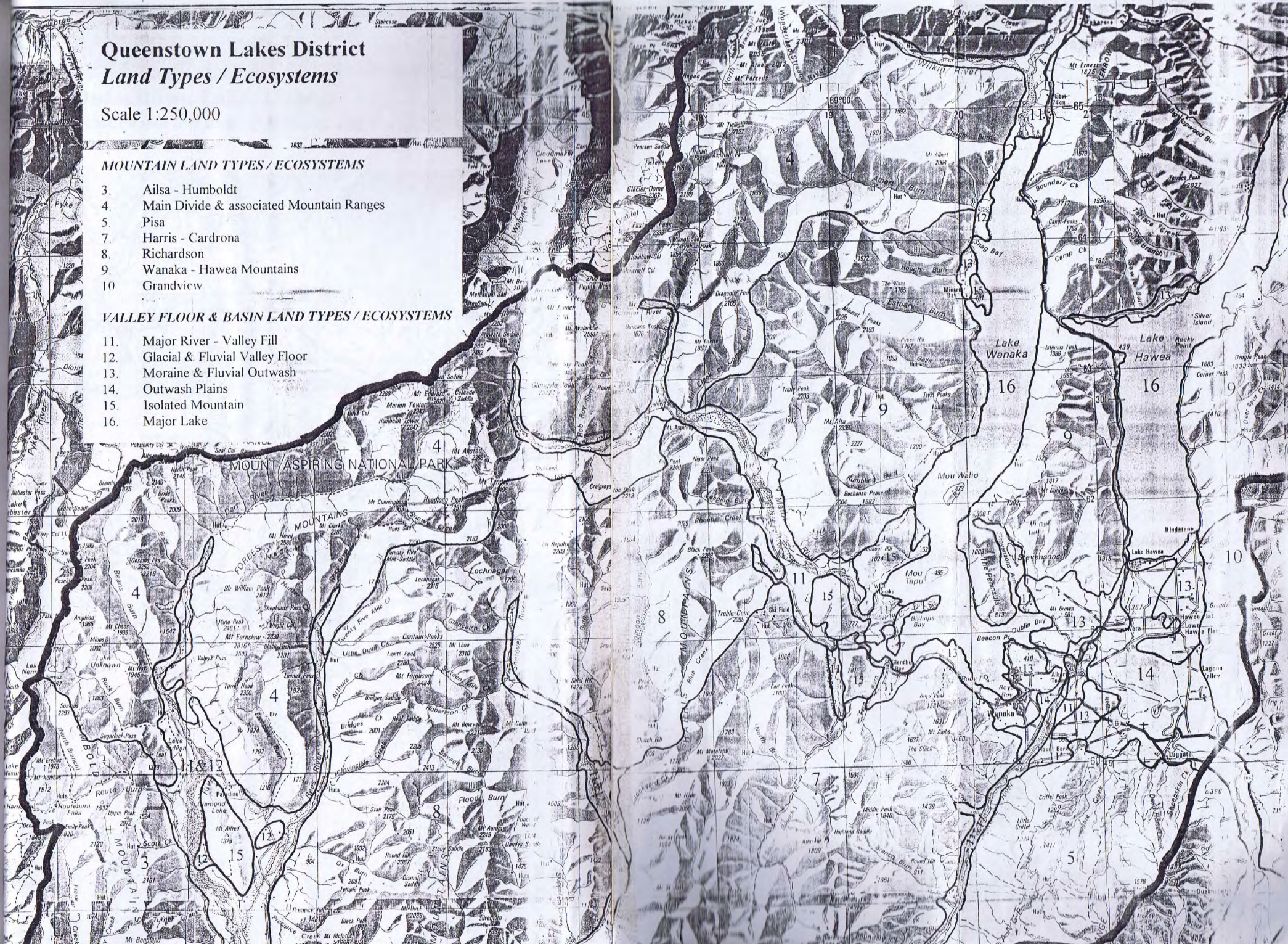
Scale 1:250,000

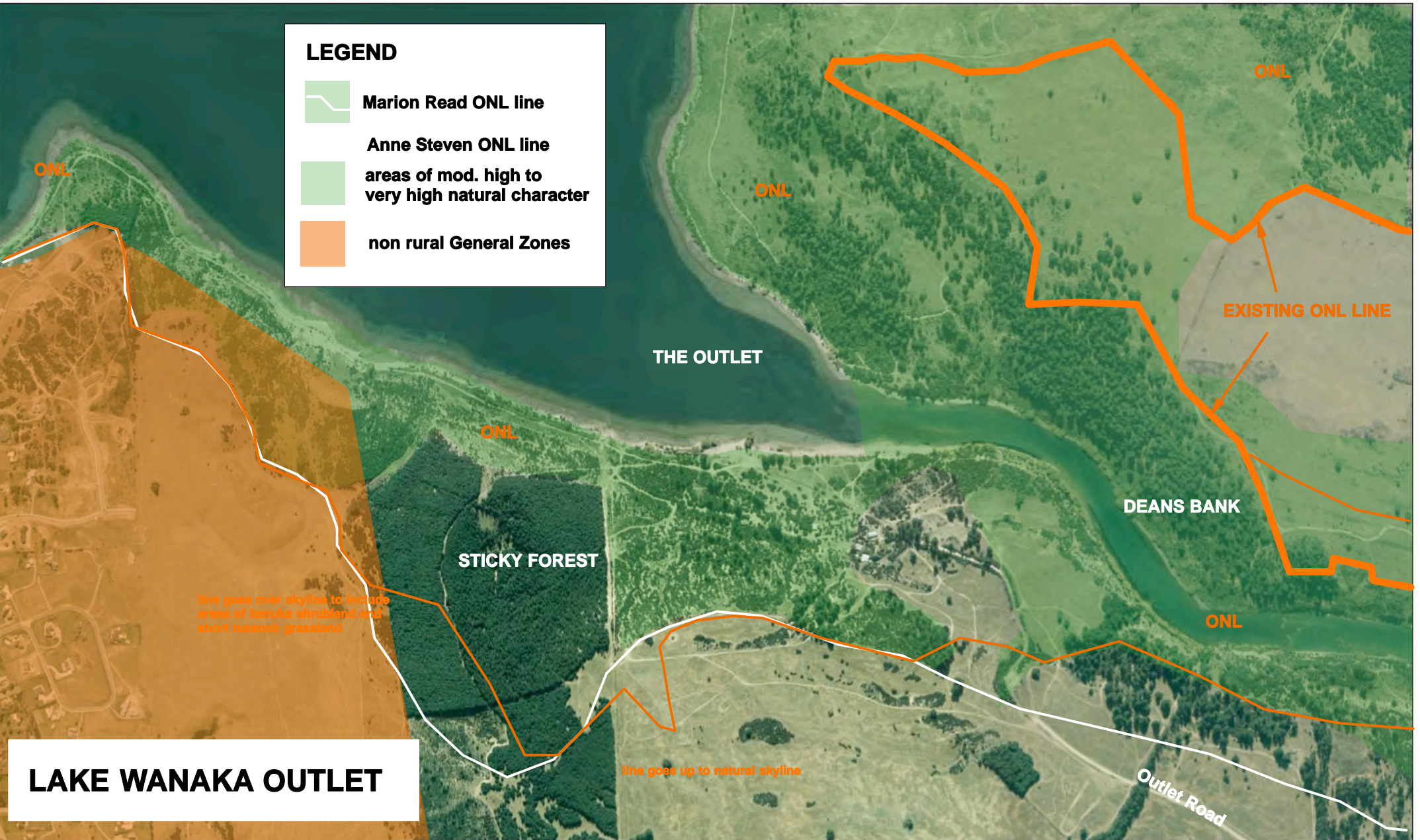
MOUNTAIN LAND TYPES / ECOSYSTEMS

3. Ailsa - Humboldt
4. Main Divide & associated Mountain Ranges
5. Pisa
7. Harris - Cardrona
8. Richardson
9. Wanaka - Hawea Mountains
10. Grandview




VALLEY FLOOR & BASIN LAND TYPES / ECOSYSTEMS

11. Major River - Valley Fill
12. Glacial & Fluvial Valley Floor
13. Moraine & Fluvial Outwash
14. Outwash Plains
15. Isolated Mountain
16. Major Lake



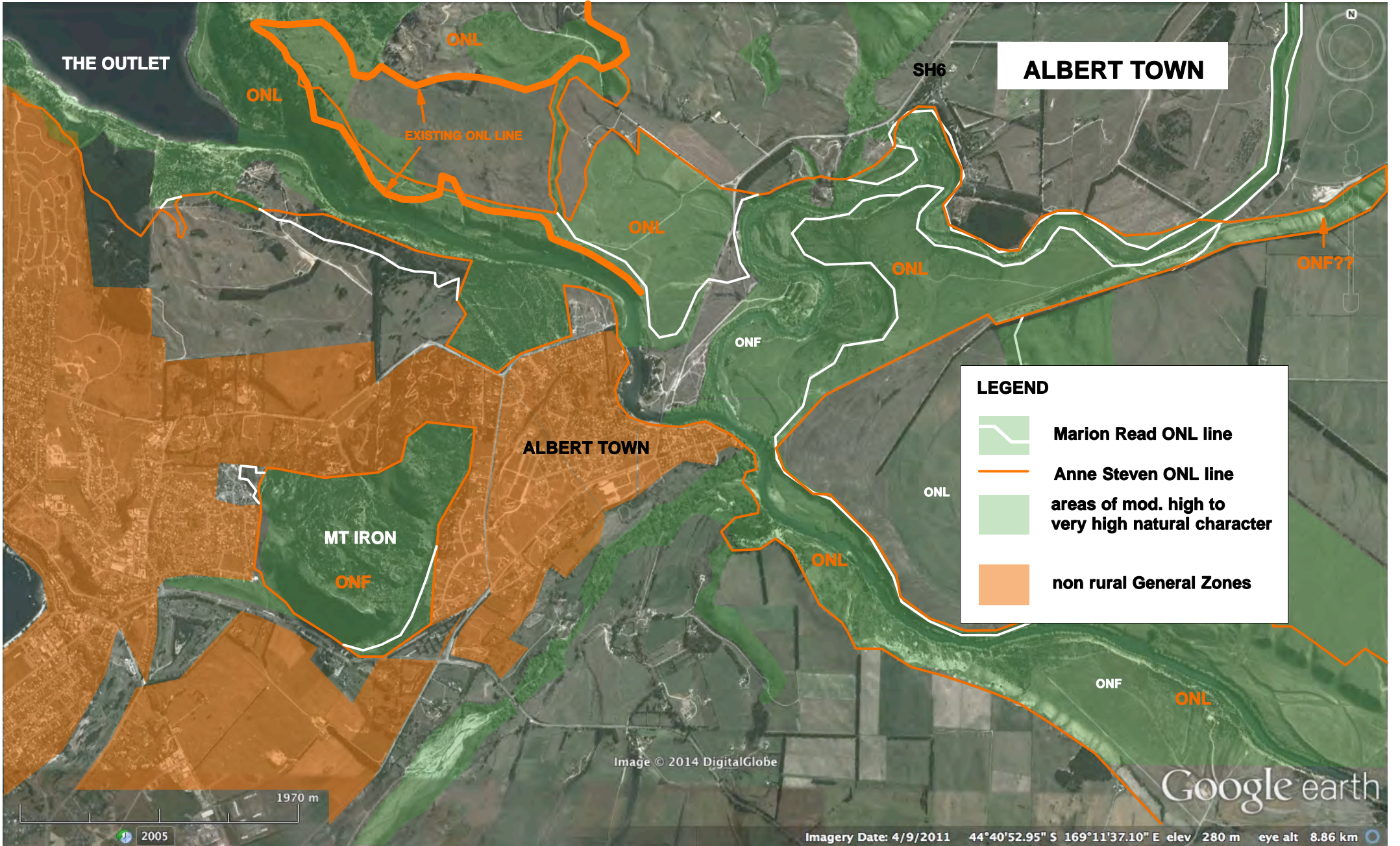


LEGEND

-  Marion Read ONL line
-  Anne Steven ONL line areas of mod. high to very high natural character
-  non rural General Zones

LAKE WANAKA OUTLET

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HAWEA RIVER

LEGEND



Marion Read ONL line



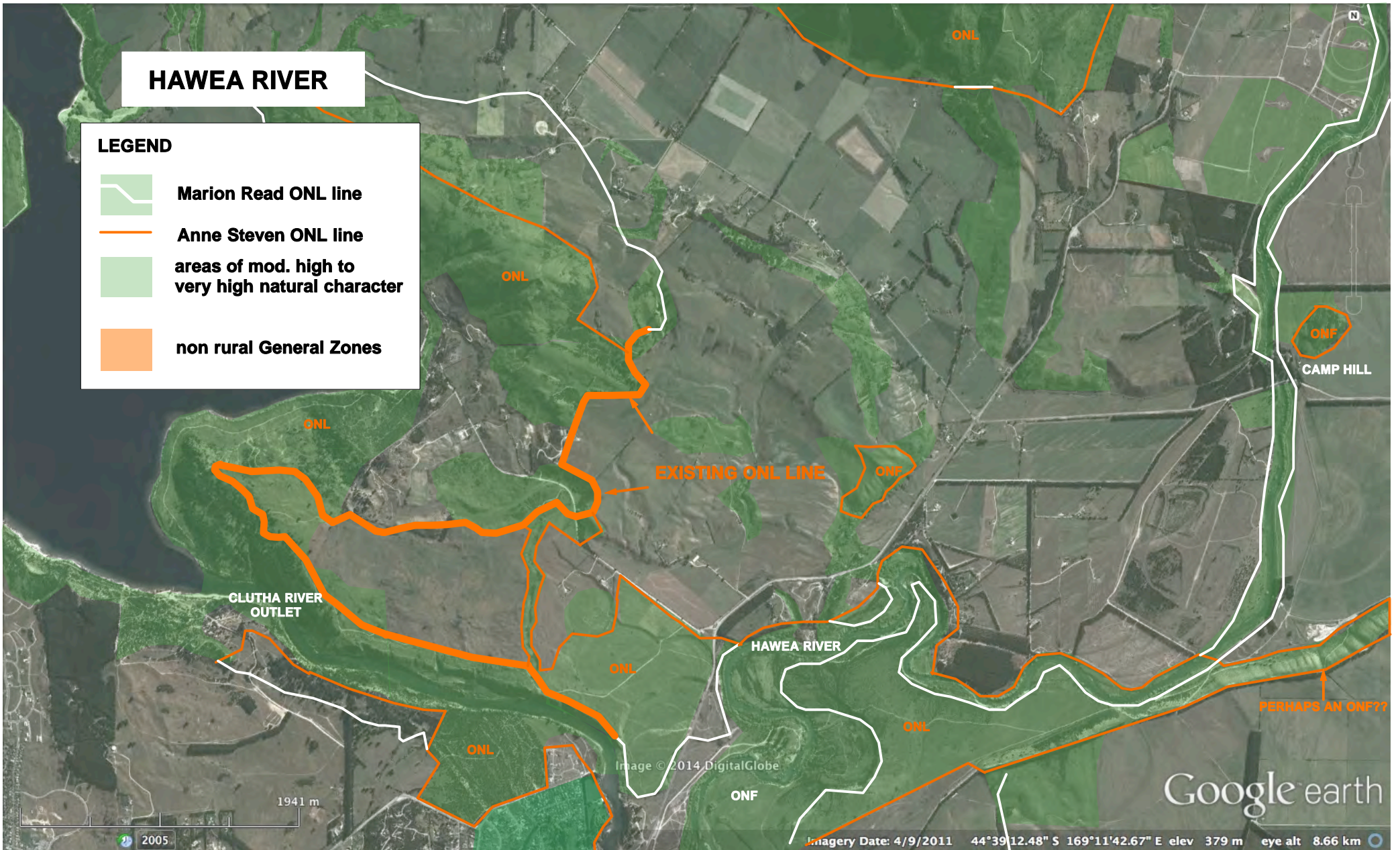
Anne Steven ONL line



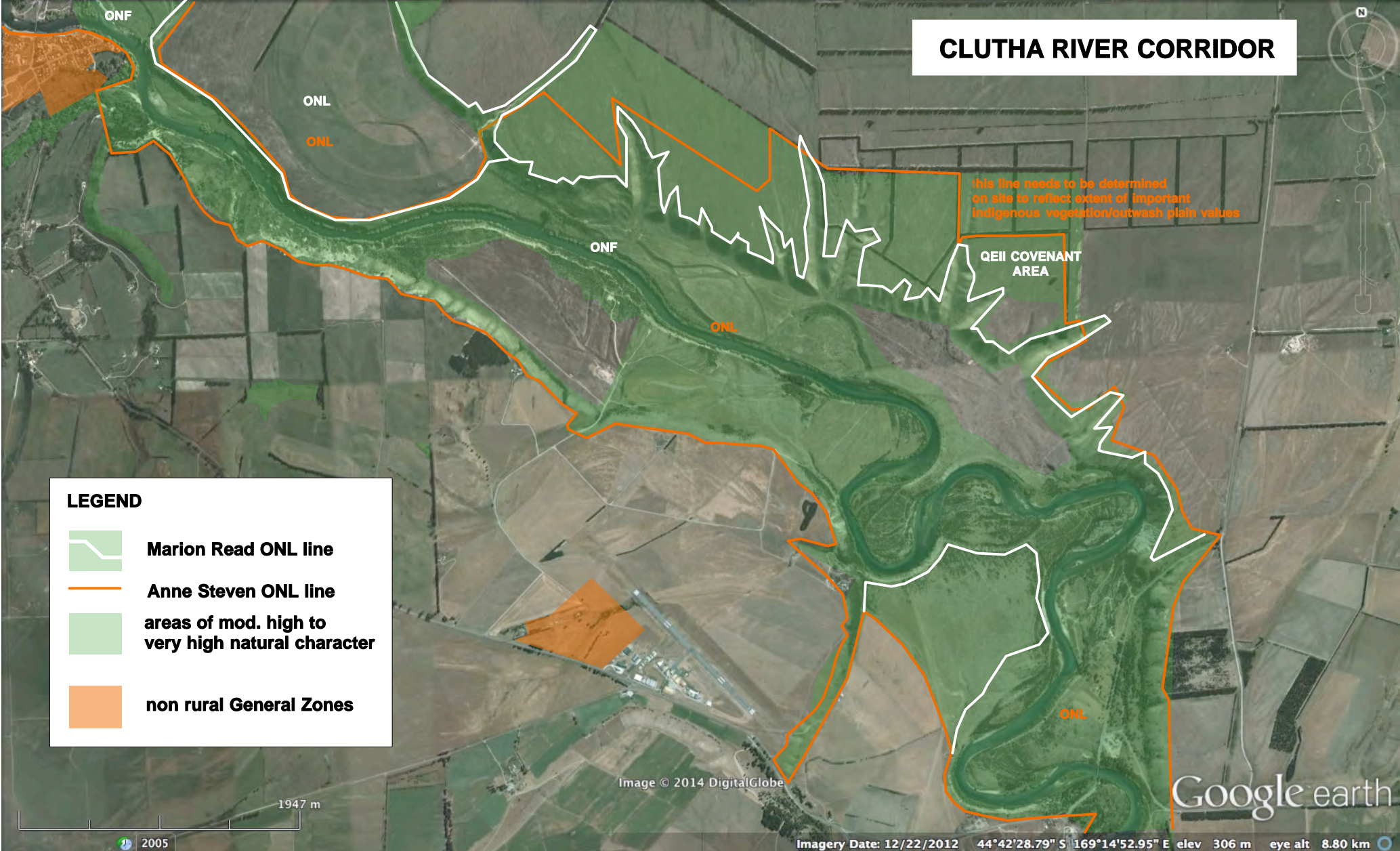
areas of mod. high to very high natural character



non rural General Zones



CLUTHA RIVER CORRIDOR



this line needs to be determined on site to reflect extent of important indigenous vegetation/outwash plain values

QEII COVENANT AREA

LEGEND





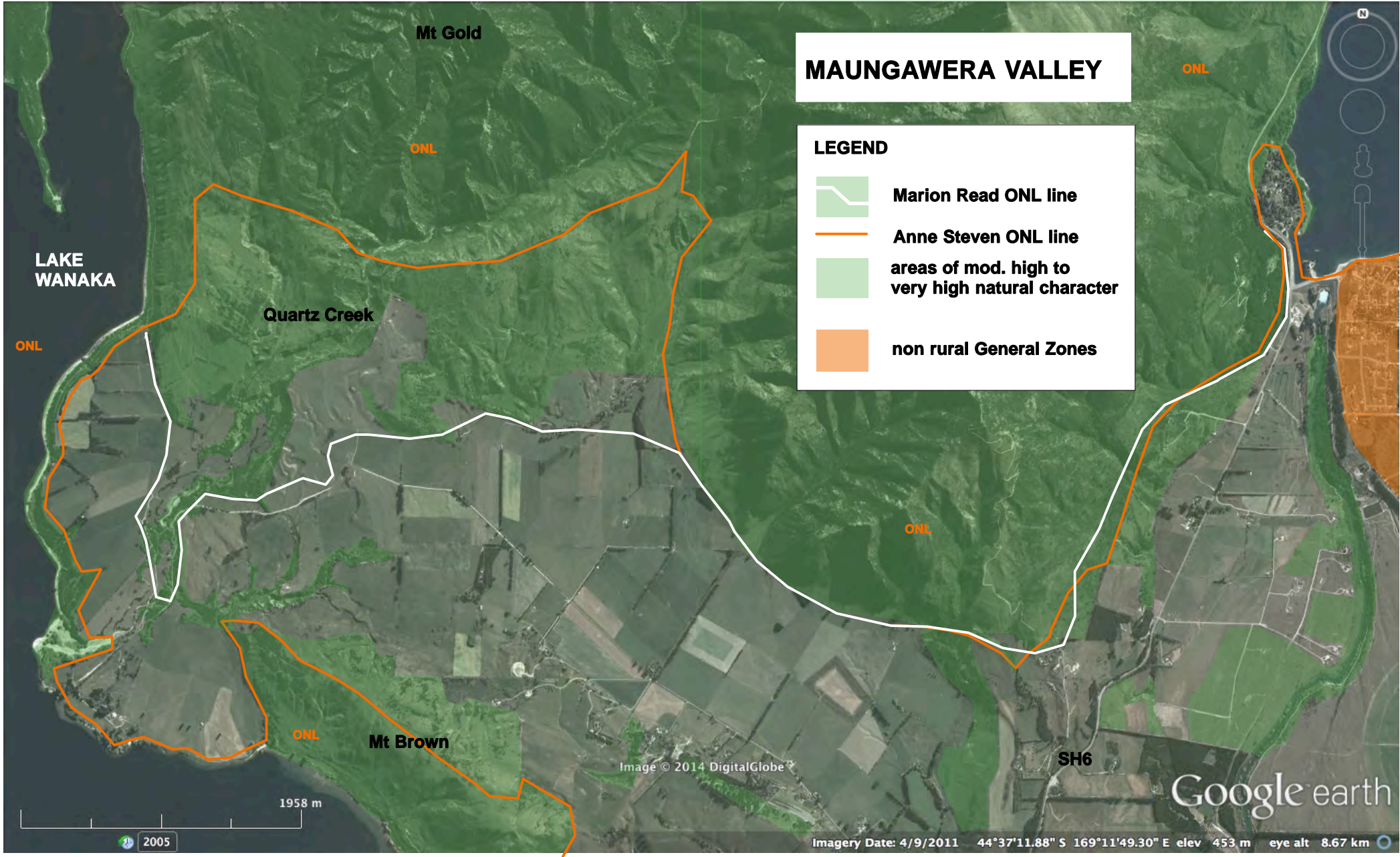
-  Marion Read ONL line
-  Anne Steven ONL line
-  areas of mod. high to very high natural character
-  non rural General Zones

Image © 2014 DigitalGlobe

Google earth





2005

Imagery Date: 12/22/2012 44°42'28.79" S 169°14'52.95" E elev 306 m eye alt 8.80 km



MAUNGAWERA VALLEY

LEGEND

-  Marion Read ONL line
-  Anne Steven ONL line
-  areas of mod. high to very high natural character
-  non rural General Zones

LAKE WANAKA

Mt Gold

ONL

Quartz Creek

ONL

ONL

ONL

Mt Brown

SH6

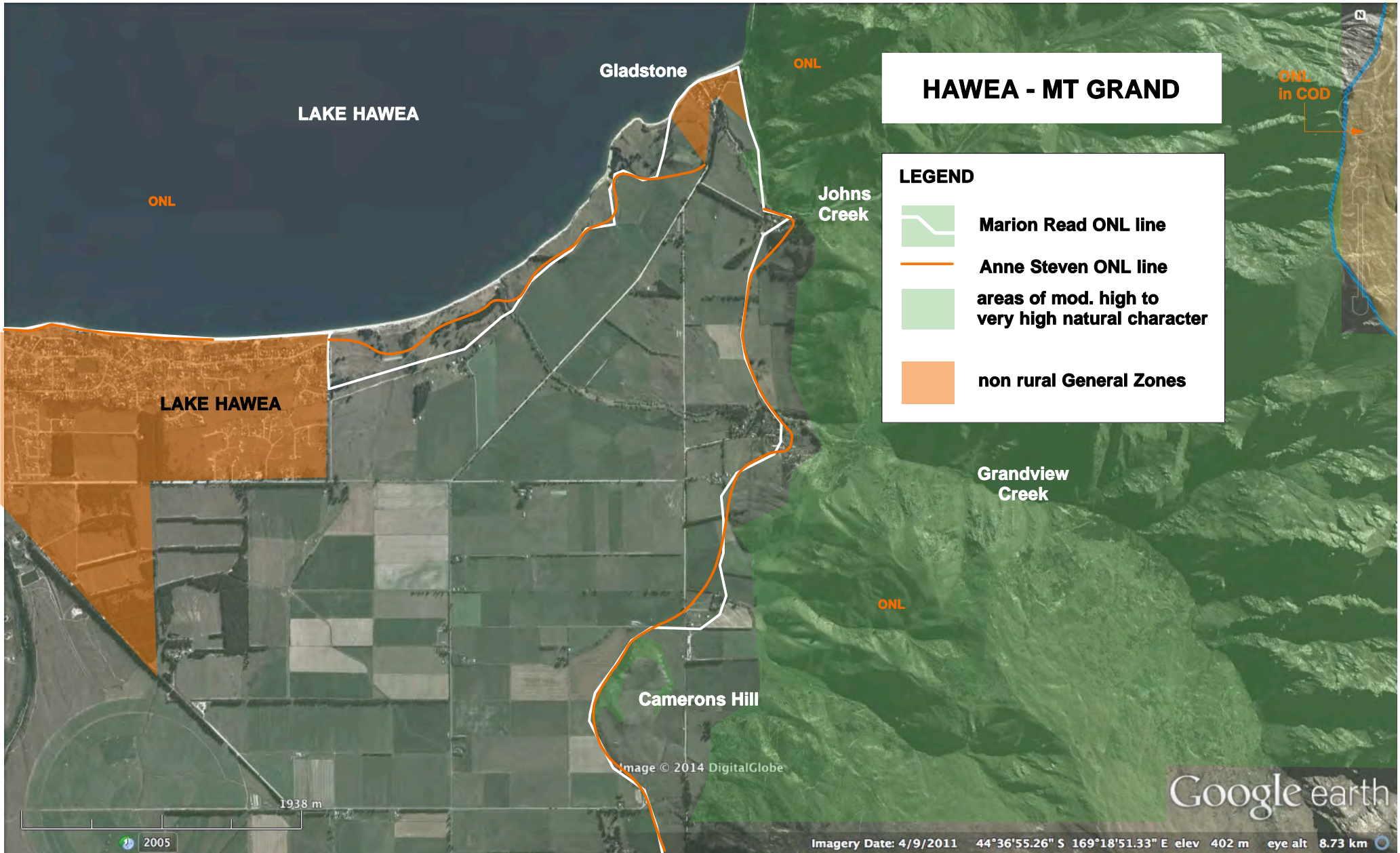
Image © 2014 DigitalGlobe

Google earth

1958 m





2005

Imagery Date: 4/9/2011 44°37'11.88" S 169°11'49.30" E elev 453 m eye alt 8.67 km



HAWEA - MT GRAND

LEGEND

-  Marion Read ONL line
-  Anne Steven ONL line
-  areas of mod. high to very high natural character
-  non rural General Zones

ONL in COD

LAKE HAWEA

Gladstone

ONL

Johns Creek

ONL

LAKE HAWEA

Grandview Creek

ONL

Camerons Hill

Image © 2014 DigitalGlobe

Google earth





1938 m

2005

Imagery Date: 4/9/2011 44°36'55.26" S 169°18'51.33" E elev 402 m eye alt 8.73 km

HOSPITAL CREEK

LEGEND

-  Marion Read ONL line
-  Anne Steven ONL line
-  areas of mod. high to very high natural character
-  non rural General Zones

HAWEA FLAT

Hospital Creek

Lagoon Creek

Bluenose

CENTRAL OTAGO DISTRICT

Significant Amenity Landscape in OOD

Image © 2014 DigitalGlobe

Google earth





1973 m

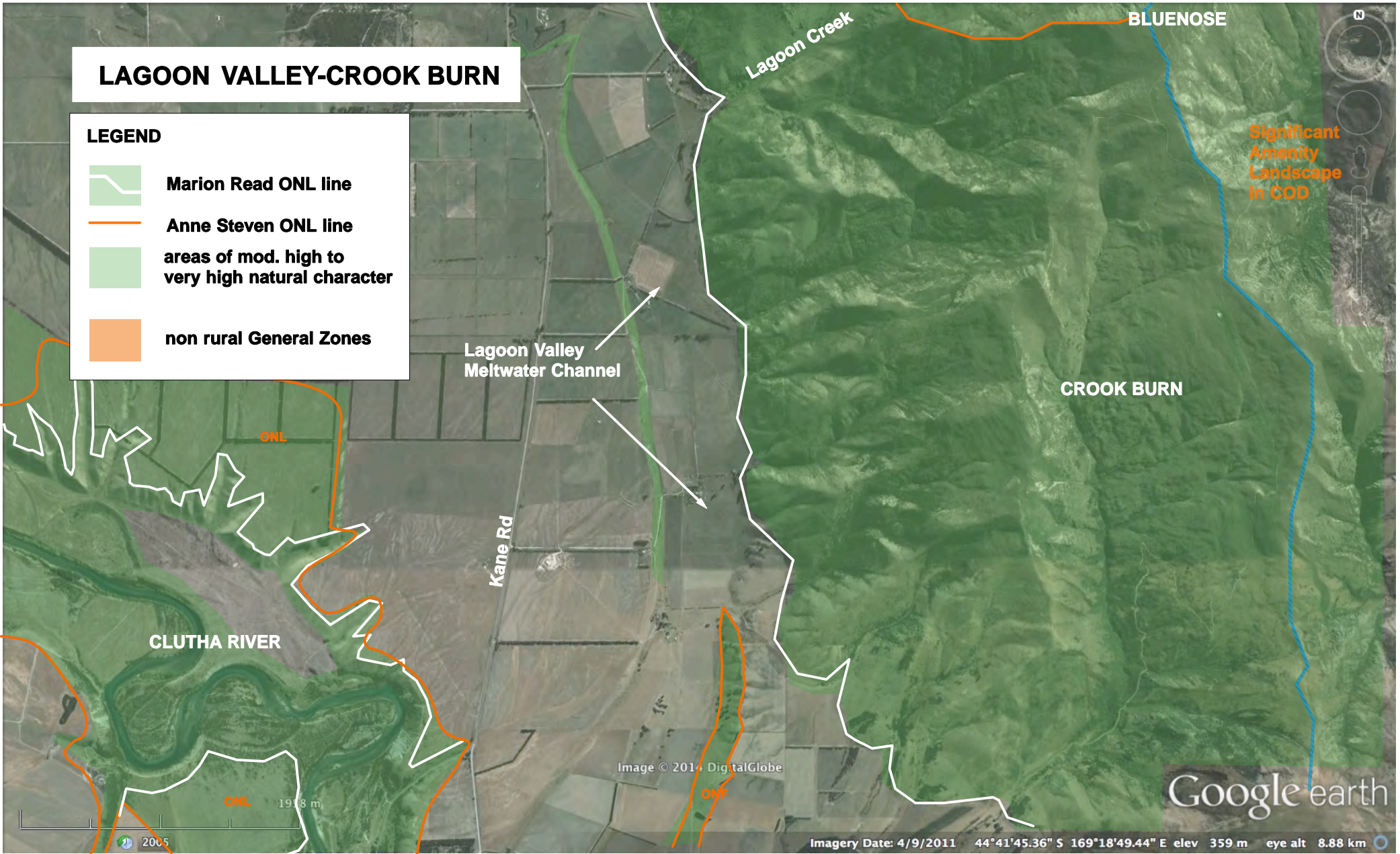
2005

Imagery Date: 4/9/2011 44°39'11.44" S 169°18'51.69" E elev 433 m eye alt 8.89 km

LAGOON VALLEY-CROOK BURN





LEGEND

-  Marion Read ONL line
-  Anne Steven ONL line
-  areas of mod. high to very high natural character
-  non rural General Zones



GLENFOYLE

LEGEND

-  Marion Read ONL line
-  Anne Steven ONL line
-  areas of mod. high to very high natural character
-  non rural General Zones

Significant Amenity Landscape in COD

see Pisa-Luggate Plan for this area

assessed as ONL in Clutha Parkway Landscape Study

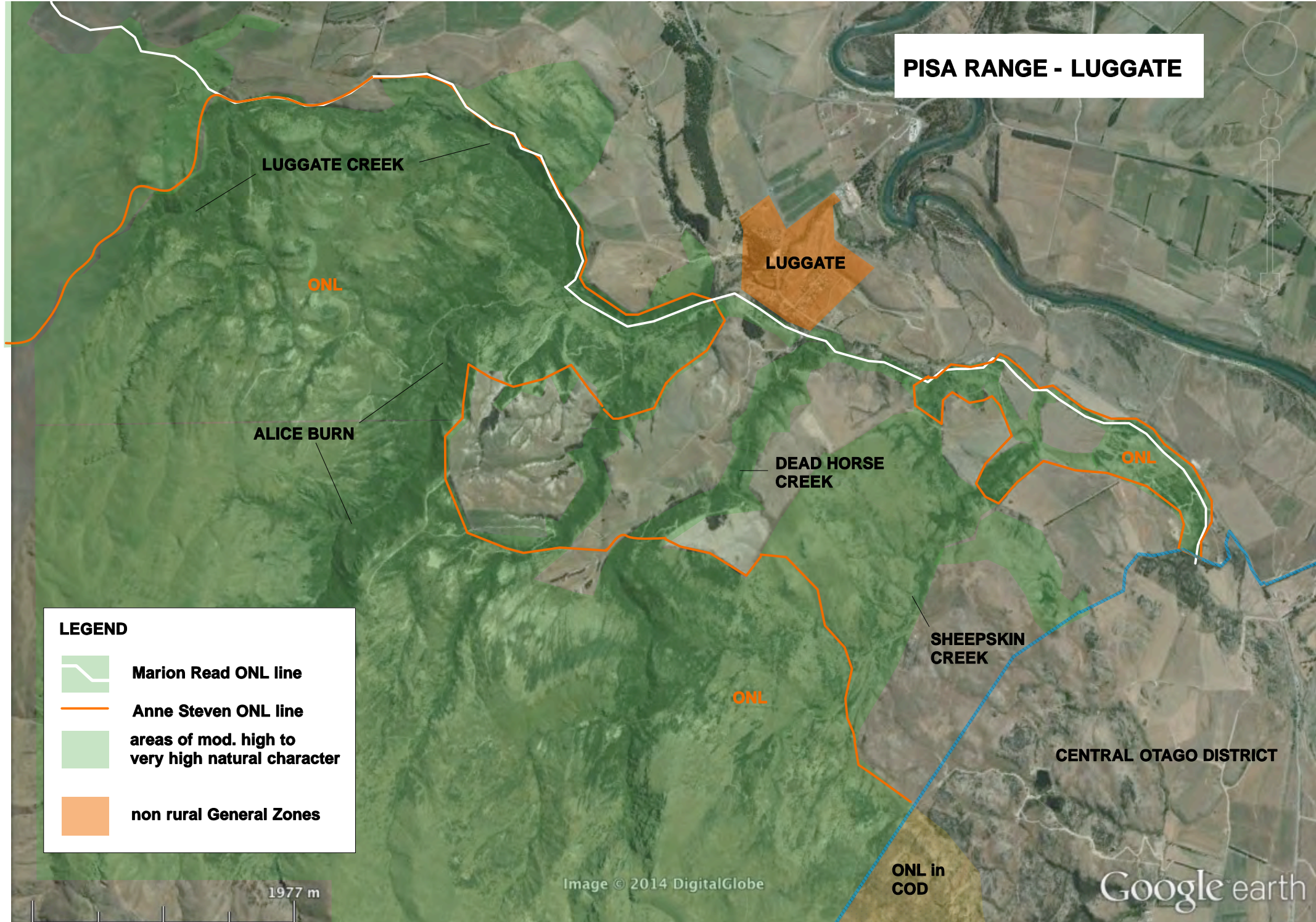
Image © 2014 DigitalGlobe
CENTRAL OTAGO DISTRICT
no classification

Google earth

1926 m

Imagery Date: 4/26/2011 44°44'36.98" S 169°19'14.93" E elev 278 m eye alt 9.06 km

PISA RANGE - LUGGATE



LUGGATE CREEK

ONL

LUGGATE

ALICE BURN

DEAD HORSE CREEK

ONL

SHEEPSKIN CREEK

ONL

CENTRAL OTAGO DISTRICT

ONL in COD

LEGEND





-  Marion Read ONL line
-  Anne Steven ONL line
-  areas of mod. high to very high natural character
-  non rural General Zones



Image © 2014 DigitalGlobe





Google earth

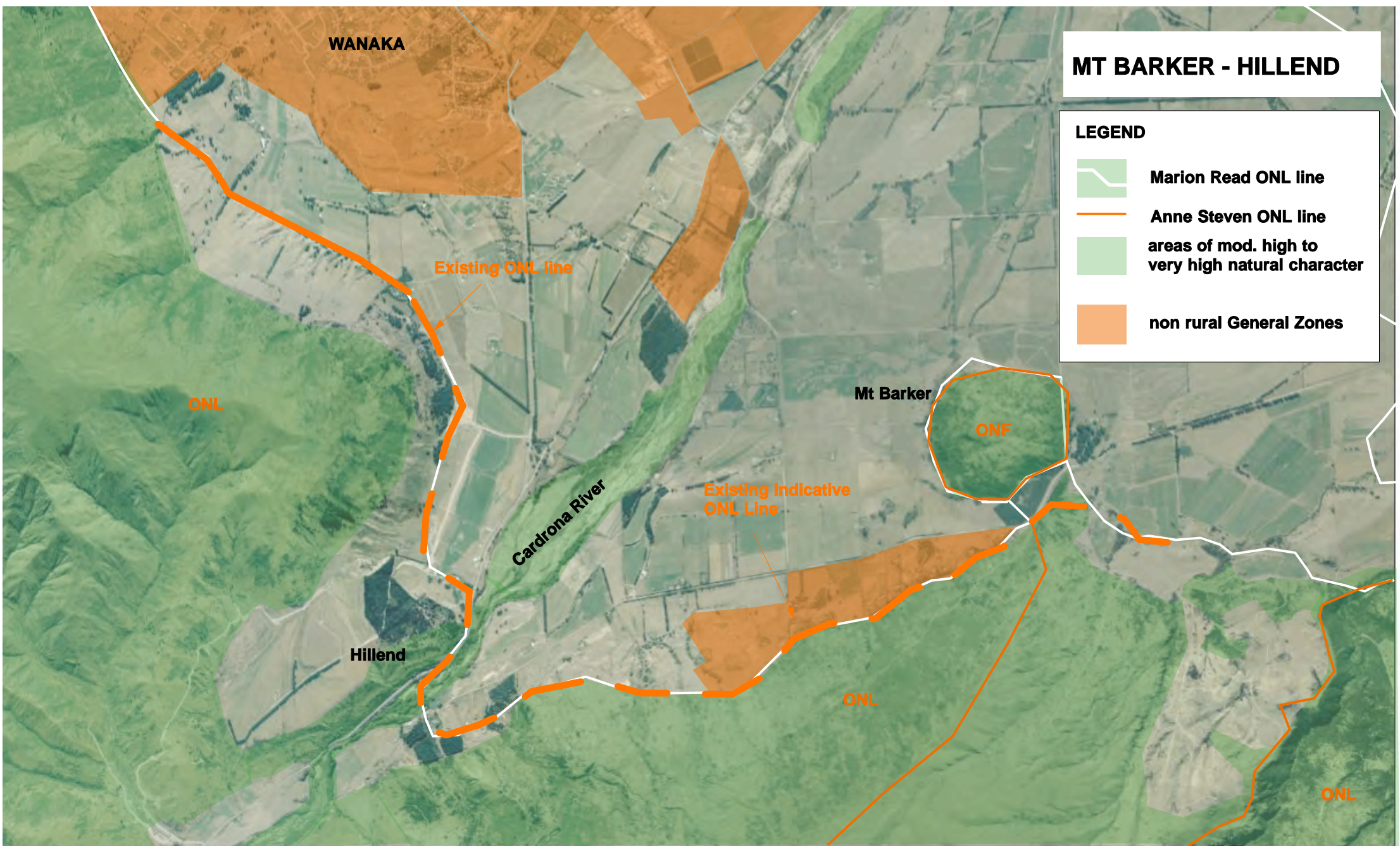
2005

Imagery Date: 12/22/2012 44°45'38.58" S 169°15'39.62" E elev 467 m eye alt 9.48 km

MT BARKER - HILLEND

LEGEND

-  Marion Read ONL line
-  Anne Steven ONL line
-  areas of mod. high to very high natural character
-  non rural General Zones



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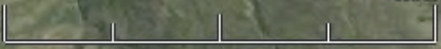
MOTATAPU - FERN BURN
1:50 000

areas off more modified landscape that
has moderate to low levels of naturalness



Image © 2014 DigitalGlobe

4.01 km



Google earth



**MIDDLE MATUKITUKI VALLEY
1:50 000**

areas off more modified landscape that
has moderate to low levels of naturalness



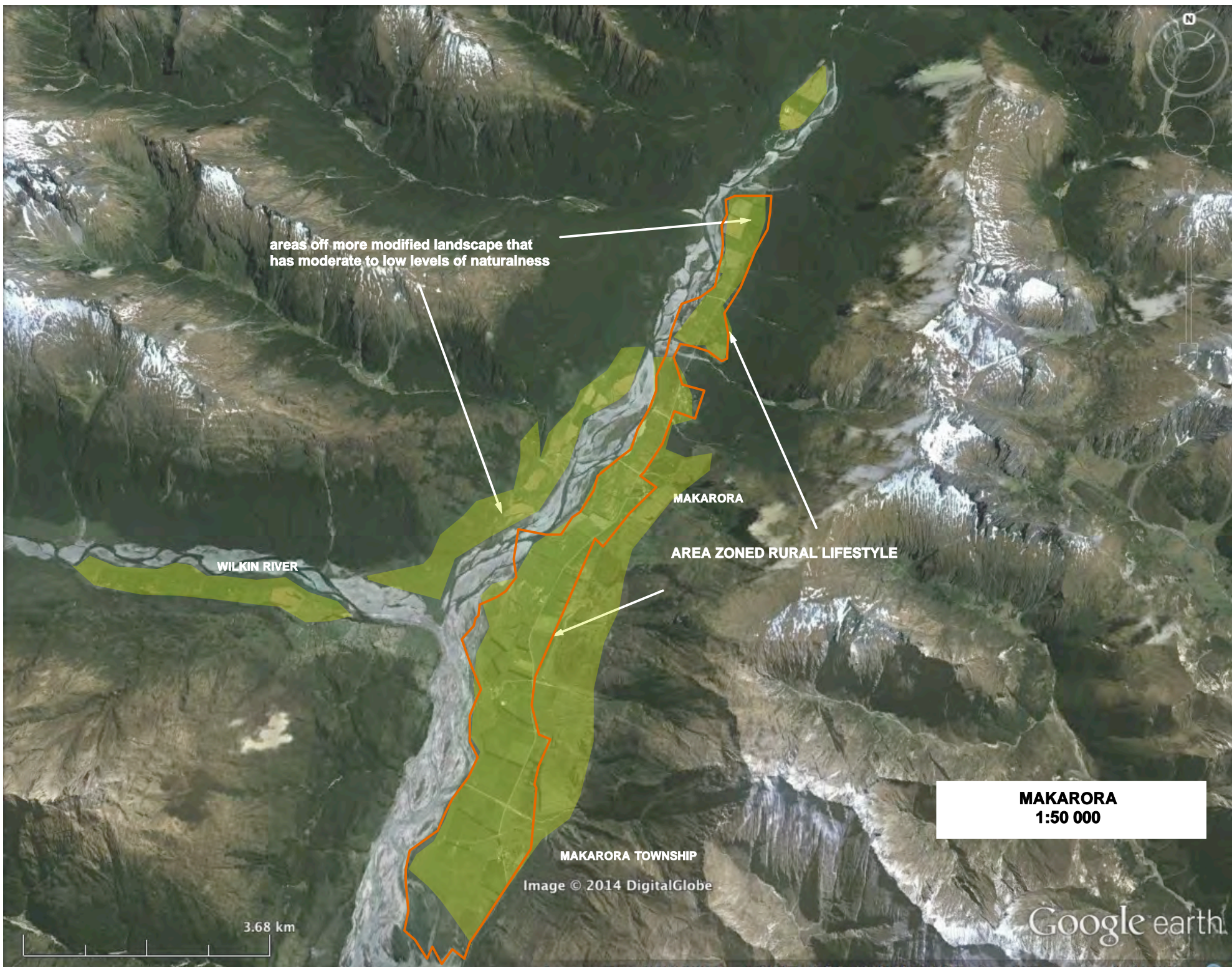
Image © 2014 DigitalGlobe

Google earth



2010

Imagery Date: 4/9/2011 44°31'57.68" S 168°52'36.86" E elev 525 m eye alt 14.19 km



areas off more modified landscape that has moderate to low levels of naturalness

WILKIN RIVER

MAKARORA

AREA ZONED RURAL LIFESTYLE

MAKARORA TOWNSHIP

**MAKARORA
1:50 000**

Image © 2014 DigitalGlobe

Google earth

3.68 km

Imagery Date: 2/18/2011 44°14'53.87" S 168°12'07.62" E, elev: 287 m, zoom: 18.20 km