

# Marlborough Landscape Study

August 2015

## LANDSCAPE CHARACTERISATION AND EVALUATION





MARLBOROUGH LANDSCAPE STUDY

LANDSCAPE CHARACTERISATION AND EVALUATION • C15018  
Prepared for Marlborough District Council (MDC) by Boffa Miskell Limited

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Thank you to the following people who contributed to this report:

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This report incorporates feedback from the consultation phase which occurred from 2011 through to 2015. Consultation was based on the information and maps produced in the February 2010 version of the *Marlborough Landscape Study 2009*. All amendments made to this 2015 updated report since 2011 therefore include all amendments that have taken place during this period.

*Front Cover:* Early morning mist emphasises the landforms of Keneperu Sound, with the forested Putanui Point evident in the foreground. Small photo to left: Wine growing in the Wairau Valley. Small photo to right: The dry hills of the Redwood Pass.  
*Inside Cover:* The vivid pink colouration of the salt-drying ponds at Lake Grassmere, as seen from the air.



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Evaluation  
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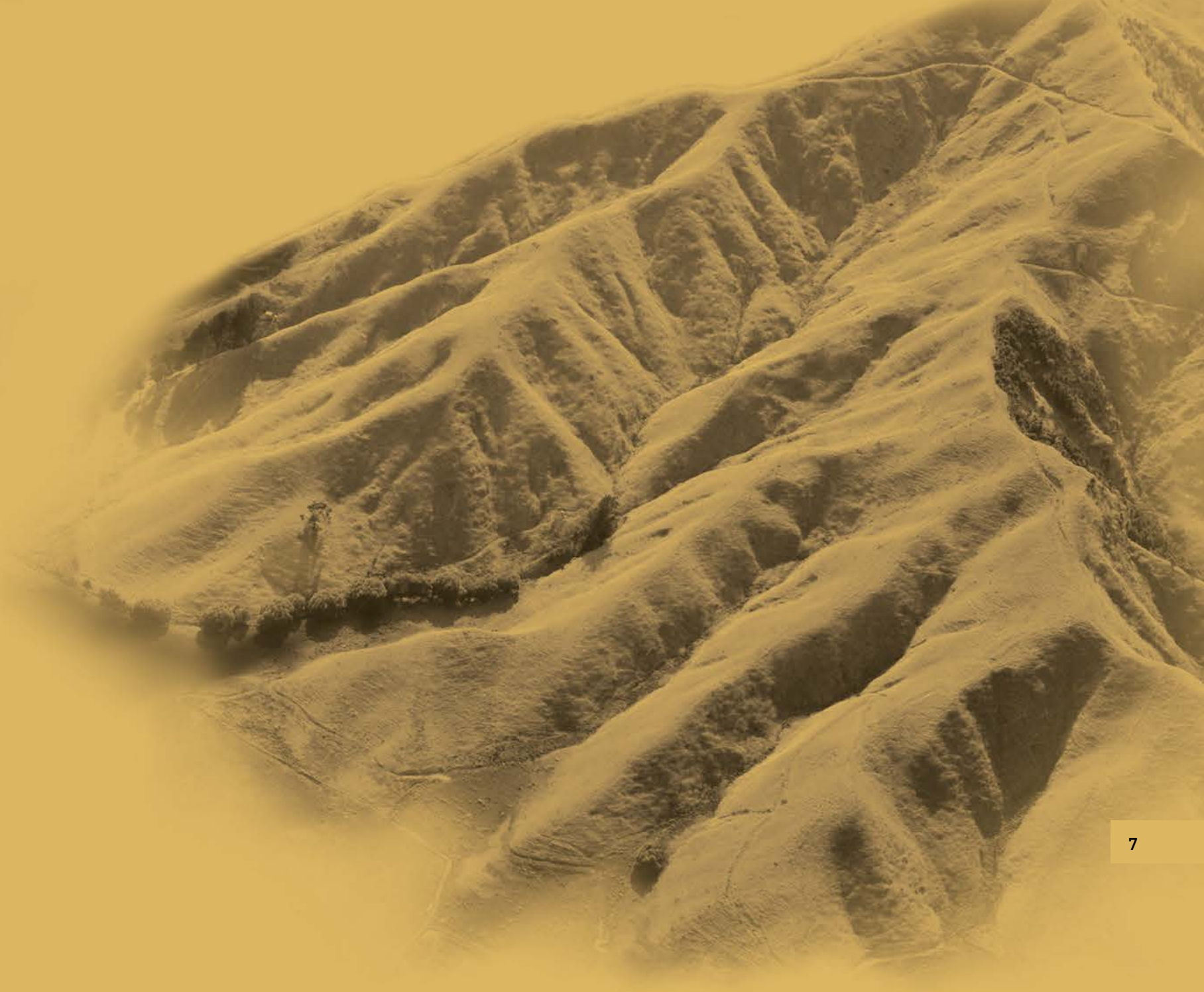


Quarry on Ward Beach Road



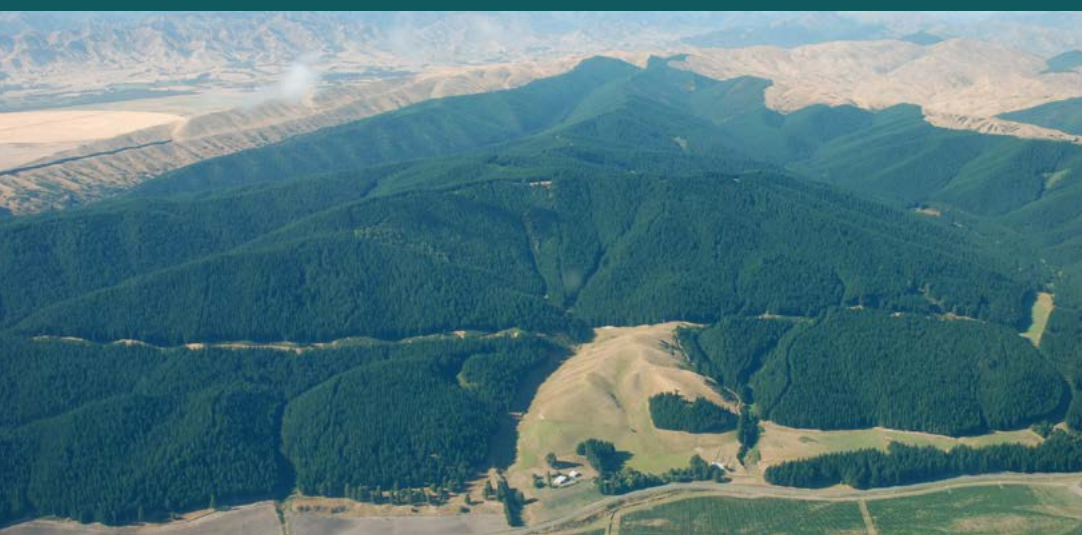
Farm building nestled in the Awatere Dry Hills Landscape Character Area





# Section A

Study Background





# STUDY BACKGROUND: MARLBOROUGH LANDSCAPE REVIEW

This Landscape Study has been prepared as part of the Marlborough District Council (MDC) review of the Marlborough Regional Policy Statement (RPS), the Wairau Awatere Resource Management Plan (WARMMP), and the Marlborough Sounds Resource Management Plan (MSRMP) (referred to as ‘the plans’). The landscape review was undertaken in order to provide greater consistency in the above-mentioned *plans*, and to incorporate changes in the understanding of landscape since the original landscape studies of the 1990’s.

The Landscape Study has been carried out in three stages. The first stage comprises a regional landscape characterisation, by which the region’s landscapes are classified into broad land-types and character areas, drawing from land typing analysis conducted by Landcare Research. The second stage comprises an evaluation of the district’s different landscape values, including the identification of landscapes in accordance with Sections 5, 6 and 7 of the Resource Management Act (RMA) 1991. These landscapes include:

- coastal and riverine ‘natural character’ landscapes; section 6(a)
- outstanding natural features and landscapes; section 6(b)
- heritage landscapes; section 6(f)
- landscapes and features with high amenity value; section 7(c).

The third stage of the Landscape Study has involved engagement with affected landowners and stakeholders, most notably on the conclusions of Stage 2. This consultation was firstly targeted at affected landowners (i.e. a landowner who had outstanding natural features or landscapes, or landscapes and features with high amenity on their land). Consultation then extended to target other interested stakeholders.

Both the characterisation and evaluation stages of the Landscape Study essentially build on the Region’s previous landscape assessments and existing data in the public realm. Aspects of landscape identified in recent case law are considered as well as advances in understanding of the concept of ‘landscape’ since the introduction of the RMA 1991 and the New Zealand Coastal Policy Statement (NZCPS) 2010. It is understood that outputs from all stages will be used by MDC to inform the RPS review and second generation versions of *the plans* in accordance with its statutory requirements.

## Approach of Study

### LANDSCAPE CHARACTERISATION AIMS AND OBJECTIVES

Currently the Marlborough RPS and its *plans* contain generally good landscape descriptions. However, the descriptions are not comprehensive nor consistent across all the plans and, in some instances, are not clearly mapped. Also, there have been substantial recent landscape changes arising from both land and water use in some locations. The landscape characterisation in this Landscape Study updates the earlier descriptions and provides consistent descriptions across the region. It highlights the landscape attributes evaluated in stage two of the Landscape Study.

Characterisation objectives are as follows:

- Objective 1:** To review the ecosystem/land-typing in the existing *plans* and extend the Landcare Research land typing to cover all of Marlborough;
- Objective 2:** To review and refine all relevant data sources that contribute to landscape character assessment including aerial photography, Geographic Information System (GIS) data bases and local sources;
- Objective 3:** To rework the current landscape descriptions, based on objectives 1 and 2, to provide a consistent explanation of the varied Marlborough landscapes;
- Objective 4:** To map and describe the region’s landscape character areas.

Landscape characterisation is an increasing focus of study overseas and under the RMA 1991 in New Zealand. It considers all landscapes and provides a sound descriptive and analytical basis for understanding landscape diversity, attributes

and change. It includes seascapes. Landscape characterisation provides a context and justification for evaluating of special landscapes (i.e. Outstanding Natural Landscapes). Therefore, the purpose of the landscape characterisation study is to provide a largely descriptive and objective foundation for landscape evaluation, which involves value judgements. Both these aspects of the Landscape Study will later inform the selection of appropriate management mechanisms.

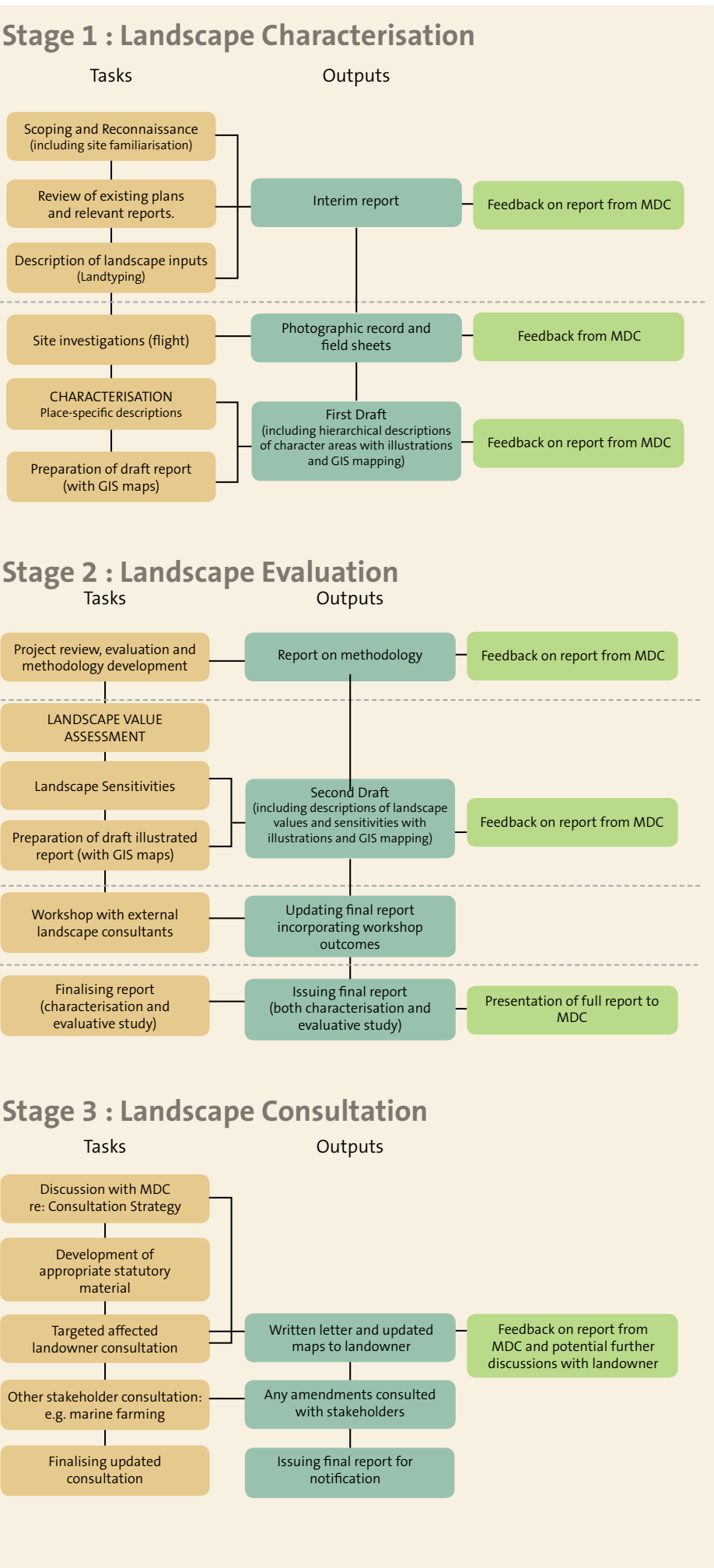
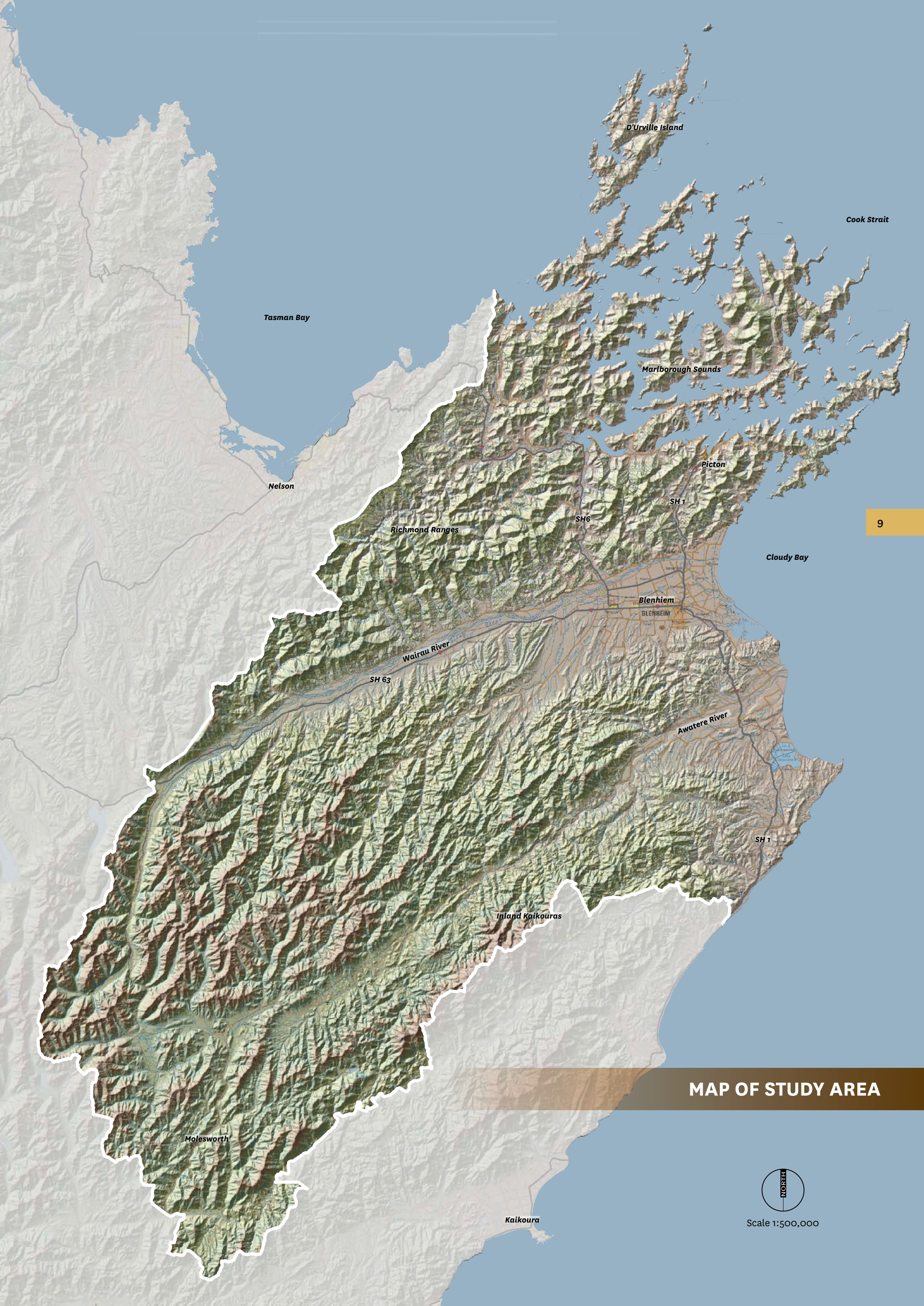
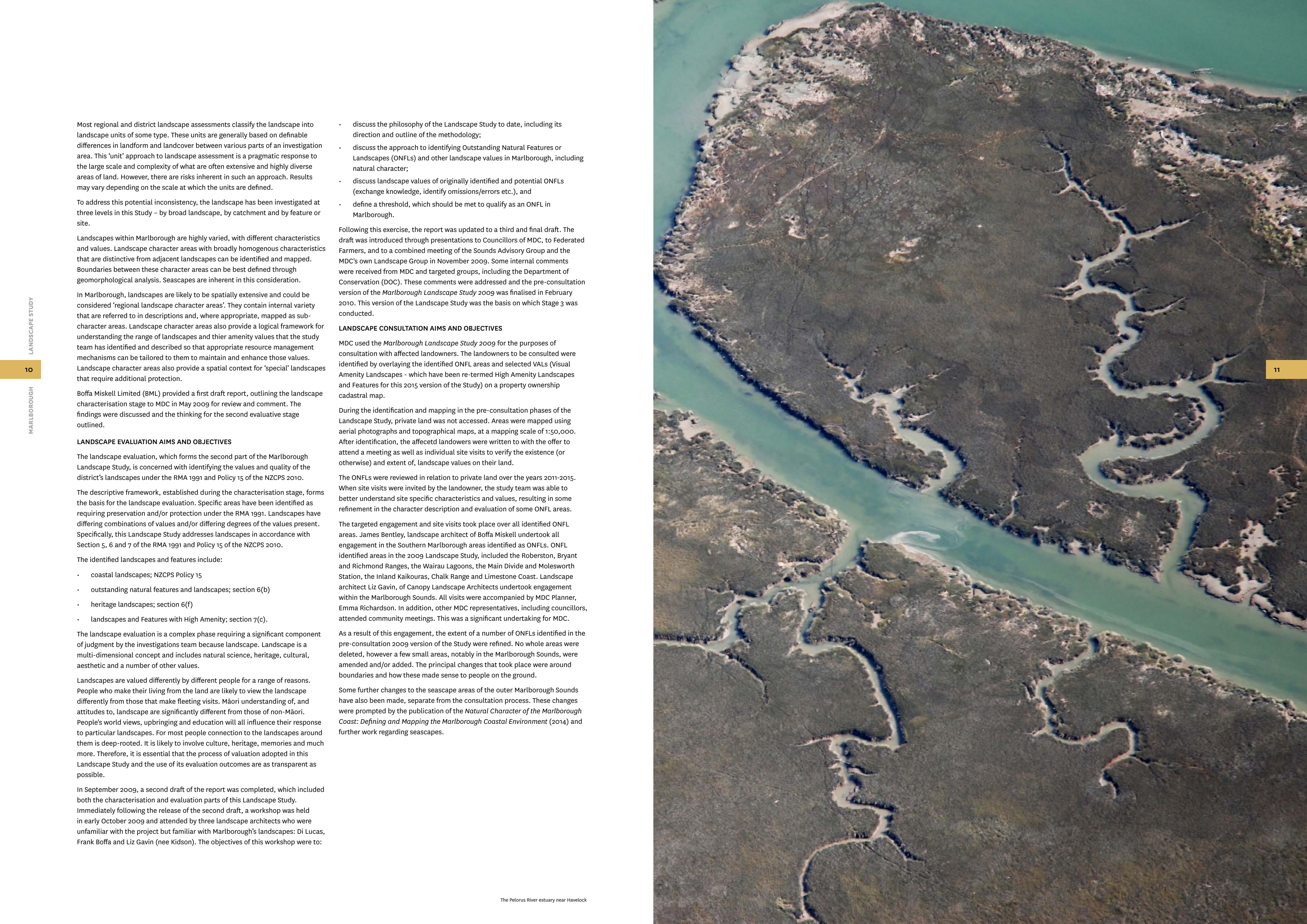


Diagram 1: Various stages of completion of the Marlborough Landscape Study 2015.







Most regional and district landscape assessments classify the landscape into landscape units of some type. These units are generally based on definable differences in landform and landcover between various parts of an investigation area. This ‘unit’ approach to landscape assessment is a pragmatic response to the large scale and complexity of what are often extensive and highly diverse areas of land. However, there are risks inherent in such an approach. Results may vary depending on the scale at which the units are defined.

To address this potential inconsistency, the landscape has been investigated at three levels in this Study – by broad landscape, by catchment and by feature or site.

Landscapes within Marlborough are highly varied, with different characteristics and values. Landscape character areas with broadly homogenous characteristics that are distinctive from adjacent landscapes can be identified and mapped. Boundaries between these character areas can be best defined through geomorphological analysis. Seascapes are inherent in this consideration.

In Marlborough, landscapes are likely to be spatially extensive and could be considered ‘regional landscape character areas’. They contain internal variety that are referred to in descriptions and, where appropriate, mapped as sub-character areas. Landscape character areas also provide a logical framework for understanding the range of landscapes and thier amenity values that the study team has identified and described so that appropriate resource management mechanisms can be tailored to them to maintain and enhance those values. Landscape character areas also provide a spatial context for ‘special’ landscapes that require additional protection.

Boffa Miskell Limited (BML) provided a first draft report, outlining the landscape characterisation stage to MDC in May 2009 for review and comment. The findings were discussed and the thinking for the second evaluative stage outlined.

LANDSCAPE EVALUATION AIMS AND OBJECTIVES

The landscape evaluation, which forms the second part of the Marlborough Landscape Study, is concerned with identifying the values and quality of the district’s landscapes under the RMA 1991 and Policy 15 of the NZCPS 2010.

The descriptive framework, established during the characterisation stage, forms the basis for the landscape evaluation. Specific areas have been identified as requiring preservation and/or protection under the RMA 1991. Landscapes have differing combinations of values and/or differing degrees of the values present. Specifically, this Landscape Study addresses landscapes in accordance with Section 5, 6 and 7 of the RMA 1991 and Policy 15 of the NZCPS 2010.

The identified landscapes and features include:

- coastal landscapes; NZCPS Policy 15
- outstanding natural features and landscapes; section 6(b)
- heritage landscapes; section 6(f)
- landscapes and Features with High Amenity; section 7(c).

The landscape evaluation is a complex phase requiring a significant component of judgment by the investigations team because landscape. Landscape is a multi-dimensional concept and includes natural science, heritage, cultural, aesthetic and a number of other values.

Landscapes are valued differently by different people for a range of reasons. People who make their living from the land are likely to view the landscape differently from those that make fleeting visits. Māori understanding of, and attitudes to, landscape are significantly different from those of non-Māori. People’s world views, upbringing and education will all influence their response to particular landscapes. For most people connection to the landscapes around them is deep-rooted. It is likely to involve culture, heritage, memories and much more. Therefore, it is essential that the process of valuation adopted in this Landscape Study and the use of its evaluation outcomes are as transparent as possible.

In September 2009, a second draft of the report was completed, which included both the characterisation and evaluation parts of this Landscape Study. Immediately following the release of the second draft, a workshop was held in early October 2009 and attended by three landscape architects who were unfamiliar with the project but familiar with Marlborough’s landscapes: Di Lucas, Frank Boffa and Liz Gavin (nee Kidson). The objectives of this workshop were to:

- discuss the philosophy of the Landscape Study to date, including its direction and outline of the methodology;
- discuss the approach to identifying Outstanding Natural Features or Landscapes (ONFLs) and other landscape values in Marlborough, including natural character;
- discuss landscape values of originally identified and potential ONFLs (exchange knowledge, identify omissions/errors etc.), and
- define a threshold, which should be met to qualify as an ONFL in Marlborough.

Following this exercise, the report was updated to a third and final draft. The draft was introduced through presentations to Councillors of MDC, to Federated Farmers, and to a combined meeting of the Sounds Advisory Group and the MDC’s own Landscape Group in November 2009. Some internal comments were received from MDC and targeted groups, including the Department of Conservation (DOC). These comments were addressed and the pre-consultation version of the *Marlborough Landscape Study 2009* was finalised in February 2010. This version of the Landscape Study was the basis on which Stage 3 was conducted.

LANDSCAPE CONSULTATION AIMS AND OBJECTIVES

MDC used the *Marlborough Landscape Study 2009* for the purposes of consultation with affected landowners. The landowners to be consulted were identified by overlaying the identified ONFL areas and selected VALs (Visual Amenity Landscapes - which have been re-termed High Amenity Landscapes and Features for this 2015 version of the Study) on a property ownership cadastral map.

During the identification and mapping in the pre-consultation phases of the Landscape Study, private land was not accessed. Areas were mapped using aerial photographs and topographical maps, at a mapping scale of 1:50,000. After identification, the affectd landowers were written to with the offer to attend a meeting as well as individual site visits to verify the existence (or otherwise) and extent of, landscape values on their land.

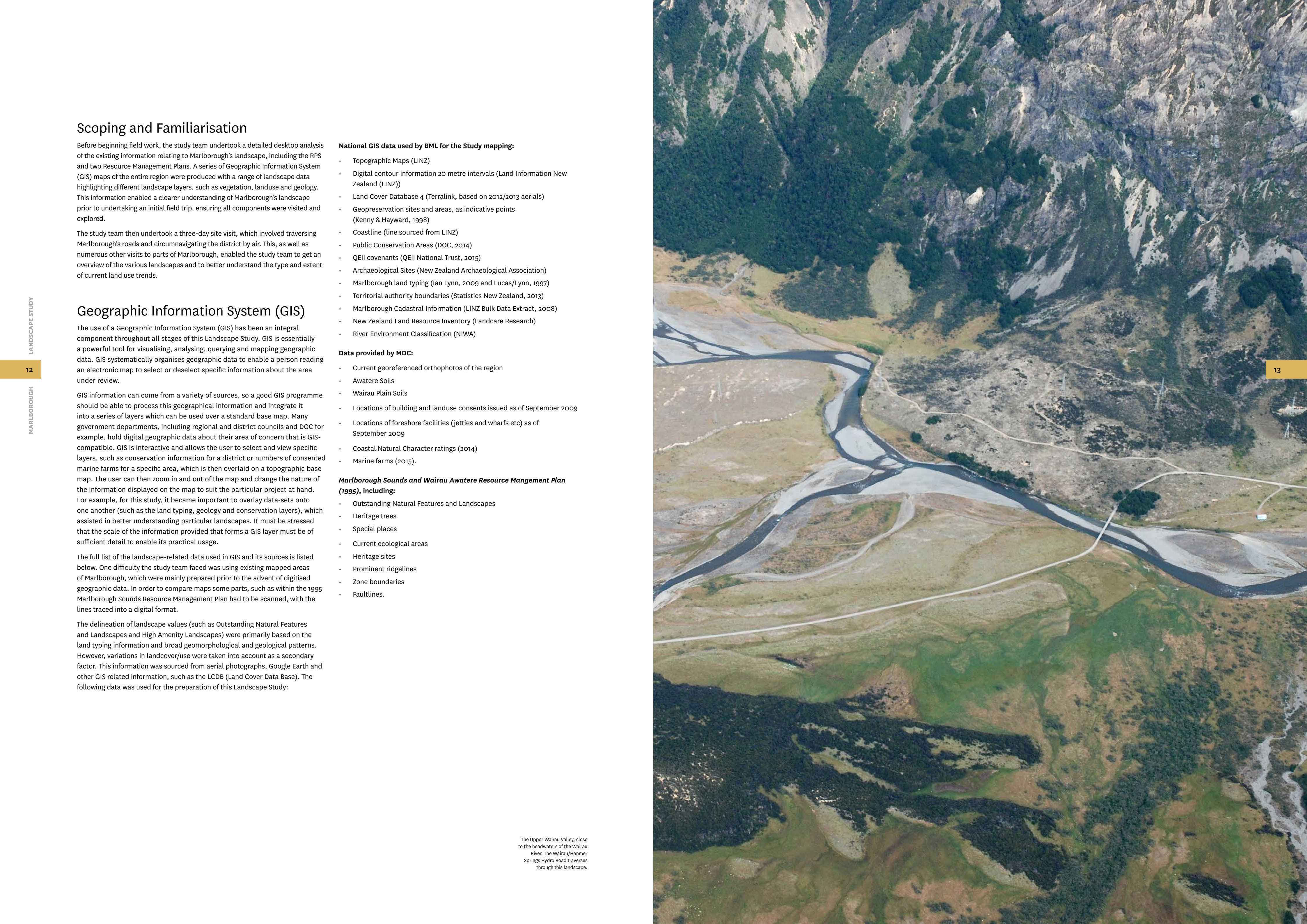
The ONFLs were reviewed in relation to private land over the years 2011-2015. When site visits were invited by the landowner, the study team was able to better understand site specific characteristics and values, resulting in some refinement in the character description and evaluation of some ONFL areas.

The targeted engagement and site visits took place over all identified ONFL areas. James Bentley, landscape architect of Boffa Miskell undertook all engagement in the Southern Marlborough areas identified as ONFLs. ONFL identified areas in the 2009 Landscape Study, included the Roberston, Bryant and Richmond Ranges, the Wairau Lagoons, the Main Divide and Molesworth Station, the Inland Kaikouras, Chalk Range and Limestone Coast. Landscape architect Liz Gavin, of Canopy Landscape Architects undertook engagement within the Marlborough Sounds. All visits were accompanied by MDC Planner, Emma Richardson. In addition, other MDC representatives, including councillors, attended community meetings. This was a significant undertaking for MDC.

As a result of this engagement, the extent of a number of ONFLs identified in the pre-consultation 2009 version of the Study were refined. No whole areas were deleted, however a few small areas, notably in the Marlborough Sounds, were amended and/or added. The principal changes that took place were around boundaries and how these made sense to people on the ground.

Some further changes to the seascape areas of the outer Marlborough Sounds have also been made, separate from the consultation process. These changes were prompted by the publication of the *Natural Character of the Marlborough Coast: Defining and Mapping the Marlborough Coastal Environment* (2014) and further work regarding seascapes.





The Upper Wairau Valley, close to the headwaters of the Wairau River. The Wairau/Hanmer Springs Hydro Road traverses through this landscape.

## Scoping and Familiarisation

Before beginning field work, the study team undertook a detailed desktop analysis of the existing information relating to Marlborough's landscape, including the RPS and two Resource Management Plans. A series of Geographic Information System (GIS) maps of the entire region were produced with a range of landscape data highlighting different landscape layers, such as vegetation, landuse and geology. This information enabled a clearer understanding of Marlborough's landscape prior to undertaking an initial field trip, ensuring all components were visited and explored.

The study team then undertook a three-day site visit, which involved traversing Marlborough's roads and circumnavigating the district by air. This, as well as numerous other visits to parts of Marlborough, enabled the study team to get an overview of the various landscapes and to better understand the type and extent of current land use trends.

## Geographic Information System (GIS)

The use of a Geographic Information System (GIS) has been an integral component throughout all stages of this Landscape Study. GIS is essentially a powerful tool for visualising, analysing, querying and mapping geographic data. GIS systematically organises geographic data to enable a person reading an electronic map to select or deselect specific information about the area under review.

GIS information can come from a variety of sources, so a good GIS programme should be able to process this geographical information and integrate it into a series of layers which can be used over a standard base map. Many government departments, including regional and district councils and DOC for example, hold digital geographic data about their area of concern that is GIS-compatible. GIS is interactive and allows the user to select and view specific layers, such as conservation information for a district or numbers of consented marine farms for a specific area, which is then overlaid on a topographic base map. The user can then zoom in and out of the map and change the nature of the information displayed on the map to suit the particular project at hand. For example, for this study, it became important to overlay data-sets onto one another (such as the land typing, geology and conservation layers), which assisted in better understanding particular landscapes. It must be stressed that the scale of the information provided that forms a GIS layer must be of sufficient detail to enable its practical usage.

The full list of the landscape-related data used in GIS and its sources is listed below. One difficulty the study team faced was using existing mapped areas of Marlborough, which were mainly prepared prior to the advent of digitised geographic data. In order to compare maps some parts, such as within the 1995 Marlborough Sounds Resource Management Plan had to be scanned, with the lines traced into a digital format.

The delineation of landscape values (such as Outstanding Natural Features and Landscapes and High Amenity Landscapes) were primarily based on the land typing information and broad geomorphological and geological patterns. However, variations in landcover/use were taken into account as a secondary factor. This information was sourced from aerial photographs, Google Earth and other GIS related information, such as the LCDB (Land Cover Data Base). The following data was used for the preparation of this Landscape Study:

### National GIS data used by BML for the Study mapping:

- Topographic Maps (LINZ)
- Digital contour information 20 metre intervals (Land Information New Zealand (LINZ))
- Land Cover Database 4 (Terralink, based on 2012/2013 aerials)
- Geopreservation sites and areas, as indicative points (Kenny & Hayward, 1998)
- Coastline (line sourced from LINZ)
- Public Conservation Areas (DOC, 2014)
- QEII covenants (QEII National Trust, 2015)
- Archaeological Sites (New Zealand Archaeological Association)
- Marlborough land typing (Ian Lynn, 2009 and Lucas/Lynn, 1997)
- Territorial authority boundaries (Statistics New Zealand, 2013)
- Marlborough Cadastral Information (LINZ Bulk Data Extract, 2008)
- New Zealand Land Resource Inventory (Landcare Research)
- River Environment Classification (NIWA)

### Data provided by MDC:

- Current georeferenced orthophotos of the region
- Awatere Soils
- Wairau Plain Soils
- Locations of building and landuse consents issued as of September 2009
- Locations of foreshore facilities (jetties and wharfs etc) as of September 2009
- Coastal Natural Character ratings (2014)
- Marine farms (2015).

### Marlborough Sounds and Wairau Awatere Resource Mangement Plan (1995), including:

- Outstanding Natural Features and Landscapes
- Heritage trees
- Special places
- Current ecological areas
- Heritage sites
- Prominent ridgelines
- Zone boundaries
- Faultlines.



# LANDSCAPE MEANING AND MARLBOROUGH'S STATUTORY CONTEXT

The Environment Court has commented that “A precise definition of ‘landscape’ cannot be given ...” [WESI vs QLDC [2000] NZRMA 59].

From the first use of the word ‘landscape’ in the late 16<sup>th</sup> century its definition has evolved. It is now accepted that landscape is far more than scenic views. Landscape has been described as the reflection of physical and cultural processes [www.NZILA.co.nz]. In the Study, the Marlborough landscapes have been assessed as expressions of environmental processes, human activity and regional identity.

The landscape’s physical complexity is further complicated by the ways in which people experience, use and value it. Many visitors and residents enjoy the landscape from a general aesthetic and cultural perspective. Those deriving a living from the land may also value its economic importance and, in many cases, its tidy and productive appearance. Conservationists, on the other hand, are likely to place greater emphasis on biodiversity and ecological processes.

Everyone sees, feels and understands the landscape differently. The landscape is required to simultaneously serve social, aesthetic, environmental and economic functions. Everyone has an investment in its future. It triggers strong emotions. However, the cost of managing the landscape often falls back on the private landowners. It is little wonder that attempts to address landscape management are fraught with difficulty.

For the purpose of these investigations, the study team has interpreted ‘landscapes’ as:

***‘the physical and characteristic products of the interaction between human societies and culture with the natural environment. They can be considered to be spatial areas where place-specific elements and processes reflect a particular natural and cultural history. This unique combination of attributes may be expressed visually or in terms of meaning and spirituality. Because the underlying human and natural processes are subject to change and evolution, landscapes are dynamic systems’.***

The RMA 1991’s references to landscape are both explicit and implicit. In “*Landscape Planning Guide - For Peri-Urban and Rural Areas*”, Raewyn Peart suggests that the RMA 1991:

*...‘enables the identification of four broad categories of landscapes which merit more dedicated focus in regional and district planning, each with slightly different management objectives: outstanding natural landscapes, landscapes which contribute to visual amenity and/or the quality of the environment, areas of the coastal environment with high natural character and areas with cultural or heritage significance. These categories are overlapping and interconnected and may not always have distinct boundaries.’*

She goes on to observe that

*“Although landscape management, like any other environmental management exercise, is necessarily going to focus on some priority areas, there is a need to be concerned for the maintenance and enhancement of landscape quality everywhere. All landscapes arguably merit some management consideration under the ‘sustainable management’ purpose of the RMA and the requirement to avoid, remedy or mitigate adverse effects of activities on the environment.”*

From a technical landscape perspective, the purpose of management may be described as:

- a) avoiding the inappropriate erosion of the intrinsic characteristics and qualities that have built up over time through the interplay of natural and cultural processes; and
- b) enabling development and change to occur that avoids the loss of landscape coherence, diversity and cultural identity and meaning.

This landscape perspective is contained within the RMA under a number of matters of national importance (Section 6) and other matters to which MDC is required to have particular regard (Section 7). The key sections of the RMA that relate to ‘landscape’ are the ‘*natural character of the coastal environment, wetlands, and lakes and rivers and their margins*’ (Section 6(a)), ‘*outstanding natural features and landscapes*’ (Section 6(b)), ‘*historic heritage*’ (Section 6(f)) and ‘*landscapes which contribute to visual amenity and/or environmental quality*’ (Sections 7(c) and (f)). ‘*Protection of areas of significant indigenous*

*vegetation and significant habitats of indigenous fauna*’ (Section 6(c)) and ‘*the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wahi tapu, and other taonga*’ (Section 6(e)) are also clearly linked to a broad understanding of landscape.

Natural features and landscapes that do not meet the criteria for being ranked as ‘outstanding’ can, nonetheless, qualify for protection under other clauses in Section 6 or be required to be ‘*maintained and enhanced*’ either as ‘*amenity values*’ as part of the wider ‘environment’ Section 7(c) or Section 7(f). Thus, for example, coastal landscapes or rivers or lakes that are not ‘*outstanding landscapes*’ would still be required to have their ‘*natural character*’ preserved under 6(a). Similarly, as would areas of indigenous vegetation or habitats of indigenous fauna that are not considered to be ‘*outstanding natural features*’ under Section 6(b) will require protection under Section 6(c).

All of these sections of the RMA are relevant to this Landscape Study. However, it is Section 6(b), relating to ‘outstanding natural features and landscapes’, that has proved particularly problematic. More than twenty years after the introduction of the RMA there appears to be a convergence in the interpretation of Section 6(b) between ‘practitioner’ views on what the concept of ‘landscape’ embraces, and the general public’s interest, awareness and concern for ‘landscape’. Various Environment Court cases have reinforced the view that it is appropriate to consider a range of criteria (or factors) in landscape assessments. These include but are not restricted to:

- the natural science factors - the geological, topographical, ecological and dynamic components of the landscape;
- aesthetic values including memorability and naturalness;
- expressiveness (legibility): how obviously the landscape demonstrates the formative processes leading to it;
- transient values: occasional presence of wildlife or its values at certain times of the day or year;
- whether the values are shared and recognised;
- value to tangata whenua;
- historical associations.

The landscape assessment carried out for this Study reflects this wide-ranging understanding of landscape. Through the landowner and stakeholder engagement process, further values and characteristics of areas assisted the study team to understand the Marlborough landscape in depth.

## STATUTORY MARLBOROUGH PLANS

Marlborough is administered by a unitary authority, the Marlborough District Council (MDC). The statutory documents relevant to this Landscape Study, as well as the RMA, include the following:

- The Marlborough Regional Policy Statement (RPS);
- The Wairau Awatere Resource Management Plan (WARMP);
- The Marlborough Sounds Resource Management Plan (MSRMP).

This technical Landscape Study can be used by MDC to inform the review of the existing landscape-related issues, policies and objectives within these documents.

The RPS, in the glossary, page 94, states that landscape ‘*means natural and built scenery in a broad view*’.

The WARMP Section 5.1 refers to ‘*indigenous, working and built landscapes*’ and defines landscapes as ‘*the visual expression of physical, biological and cultural processes both past and present*’.

The MSRMP does not appear to define landscape although in Volume One, Appendix One, page 1 the Plan states that: ‘*The dimensions of landscape are landscape character and landscape quality*’.

In section 5.1 the MSRMP notes that: ‘*The Marlborough Sounds has landscapes which are unique in New Zealand and are valued for their semi-wilderness aspects, scenic beauty, recreational capability and their social, economic and cultural utility*’.

In this Study, these various interpretations have been taken into account in producing a consistent and cohesive description and evaluation of the Marlborough landscape.

# ASSIGNMENT OF VALUES TO THE LANDSCAPE

The New Zealand landscape has an international reputation as being exceptional. Ranging from the volcanic cones of Rangitoto and Tongariro in the North Island to the Marlborough Sounds, Aoraki/Mount Cook and the sheer walls and waterfalls of Milford Sound in the South Island, all are landform icons which grace tourist brochures and underpin New Zealand’s reputation for an amazing diversity of natural landscapes and seascapes [Molloy, L. *et al* (2002), p6 ]. This high landscape quality and diversity is increasingly recognised as one of the country’s key attributes and the Marlborough region is as diverse as any New Zealand region. Natural features within Marlborough range from the drowned river valleys of the Marlborough Sounds to the open braided rivers of the Wairau and Awatere valleys to the high rugged peaks of the Inland Kaikoura Ranges. The difficulty the study team faced during the landscape evaluation phase lay in determining whether these landscapes meet the threshold of being ‘outstanding at a district level’.

All landscapes have values. The study team used the Stage 1 character descriptions as a basis for value assessment. The descriptions of land types provide useful data on the attributes that contribute to landscape character. However, it gives little assistance to the identification of values attributed to the landscape. If a rational decision on what constitutes an outstanding natural feature or landscape is to be made, then the criteria, or justification must be explicit. Consequently, the Stage 2 evaluation phase was complex, involving the review of a range of existing information, including existing landscape studies of the district, literature reviews and other research documents. The considerable amount of information from different sources required the study team to use its professional judgement in identifying and evaluating the region’s landscape values. No other specialist assessments such as land use, tangata whenua, economics or historic values were commissioned as part of this Landscape Study.

As part of this Landscape Study, the study team reviewed the landscape character and value assessments that formed the basis of existing landscape policies in the RPS and the two resource management plans. Gaps were identified, which primarily related to the variable depth of information provided on landscape values. Other values such as the extent of the coastal environment and degree of natural character (Section 6a), heritage landscapes (Section 6f) and High Amenity Landscapes (Section 7c and 7f) were only partially identified in the previous landscape assessments. These other values had been assessed in relation to smaller areas of Marlborough but had not been addressed as a collective whole.

As mentioned previously, there are various different ways in which landscapes may be appreciated and thresholds for quality determined. The range of criteria that the Environment Court has reinforced for landscape practitioners to consider when valuing landscapes is referred to as the ‘amended Pigeon Bay criteria or factors’ (C32/1999 – Pigeon Bay Aquaculture Ltd v CRC and C180/1999 – Waikaitipu Env. Society v QLDC). The criteria or factors include: 1) the natural science factors - the geological, topographical, ecological and dynamic components of the landscape; 2) aesthetic values including memorability and naturalness; 3) expressiveness (legibility): how obviously the landscape demonstrates the formative processes leading to it; 4) transient values: occasional presence of wildlife or its values at certain times of the day or of the year; 5) whether the values are shared and recognised; 6) value to tangata whenua; and 7) historical associations.

There is now a level of acceptance in the use of these criteria as an assessment framework, however it is also increasingly recognised by practitioners that while the criteria are useful, they also have certain limitations. While the criteria were not intended to form a definitive or ‘complete’ list of landscape values, this is how they have often been used by assessors. Many of the criteria actually overlap and some could be more usefully seen as subsets of one another rather than as separate value categories. This can be confusing and lead to some values being given more weight than others, or ‘double-counting’.

The New Zealand Institute of Landscape Architects (NZILA 2010, p3) has recommended reordering the Pigeon Bay criteria into three categories, focusing on the landscapes’ broad biophysical, sensory and associative values. Biophysical, sensory and associative attributes can all be surveyed in a relatively objective way, using techniques that others can understand, repeat, review and critique. Condensing the Pigeon Bay criteria or factors into these three broad categories reduces the risk of emphasising some criteria at the cost of

others and enables assessors to interpret the landscape values with validity and reliability.

International landscape values such those used by UNSECO to value World Heritage Sites consider a variety of factors but, essentially, they separate the landscape into two aspects: natural landscapes and cultural landscapes. There are a number of criteria that a site [or property] needs to meet. For cultural landscapes this includes: creativity, cultural tradition, events/ideas/beliefs, as well as historic land use patterns. For natural landscapes the criteria extends to natural beauty/aesthetics, geological processes/features/landforms and natural habitats and biodiversity. Each criteria is also considered in terms of authenticity and integrity.

The UNSECO measure of ‘authenticity’ states: ‘*The ability to understand the value attributed to the heritage depends on the degree to which information sources about this value may be understood as credible or truthful. Knowledge and understanding of these sources of information, in relation to original and subsequent characteristics of the cultural heritage, and their meaning are requisite bases for assessing all aspects of authenticity.*’

The UNSECO measure of ‘integrity’ states: ‘*Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. Examining the conditions of integrity, therefore requires assessing the extent to which the property: a) includes all elements necessary to express its outstanding universal value; b) is of adequate size to ensure the complete representation of the features and processes which convey the property’s significance; and c) suffers from adverse effects of development and/or neglect.*’

Based on the developing methodology of valuing landscapes, and the review undertaken by the NZILA, the framework for the Stage 2 evaluation component of this Landscape Study focuses on three aspects of landscape, namely:

1. ***Biosphycial aspects, which incorporate a landscape’s natural science elements, including its geological, ecological and biological elements. This part of the analysis involves more objective and quantifiable data;***
2. ***Sensory aspects, which involve aesthetics, natural beauty, transient matters as well as distinctive smells and sounds. This part of the analysis involves judgmental and subjective interpretations of a landscape’s or feature’s aesthetics; and***
3. ***Associative aspects, which involve cultural (tangata whenua) and historic values as well as shared and recognised attributes.***

In the evaluation summary of each character area, the study team’s judgements of ‘authenticity’ and ‘integrity’ will be explained.

A breakdown of the methodology is described over the page:



Boat in the Marlborough Sounds.



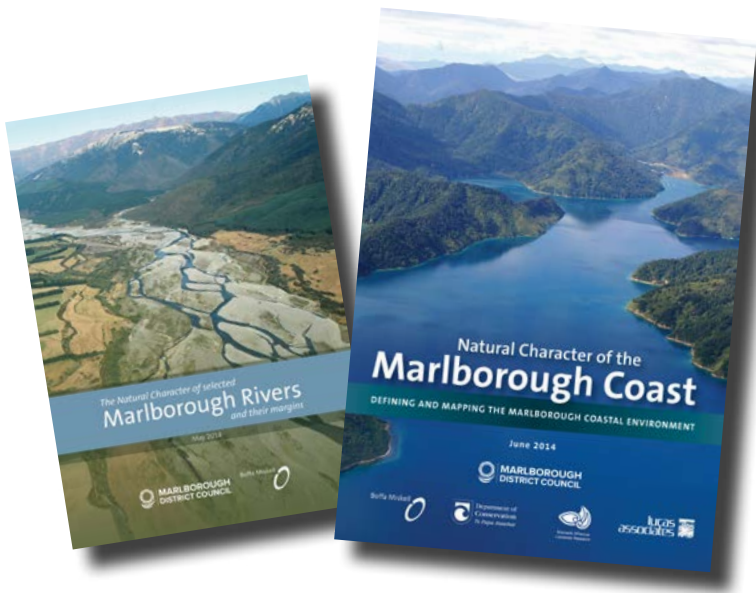
# LANDSCAPE VALUES UNDER THE RMA

## NATURAL CHARACTER (Section 6a)

Refer to the following separate studies:

Right image below: *Natural Character of the Marlborough Coast: Defining and mapping the Marlborough Coastal Environment* (June 2014)

Left image below: *The Natural Character of Selected Marlborough Rivers and their Margins* (May 2014)



## OUTSTANDING NATURAL FEATURES AND LANDSCAPES (SECTION 6b)

### BIOPHYSICAL VALUES

#### GEOLOGICAL VALUES

The Environment Court described ‘natural sciences’ in the Queenstown decision (C180/99) as “*the geological, topographical, ecological and dynamic components of the landscape*”. Natural science values were considered important if a landform (including geology and soils) and/or land cover (in particular, native vegetation communities, wildlife and ecosystems) displayed particular representativeness or rarity within the region or district. Representative natural features and landscapes are clearly and recognisably characteristic of the area, district or region. The key components of the landscape will be present in a way that generally defines the character of the place. Natural features in a good state of preservation are representative and characteristic of the natural geological processes and diversity of the region or district. Natural features are unique or rare in the region or nationally, if few comparable examples exist. Natural features may be a landscape feature such as Lake Chalice or an element/component of the landscape such as the Inland Kaikoura Range.



The form of the chalk cliffs at White Bluffs/Te Parinui o Whiti are expressive of geological processes including formation of sedimentary rocks, uplift and erosion.

In the past century, almost all areas protected in New Zealand have been identified for aesthetic or biotic values. While this has resulted in the protection of a large number of sites of significance, it has also resulted in considerable bias in what has been preserved. New Zealand has a unique and extremely diverse natural landform, geological and soil heritage. This is a result of its long and complex geological history, its climate and location on a volcanically and tectonically active boundary between two of the world’s major crustal plates. The Geopreservation Inventory (refer to Appendix 3) lists information on all the internationally, nationally and many of the regionally important earth science sites throughout New Zealand.

The overriding objective of geological conservation in New Zealand should be to ensure that the broad diversity of geologic features, landforms, soils sites and active physical processes, the integrity of the best representative examples are protected. Such protection would enable better understanding of New Zealand’s unique geological history, the development of its landforms and evolution of its biota.

Another aspect to assessing geological values lies in ‘readability’ or ‘how legible’ or expressive the geology is in the landscape. Overseas visitors often remark that New Zealand landscapes provide a wonderful lesson on physical geography. Past processes are often clearly seen and understood, and present geological activity, such as volcanoes, glaciers or rock slides, are clearly evident in many places. Legibility need not necessarily relate to ‘attractiveness’, but clarity of the geological processes is important.

Under the amended Pigeon Bay factors, ‘legibility’ is a stand alone criterion and is considered to be an essential quality of a landscape. For this Landscape Study, the study team has incorporated the legibility evaluation under geological values, while mindful that other values are also interrelated with legibility. The Environment Court described this criterion as “how obviously the landscape demonstrates the formative processes leading to it” (Barton, 2005), in other words, the degree to which the processes (geomorphological, hydrological, climate, vegetation, coastal and cultural) are actively displayed in the landscape. Some landscapes (or natural features) clearly express past natural and cultural processes. However, landscapes or features that are significant in terms of their geomorphological values, may not be expressive of their formative processes, whilst others that are highly expressive may not have a notable geomorphological value. Natural features and landscapes that exemplify the particular processes that formed them may also have strong historical connotations and a distinctive sense of place.

#### Authenticity of Information Sources used to inform the evaluation

The study team found that there was a large amount of material relating to the geology and geomorphology of Marlborough. All of this material appeared to come from credible sources and was generally scientifically comprehensive and sound. The Land typing report by Landcare Research was considered the most helpful, as this report was prepared specifically for this Landscape Study. The main sources of information used were:

- Land Typing provided by Ian Lynn (Landcare Research, 2009 and Lucas/ Landcare Research 1997)
- Geopreservation Sites (Hayward, Kenny and Johnson, 1999)
- Geology and Soil Maps (MDC)
- Geology of the Wellington & Nelson areas (Begg, Rattenbury, 2000 & 1998)
- River Environment Classification (NIWA)
- Study team knowledge.

#### ECOLOGICAL VALUES

Marlborough has a vast number of small protected areas, as well as numerous conservation areas of national significance. Information available from various documents, including the Conservation Management Strategy, the Coastal Study [Boffa Miskell *et al*, 2014] and MDC’s South Marlborough Significant Natural Areas project was used to inform the study team about biological values in the region. Several other publications (see Appendix 1, Bibliography) provided valuable information about flora and botanical values, freshwater resources, and wildlife.

There are a little over 20 ecological districts within Marlborough, ranging from the Sounds and Cook Strait to the Wither Hills and Flaxbourne areas. Together, the region’s climate and geology have created a wide diversity of habitats and this diversity is reflected in the character of the native vegetation found. Marlborough harbours extensive areas of mixed forests (beeches, podocarps and broadleaf trees), shrublands (including ‘grey scrub’) and grasslands (silver tussock and snow tussock). The scale and representativeness of these areas are important in considering an areas outstandingness. In terms of the marine environment and specifically, the Marlborough Sounds, the waters harbour a myriad of habitats and environments, due to the diverse geomorphic landscape (e.g. reefs and offshore rocks and stacks of the Outer Sounds) to the relatively simple (e.g. benthic communities) of the more sheltered, enclosed bays.

Another aspect of ecological values relates to a landscape’s transient nature. Transient values describe the contribution which wildlife, climate and hydrological processes make to landscape. A landscape may gain significance due to the way in which wildlife seasonally (or at times in the day) gathers or occupies a specific area. Similarly, locations that benefit from the rising or setting sun, time of day and seasons of the year may be elevated in value due to this ‘transient characteristic’. Transient values have associations with sensory and associative values.

#### Authenticity of Information Sources used to inform the evaluation

The study team found that the majority of sources relating to the biology and ecology of Marlborough was comprehensive and sound, although varied in spatial context (often being focused towards Ecological Districts rather than Territorial Districts). The two Significant Natural Areas Projects for South and North Marlborough proved to be helpful, as did many Department of Conservation sources, such as the Conservation Management Strategy. The Land typing report by Landcare Research was also considered helpful for biological research, as was the coastal natural character study (Boffa Miskell *et al*. 2014). The main sources of information used were:

- Land typing provided by Ian Lynn (Landcare Research, 2009 and Lucas/ Landcare Research 1997)
- Geology and Soil Maps (MDC)
- South and North Marlborough Significant Natural Areas Projects (2005 & 2009 respectively)
- Department of Conservation, Protected Areas (DOC, 2009)
- Natural Character of the Marlborough Coast (Boffa Miskell *et al*, 2014)
- Natural Character of Selected Marlborough Rivers and their margins (Boffa Miskell, 2014)
- Ecologically Significant Marine Sites in Marlborough (Davidson/DOC/MDC, 2011)
- Conservation Management Strategy (DOC, 1993)
- A natural character framework for the Marlborough Sounds (DOC, 2004)
- Study team knowledge, including BML ecologists.



The biologically rich Pelorus Sound.

#### Biophysical values ‘outstanding test’

For a feature or landscape to rate highly for biophysical values and characteristics, the outstanding test is:

**‘a feature or landscape that contains exceptional and/ or very high geological and/or ecological values. The intactness and legibility of a landform and its wider setting is essential in assessing geological values, particularly in terms of its ability to fully represent or express those geological features or processes that make it significant, such as tectonics or glacial activity. The representativeness of the ecology of an area, including its level of biodiversity, its spatial scale and sensitivity to landscape change is also critical to this test’.**

### SENSORY VALUES

#### AESTHETIC VALUES

The aesthetic value aspects considered by the Environment Court were described in the amended Pigeon Bay criteria as “including memorability and naturalness”. In its decision (C180/99) the Court discussed of the adequacy of this description and was of the view that traditional scenic and visual considerations may be underplayed. The court noted that considerations such as pleasantness raised in the RMA amenity definition with reference to Section 7(c) are also relevant.

The concept of vividness and visual coherence are also often used in relation to aesthetic values. For example, they were considered as contributors to the landscape’s visual quality in the *Wairau Awatere Landscape Assessment* (BML, 1996). The definitions of the following terms show that aesthetic factors are interrelated:

**Memorability:** the way in which experience of a landscape remains in the memory. Highly memorable landscapes comprise a key component of a person’s recall or mental map of a region or district. This is also often related to a landscape’s legibility and beauty.

**Naturalness:** natural features and landscapes appear largely uncompromised by modification and appear to comprise natural systems that are functional and healthy. Naturalness describes the perception of the predominance of nature in the landscape. A landscape may retain a high degree of aesthetic naturalness even though its natural systems are modified. Similarly, landscapes that have high ecological values may not necessarily display high qualities of visual naturalness.

**Vividness:** vivid landscapes are widely recognised across the community and beyond the local area and remain clearly in the memory; striking landscapes are symbolic of an area due to their recognisable and memorable qualities, including their landform.

**Coherence:** coherence describes the way in which the visual elements or components of any landscape come together. Landscapes with high levels of coherence will have their visual elements in harmony and reinforcing each other. They will have unity, whilst they may be either visually diverse or relatively simple in terms of their elements. They work together in terms of their composition. Natural systems are intact and aesthetically coherent and do not display significant visual signs of disharmony. The patterns of land cover and land use are largely in harmony with the underlying natural pattern of the landform of the area and there are no significant discordant elements of land cover or land use.

While natural features and landscapes are generally characterised by their landform and their land cover, the experience of some landscapes can be significantly influenced by other, sometimes ephemeral characteristics such as seasonal wildlife concentrations and breeding areas. Where these characteristics occur regularly, they become a recognised and integral part of the landscape, to the extent that some landscapes are widely recognised for their transient features. The common occurrence of transient features (for example the seasonal changes in the mountains or particular weather patterns and cloud formations) contribute to the character, qualities and values of the landscape. Some landscapes are widely recognised for their transient features and the contribution these make to the landscape.



The Oxford English Dictionary (2002) defines 'aesthetic' as 'concerned with beauty or the appreciation of beauty; of pleasing appearance'. This appreciation of beauty encompasses not only the visual aspects of a landscape but also other sensory experiences, such as sound, smell and touch. Many scientific studies have been undertaken to examine and quantify scenic beauty of landscapes'. A number of researchers<sup>2</sup> found that both a landscape's intrinsic physical properties (natural beauty) and/or cultural elements (relating to human creation) can result in aesthetic landscape quality. Areas identified as outstanding landscapes generally contain these favoured characteristics. However, significant visual signs of human modification, intervention or manipulation often detract from the visual 'wholeness' and the aesthetic qualities of a landscape.

#### OTHER SENSORY VALUES

Sensory elements of a landscape can extend beyond visual or aesthetic values. For instance, a landscape can portray auditory and odour stimuli that are just as important as the landscape's appearance. There is usually a congruence or coherence between sound, smell and visual stimuli that excites the senses, such as a the experience of being in a natural setting. Sensory values can be highly transient; from the morning chorus of waking birds in the bush to the fragrance of a meadow on a summer's evening. Weather patterns, seasons, tidal movements and time of day all stimulate our senses and are integral when assessing the sensory aspect of a landscape.

#### Authenticity of Information Sources used to inform the evaluation

The authenticity of the sources relating to aesthetics varied considerably, due to the high level of subjectivity relating to the term. The study team preferred the sources provided by MDC and the DOC for their completeness, as well their combined knowledge of the area. Other helpful sources included:

- previous landscape assessments (Wairau/Awatere Landscape Assessment (BML1996)) and relevant information within the MSRMP, WARMP
- site visits, study team knowledge and internet searches
- variety of relevant literature, pamphlets and booklets from Marlborough District Council and DOC.

#### Sensory values 'outstanding test'

For a feature or landscape to rate highly for sensory values and characteristics, the outstanding test is:

*'a feature or landscape that contains exceptional and/or very high aesthetic values (and may include non-visual sensory values). The integrity [refer to page 15] of an area includes reference to the level of visual coherence and the extent to which all components necessary for maintaining the sensory qualities of the area are included, such as the way in which a scenic body of water is linked to the qualities of the wider water catchment'.*

## ASSOCIATIVE VALUES

#### SHARED AND RECOGNISED VALUES

Certain natural features and landscapes are widely known and valued by the immediate and wider community for their contribution to a sense of place. This leads to a strong community association with or high public esteem for the place. The presence of existing protected sites is a key indicator of shared and recognised values. These values are closely associated with cultural heritage and tangata whenua values described below.

Research has shown that many professional landscape assessments have reflected fairly accurately the views of the general public. Nonetheless, it is fully accepted that in some circumstances the expert's perceptions may be different. Public perception exercises are often extremely costly and not always feasible as part of a landscape study. In many such studies there is no consensus between members of the public or different stakeholder groups.

Studies of Marlborough's literature and art stress the significance of both generic and specific landscapes and the extraordinary differences of scale found in the region's landscapes. For example, the poems written by Eileen Duggan are specific to a number of areas, including Tuamarina and the Wairau River, while some artists focus on the more ephemeral attributes in the landscape, such as light, vegetation and water patterns.

When making paintings, artists use colour, shape, form and tonality to express their 'observation' and 'perception' of the landscape. In this way, artists can transform the viewer's own perception of 'time' and 'place', exposing a meaningful insight about ourselves relevant to the environment. The importance of sense of place (genius loci) is apparent. Artists often articulate the scenic qualities of a place in terms such as patterns, rhythms, space, horizon, sky, weather, diversity, barren, empty, raw, sculptural, vivid, harsh. Marlborough paintings emphasise the specialness of their subject and often result in contemporary images with which the community can identify.

Tourism in Marlborough is important for the local economy. An analysis of visual material provided for visitors clearly shows that the Sounds, the mountain and dry hill backdrops, the plains and braided rivers, and vineyards all frequently appear in images. The most frequently 'referred to' places include Picton and the Queen Charlotte Sound; Havelock, Pelorus, French Pass and Kenepuru Sound and Blenheim and the Wairau Valley, which are often considered to be 'iconic landscapes' of the region. Views from principal corridors, such as state highways also increase the shared and recognised values of a landscape.

Conservation areas and popular recreation opportunities within them have been considered under this set of values. DOC is one of the largest landholders in New Zealand, with over 480,000 hectares of conservation land in Marlborough; located predominantly within the mountainous south, west and north of the region, including areas within the Marlborough Sounds. Digital GIS maps of DOC and QEII Trust managed protected areas, including forest parks, reserves, stewardship land, etc, were used by the study team as information sources.

#### Authenticity of Information Sources used to inform the evaluation

Due to the nature of the topic, the authenticity of a number of sources was of variable quality. The study team found the following sources relating to shared and recognised values the most helpful:

- previous landscape assessments (Wairau Awatere Landscape Assessment(BML 1996)) and relevant information within the MSRMP, WARMP
- DOC and QEII Trust protected areas
- MDC and DOC information brochures and websites
- study team knowledge.

#### CULTURAL AND HERITAGE VALUES

Cultural legibility is a vital component of many overseas landscapes where many centuries of human endeavour can be unravelled through study of the present landscape. In New Zealand this aspect of landscape has received only limited and belated attention. The developing awareness of complexity of the 'indigenous cultural landscape' of Tangata Whenua is covered under the Tangata Whenua evaluation criterion below. This increased understanding of the value of landscape as a living record of social change, adds to the increasing significance attached to the legibility of our landscapes.

Some of Marlborough's landscapes are clearly and widely known and influenced by their connection to the historical values inherent in the place. Cultural and historical values are based on traditional land uses such as farming and food gathering practices, traditional settlement patterns or other social patterns of a time, architectural periods, or notable landmarks, events or figures. Some of them are specific sites of significance, others are wider areas that reflect a high degree of unity or integrity as a setting for historic sites or activities. Individuals and communities leave their different marks on the landscape. From the clues in our landscapes, such as architecture and land use, as well as memories of events, landscapes can tell stories of from where and from whom we came and why we have responded to the physical environment in the ways we have.

#### Authenticity of Information Sources used to inform the evaluation

The authenticity of a number of sources for this topic also proved to be highly variable. Marlborough's cultural history has been much written about so the task for the study team was to condense that information into manageable whilst still meaningful summaries. The study team found the following sources the most helpful, particularly the websites:

- Previous landscape assessments (Wairau Awatere Landscape Assessment (1996)) and relevant information within the MSRMP, WARMP
- Cultural Heritage maps, (Central Index of New Zealand Archaeological Sites (CINZAS) and New Zealand Archaeological Association (NZAA))
- Department of Conservation and QEII Trust protected areas
- Study team knowledge
- Reference books, pamphlets and brochures from MDC
- Website searches including [www.theprow.org.nz](http://www.theprow.org.nz), [www.marlboroughonline.co.nz](http://www.marlboroughonline.co.nz), [www.archsite.org.nz](http://www.archsite.org.nz) and [www.nzhistory.govt.nz](http://www.nzhistory.govt.nz)

#### TANGATA WHENUA VALUES

There are a variety of natural features and landscapes in Marlborough that are clearly special for, or widely known and influenced by, their connection to the Māori values inherent in the place. These landscapes (or parts of them) have been identified, as best as practicable as having particular regional importance to tangata whenua. No liaison with tanagata whenua has taken place during the assessment of this Landscape Study. This is a recognised gap in this study.

#### Authenticity of Information Sources used to inform the evaluation

Due to the mainly oral recorded history of tangata whenua, the authenticity/credibility of the sources varied considerably. The study team found the following sources most helpful due to their comprehensiveness:

- Historical research of Māori and iwi values including the website: [www.teara.govt.nz](http://www.teara.govt.nz)
- MDC website.

#### Associative values 'outstanding test'

For a feature or landscape to rate highly for associative values and characteristics, the outstanding test is:

*'a feature or landscape that contains exceptional and/or very high shared and recognised, cultural (including tangata whenua), and heritage values. There is a difference between an acknowledged area of value such as a reserve, and an association with an area due to it having been written about or painted. Therefore, the measure of integrity [refer to page 15] is useful to differentiate those landscapes that currently demonstrate shared and recognised values through various forms of functioning protection and management such as legislative or voluntary systems. For heritage values, the measurement and extent of which the landscape has been modified with consideration to whether the key characteristics of the historic period have been retained, is fundamental. In terms of tangata whenua values, integrity refers to the manner in which an area fully embodies culture and beliefs, in particular, the spiritual connection between the Māori community and their environment'.*

#### HERITAGE VALUES (Section 6f)

All landscapes express their past to a greater or lesser extent. Identifying and assessing cultural or heritage landscapes is a relatively new area of research in New Zealand.

The historic and cultural values of Marlborough are rich and cover vast areas, however, evidence of this today tends to be sporadically located. Where collections of heritage features are found, they are often unrelated by event, custom or by historic era. The task the study team faced, therefore, was to interpret the definition of heritage landscapes through its meaning within the RMA 1991 context, focusing on historic heritage relevant to section 6f and including, within the scope of investigations, areas and surroundings beyond specific heritage sites, particularly where those areas express past landscapes.

A number of guidelines, essays and theses have been written regarding the

identification and evaluation of heritage landscapes. The overriding assessment principles from these sources relate to the integrity of a landscape's heritage fabric, its intactness and distinctiveness as an historic landscape, and its vulnerability to change/ modification. In some cases there may be little extant in the landscape, e.g. a battle site. In others, there may be visual and physical cues from a specific period of activity, e.g. pa site or wharf buildings; or a 'layering' of features from a number of periods. In other instances, the heritage components of a landscape may be sufficiently rich to suggest identification and management as a 'heritage landscape'.

In a decision by the Environment Court, the Court noted 'While not committing ourselves to any particular wording for a threshold evaluation, we consider that for the purposes of assessing whether a landscape

is significant for its heritage the extent of heritage items and associations must be such as to give the landscape its particular character.' (Holcim nZ, Decision C058/2009, page 177)

The study team, therefore, had to ascertain the importance, density and distinctiveness of heritage features that may constitute a heritage landscape.

The study team identified the main historic values of Marlborough and incorporated these into the evaluation stage of the Landscape Study but no one area clearly 'stood out' as a heritage landscape. Although many of Marlborough's cultural and historical areas are of great importance to the region and, in some regards to the country, the study team found it difficult to locate a clearly legible cultural landscape that displayed obvious, coherent, rich associations even though some parts of Marlborough display a slightly higher, though still varying, concentration of historic structures, buildings and events than others.

The coastline from Rarangi to Port Underwood displays a wealth of history, ranging from old whaling stations to cottages and cemeteries, but these values appear sporadic and do not, in the mind of the study team, collectively constitute an historic landscape. Rather, their values for ONFL status were considered independently as part of the associative attribute of the methodology.

Therefore, for the purposes of this Landscape Study, no heritage landscapes have been identified. The study team propose that a more rigorous appraisal be undertaken at a later stage, when a separate heritage study for the district is undertaken.

#### AMENITY VALUES AND QUALITY OF THE ENVIRONMENT (Section 7c and 7f)

The RMA defines amenity values 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."*

The quality of the environment is not defined by the RMA. The focus of the investigations into amenity and environmental quality in this Study was on visual amenity. The study team assessed the important visual amenity features or characteristics that occur outside the areas identified as outstanding natural features and landscapes. 'High Amenity Landscapes' tend to be more culturally modified landscapes, where their aesthetic and scenic values are high. They tend to have high associative values. The study team found that the following data assisted in the identification of high amenity landscapes:

- Reserves (DOC, MDC etc.)
- Key viewpoints (study team investigations)
- New Zealanders' *Perceptions of the Marlborough Sounds in 2012: Results of a Nationwide Survey* (Corydon, 2012)
- Recreation opportunities (tourist maps, walkways, topographical maps, study team investigations).

The study team therefore evaluated the aesthetic aspects of the Marlborough landscape and determined those landscapes (such as the Upper Awatere Valley) and features (such as Spring Creek) with high amenity value within Section 7c and 7f of the RMA 1991.

<sup>2</sup> Landscape Quality Assessment of South Australia, Andrew Lothian, Dissertation for Doctorate of Philosophy, Department of Geographical & Environmental Studies, University of Adelaide, 2000  
2 Eg Zube, Sell and Taylor (1982) analysed 160 published papers and found that the physical elements, compositional construction, locational context, naturalness, man-made elements, and gestalt were the key characteristics that were considered in landscape quality assessments.



# MAPPING LANDSCAPE VALUES

## Identifying and Mapping Landscape Values

Mapping is essential to recording and defining the landscapes and landscape features identified through the landscape characterisation and evaluation stages of this Study, described on pages 8-10. Defining boundaries between identified areas can be complex. This section outlines the broad approach taken.

In general, landscapes and features are differentiated as follows.

**Landscapes** are larger areas that are perceived as a whole and can include a number of features within them. Landscapes can be either experienced from within (e.g. from walking tracks, such as the Queen Charlotte Track, which would traverse the eastern Marlborough Sounds landscape) or seen as the whole of an outlook (e.g. the Southern Hills/Wairau Valley perceived from Blenheim). For the purpose of this Landscape Study, the landscape is perceived at a regional perspective, to encapsulate broad-scale views, and also at a district/local perspective to capture more intimate and local views.

**Landscape features** are discrete elements within a landscape, which are generally experienced from outside the features' boundaries. Features display integrity as a whole element and can often be clearly distinguished from the surrounding landscape. Generally, features are defined by their geomorphological landform boundaries. However, in some instances (such as areas of native bush) features are defined more readily by land cover characteristics.

The identification of both landscapes and features is scale-dependent, e.g. the whole of the Marlborough Sounds could be identified as a feature when seen as a whole from a satellite aerial view (regional scale), while landscapes, such as Tennyson Inlet, and features, such as islands, bays or peninsulas, occur within it when perceived from within. Therefore, small landscapes can nest within larger landscapes.

This Landscape Study considers landscape at the finer district scale, for purposes of landscape management. The identification of ONFs and ONLs within this study are clearly shown in the mapping. The contextual landscape of ONFs, irrespective of whether or not that wider landscape is outstanding, has also been mentioned. ONLs and ONFs can, collectively be referred to as ONFLs.

## Identifying Seascapes

Seascapes have been described as:

*"Landscapes with views of the coast or seas, and coasts and the adjacent marine environment"* (Landscape Institute/ IEMA 2013, p17) and *"An area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land with sea, by natural and/ or human factors"* (Natural England 2012, p8)

This Landscape Study identifies seascapes that contribute significantly to the experience of an adjacent outstanding natural landscape. The seascapes identified in this Study form vistas that are imbued with biophysical, sensory and associative qualities that are outstanding in their own right. These seascapes have had limited modification; although in some instances seascapes with development (such as jetties, marine farms and moorings) were incorporated, knowingly, where the development was at a scale that did not detract significantly from the outstanding qualities of the seascape surrounding.

The Marlborough Sounds landscape is complicated by the many potential viewpoints from land or sea. The range of viewpoints and changing views and distances influences the scale at which the landscape/seascape is perceived.

For the purposes of this Study, seascapes are considered at two scales, as they are generally experienced from within the coastal area or from neighbouring open sea (i.e. the waters of the Outer Sounds).

At the broader scale, the Outer Sounds open coastline is where the seascape binds together views of a landscape or series of landscapes - forming both a defining element (between land and sea) and connecting element (between landscapes and features such as headlands, islands and rocky reefs).

At the finer scale, this includes Inner Bays/ headlands/mouths and entry points to the Sounds where the viewer is more likely to feel enclosed and contained by land-based elements. The sea forms an important visual and perceptual part of this land/sea interface.

This approach was also taken when defining landscapes and features. When perceived from within a bay, the view and experience of the landscape are encapsulated by the waters and the bay itself up to the dominant ridgeline. When viewed from further away, from perhaps a ridge-top road, the waters of a reach or of the sea in the outer Sounds coastline, reveal more of the surrounding landscape, influencing the viewer's perception of that landscape.

## Identifying Outstanding Natural Features and Landscapes

Fundamental to the identification of an ONF or ONL (or collectively ONFL) is the appropriate threshold that triggers an ONFL to be outstanding. It is important to recognize that all landscapes have values and there are many landscapes and features that are of significance, but that do not meet the threshold required for being an ONL or ONF. The study team utilised the mapping of significant values on GIS to analyse where particular values overlap. Not all values were mapped (such as aesthetic values), so consideration of the ONFL line took considerable deliberation and refinement. From this, the study team delineated areas that displayed notably high qualities of a range of biophysical, sensory and associative values. For the purposes of this Study, and due to the territorial authority of Marlborough encompassing both regional and district governance, there was no need for the study team to assess ONFLs at two levels, i.e. regional and district-levels. An ONFL in Marlborough will, therefore, be an ONFL at both regional and district scale.

When identifying the potential location of ONFLs it is also recognised that the boundaries identifying valued areas of landscape do not necessarily need to coincide with areas of landscape character. The following diagram illustrates the different relationships between landscape character areas and ONFLs which may occur:

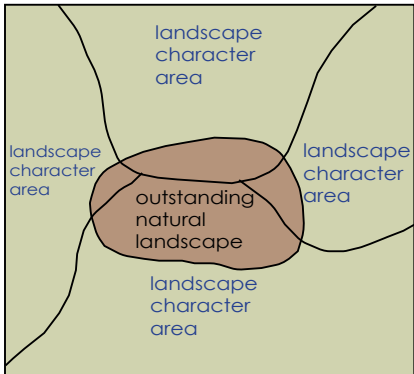


Figure 1: ONFL boundary is wholly independent and crosses adjoining landscape character areas.

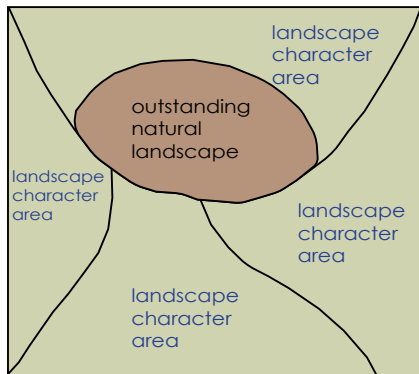


Figure 2: ONFL boundary partially follows landscape character area boundary.

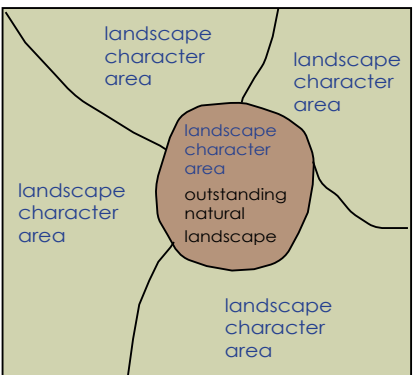


Figure 3: ONFL boundary coincides with landscape character area boundary.

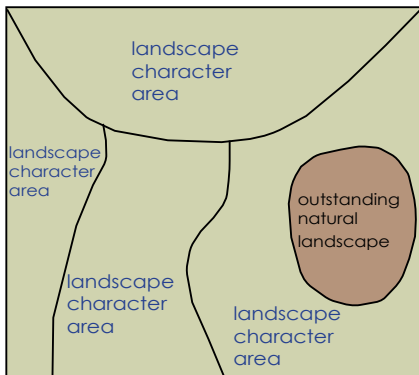
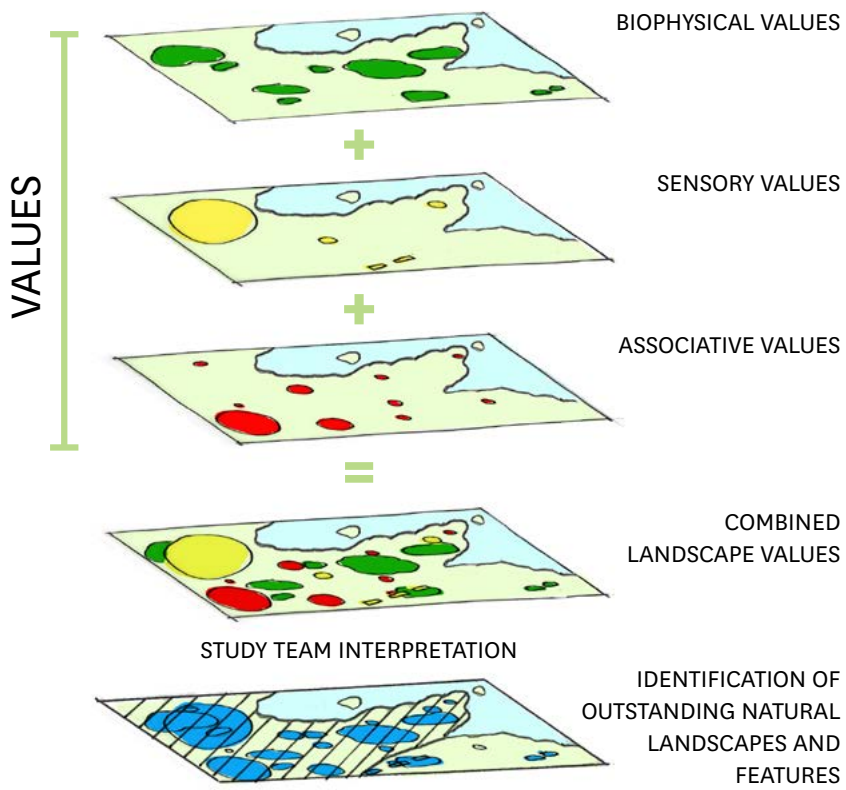


Figure 4: ONFL boundary occurs independent and within a landscape character area boundary.

### OUTSTANDING NATURAL FEATURES AND LANDSCAPE THRESHOLDS

Information and findings from on-site investigations assisted the study team to determine a landscape's biophysical, sensory or associative values. A nine point scale from Exceptional through to Very Low was used. Under the methodology, outstanding landscapes or features, rated at least an Exceptional, Very High or High attribute scoring. The study team acknowledged that not all landscapes needed to score high in every category to be considered as an ONFL, although this depended on the landscape under consideration. While some landscapes hold key scenic values, such as the Wither Hills, ONFLs were only identified in areas that also contained other landscape values, such as those within the Molesworth Station, which, in addition to scenic or sensory values contain high biophysical and associational values.

The study team realised that there were a number of discrepancies between 'outstanding' areas in the current district plans and what was being determined through this landscape study process. Where these arose, considerable discussion took place within the team. The discrepancies reflect a number of factors, including limitations to the original methodology used (in some instances prior to the RMA 1991), the mainly 'scenic' aspects being taken into account at the time the previous studies were undertaken and the different land use and water patterns experienced today. Landscapes containing particular scenic values, but a noticeable absence of other landscape values, have been identified as landscapes and features with high amenity.



## Mapping of Features and Landscapes

Depending on the specific values related to a landscape or feature, a number of different mapping techniques were used in this Landscape Study to identify the boundary and this is outlined in the following diagrams and descriptions:

1. Land typing approach;
2. Contour line approach;
3. Contained landscape features (such as Islands);
4. Ridges and spurs approach (visual catchment);
5. Land use approach;
6. Seascape approach.

In some areas, a variety of the above were used to delineate the ONFL and landscapes and features with high amenity. The delineation of all ONFLs are described in Section D of this report.



DIAGRAM ONE : LAND TYPING BOUNDARY APPROACH  
Boundary follows edge of landform / land type. This mapping style would suit either the identification of Features or Landscapes.

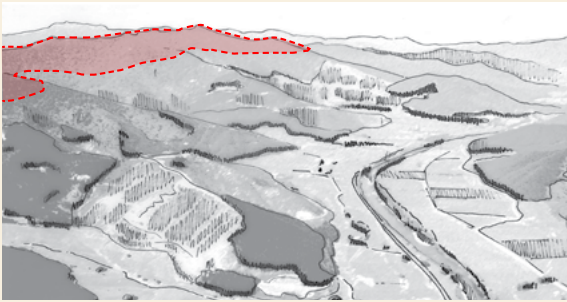


DIAGRAM TWO : CONTOUR LINE APPROACH  
Boundary follows a specific or a number of specific contour lines. This mapping style would suit the identification of Features.

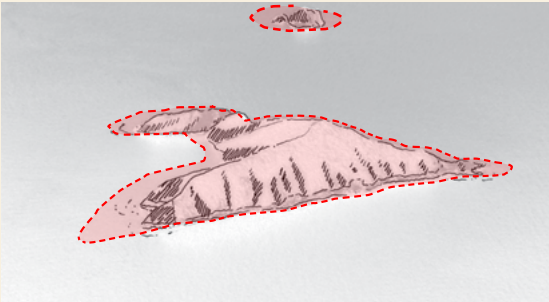


DIAGRAM THREE : CONTAINED LANDSCAPE FEATURES APPROACH  
Boundary follows contained landscape features and allows where appropriate, for a curtilage, to include, in this example, the rocky shore line and outlying rocks. This mapping style would identify Features.

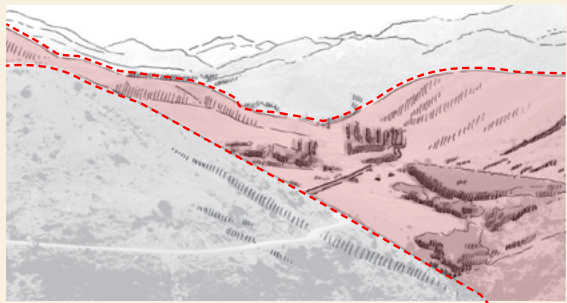


DIAGRAM FOUR : RIDGES AND SPURS APPROACH (VISUAL CATCHMENT)  
Boundary follows ridgelines and spurs and can also be used to define the visual catchment. This mapping style would suit the identification of Landscapes. Features can nest within Landscapes.

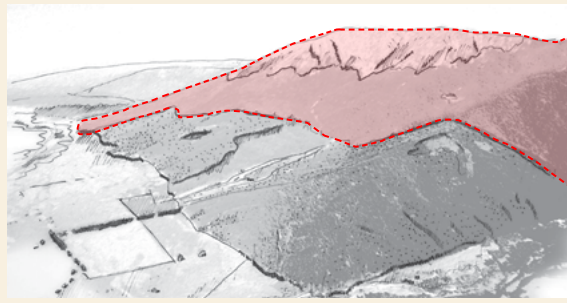


DIAGRAM FIVE : LAND USE APPROACH  
Boundary follows Landuse patterns, such as the division between commercial forestry land and conservation land. This mapping style would suit the identification of Features.

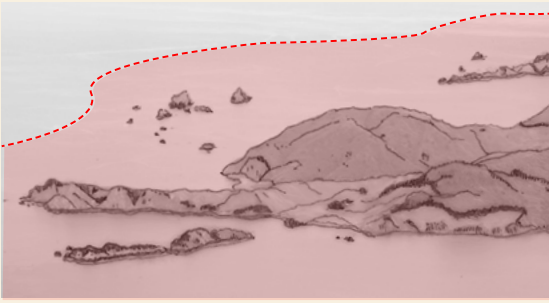


DIAGRAM SIX : SEASCAPE APPROACH  
Whilst the land based ONFLs are mapped using approaches 1-5, the extent of seascape ONFLs have been determined predominately by the marine component of the coastal natural character study 2014. This captures the land/ sea interface, where information of marine based-values is generally the greatest. Refer to Appendix 6 of *Natural Character of the Marlborough Coast* [Boffa Miskell et al, 2014] for further explanation. Other landscape factors have also been considered in determining this mapping approach.