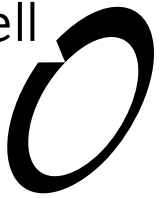


Boffa Miskell




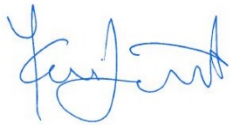
# Mackenzie Basin Planning Gap Analysis – Summary Report

Prepared for the Mackenzie Alignment Agencies

28 May 2019



## Document Quality Assurance

<p><b>Bibliographic reference for citation:</b>          Boffa Miskell Limited 2019. <i>Mackenzie Basin Planning Gap Analysis – Summary Report</i>.          Report prepared by Boffa Miskell Limited for the Mackenzie Alignment Agencies.</p>		
Prepared by:	Stephanie Styles Senior Planner / Principal Boffa Miskell Limited	
Reviewed by:	Ken Gimblett Senior Planner / Partner Boffa Miskell Limited	
Status: FINAL	Revision / version: 2	Issue date: 28 May 2019
<p><b>Use and Reliance</b>          This report has been prepared by Boffa Miskell Limited on the specific instructions of our Client. It is solely for our Client's use for the purpose for which it is intended in accordance with the agreed scope of work. Boffa Miskell does not accept any liability or responsibility in relation to the use of this report contrary to the above, or to any person other than the Client. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate, without independent verification, unless otherwise indicated. No liability or responsibility is accepted by Boffa Miskell Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.</p>		

# Executive Summary

Boffa Miskell Ltd (**Boffa Miskell**) was engaged by Environment Canterbury (**ECan**) to undertake a review of a range of statutory and non-statutory documents that relate to the management of the Mackenzie Basin. This review provides the analysis, commentary and opinions of the Boffa Miskell team and it should be emphasised that these views may not be the same as the views of the Mackenzie Alignment Agencies.

This project was initiated and undertaken on behalf of the 'Mackenzie Alignment Agencies', the five agencies involved in the Mackenzie Alignment Programme (Environment Canterbury, Waitaki and Mackenzie District Councils, the Department of Conservation and Land Information New Zealand). The review was recommended by an earlier report on opportunities for agency alignment, commissioned in 2017<sup>1</sup>.

The objective of the current review is to ascertain the extent of overall alignment between these documents in relation to the topics of landscape, water quality, biodiversity and land use change.

The documents that we have reviewed are:

- Canterbury Regional Policy Statement (**CRPS**)
- Canterbury Regional Biodiversity Strategy (**CRBS**)
- The Canterbury Regional Landscape Study (**CRLS**)
- Canterbury Land and Water Regional Plan (**LWRP**)
- Waitaki Catchment Water Allocation Regional Plan (**WCWARP**)
- Waitaki District Plan (**WDP**)
- Mackenzie District Plan (**MDP**)

The report also reviewed the Mackenzie Vision and the Mackenzie Agreement (**The Mackenzie Agreement**). These documents were included in the scope of this project as part of the wider context in the Mackenzie Basin. We note that these are non-statutory documents, which have little or no consideration in RMA processes but are of relevance to those working within the Basin.

There are other planning documents that could have been included in the analysis, for example the Canterbury Water Management Strategy and the Conservation Management Strategy. However, they were not included in the scope in order to keep the project of a manageable size.

Our review has focussed on ascertaining whether, and the extent to which, there is poor alignment between the planning documents outlined above, and/or there are any gaps in the framework that are allowing activities that have adverse effects on the environment. The key areas that this report focusses on are:

---

<sup>1</sup> "Mackenzie Basin – Opportunities for agency alignment", HenleyHutchings, January 2018

- Biodiversity
- Outstanding Natural Landscapes
- Land Use Change
- Water Quality

Determining the most appropriate way to address the findings outlined in this review was beyond the scope of this project.

### Methodology, assumptions and exclusions

The approach that we took to undertake this analysis was to examine each of the project documents to identify the various provisions that related to the project topics. This process helped to distil the key sub-themes that related to each of the topics, which in turn set up the framework for our analysis to compare the documents and identify areas of alignment and any gaps.

In undertaking our review, we focused only on the provisions in the documents (including maps as required). We did not undertake any site visits. Nor did we carry out any investigation into monitoring and reporting information held by agencies as to the significance of some of the effects that the documents manage, and the extent to which they are occurring 'on the ground'. We did not undertake detailed review of any recent case law pertaining to issues in the Mackenzie Basin. These were all outside the scope of the project.

We have focussed on matters relating to outstanding natural landscapes. On this basis, any references to cultural landscapes or coastal landscapes have not been captured in this analysis. In addition, we have not included geological or geomorphological features where they are not addressed as part of an ONL.

Natural character was not a specific topic explored, but elements of natural character are likely to have been captured in the biodiversity, water quality and landscape topics.

In respect of the land use change topic, we have not considered provisions relating to transportation and servicing infrastructure requirements to support land use change, natural hazard issues relating to land use change, or the integration of development with regionally significant infrastructure.

### Overview of findings

Our review has found that there are many areas where there is alignment between the documents across each of the project topics. Where there are areas of misalignment or gaps, we recognise that this could be due to the different 'ages' of the various documents, and that some documents have been the subject of relatively recent proceedings to update particular issues (e.g. Plan Change 13 to the MDP). Additionally, we are aware that various agencies have undertaken, or may be in the process of undertaking, work to address some of the areas of misalignment or gaps that this review has identified, including work to inform upcoming plan review processes.

We have observed that the functions of the regional council and district councils can also be a reason why planning provisions take different

approaches. In some case, the functions of district and regions are distinctly different. In other areas they may overlap, or appear to overlap, but be managed in different ways. For example, the district plans include provisions relating to activities on the margins of waterbodies e.g. earthworks that could damage indigenous biodiversity, and regional plans include rules managing activities in and adjacent to waterbodies in relation to water quality and quantity.

We have not investigated these two key reasons for potential misalignment – the different times and contexts in which the planning documents have been prepared, and the differences between regional and district council functions – for each specific topic in the report. However, they provide important context, and should be kept in mind when considering the findings in this report.

We have observed a more recent trend towards property specific management plans e.g. Joint Management Agreements, Farm Biodiversity Plans and Farm Environment Plans. These plans can be used to address multiple issues across jurisdictional boundaries, if supported by aligned provisions in planning documents throughout the hierarchy. In this regard, we note that PPC 18 to the MDP introduces the Farm Biodiversity Plan approach. This a new approach and yet to be confirmed through decisions on the plan change or tested by implementation.

The supporting role of education, advocacy and non-statutory mechanisms alongside rules cannot be underestimated, as well as building strong and collaborative relationships to address these issues.

We are conscious of the importance of, and challenges associated with, resourcing and funding. Appropriate resourcing is necessary to identify sites and areas of value, support plan review processes, support protection and pest management, education and advocacy, and enforcement. We note here the funding model proposed in the Mackenzie Agreement is an example of an alternative model to secure additional funding from those who benefit from the values in the Mackenzie Basin to support their protection and ongoing management.

Our review has assessed the potential significance of the gaps that we have identified. Determining the significance of these gaps is a subjective judgement and has principally been informed by the degree of difference, and the implications of those differences. The following factors have informed our assessment of significance:

- Whether the issue relates to a key activity (e.g. agricultural conversion or intensification) that has the potential for significant effects on the environment of the Mackenzie Basin;
- Whether the issue relates to the way in which areas of significant environmental value are identified and described (e.g. assessment criteria, the mapping of Outstanding Natural Landscapes);
- Whether the issue reflects a disconnect between documents in the statutory hierarchy (e.g. between the CRPS and district plans); and

- Whether the issue reflects a disconnect in the way that the same activity is managed between the two district plans.

The following sections draw out our findings of the highly significant areas of alignment, and significant gaps or misalignments between the documents that we reviewed. Our analysis has also identified less significant gaps and areas of misalignment and these generally relate to matters such as different activity statuses for activities in the district plans or slightly different permitted activity thresholds.

### Significant areas of alignment

All the documents generally recognise that the ongoing loss and degradation of biodiversity is an issue that needs to be addressed, and that land use and development, and plant and animal pests have contributed to this decline. The documents also, to varying degrees and levels of specificity, describe the ecological values, habitats and species within the region, area or district to which they relate.

PPC 18 to the MDP and the Mackenzie Agreement both propose the use of property-specific management plans to identify, protect, and manage the development of properties to achieve development and biodiversity protection outcomes. While used for a different purpose, the LWRP uses Farm Environment Plans as a tool to assist with nutrient management.

The criteria for assessing landscape values in the CRPS directly correspond to the modified Pigeon Bay criteria<sup>2</sup>, and the CRPS and the MDP both set out the criteria for assessing landscape values in policies.

In general, the CRPS, LWRP, WCWARP and the District Plans all recognise that high water quality is important in the continuing supply of water for drinking water and recreation, however only the regional documents also acknowledge that high water quality is important for customary uses.

The CRPS seeks to maintain water quality where it is of a high standard, and to improve, restore, and enhance degraded fresh water bodies and their surroundings.<sup>3</sup> This principle is reflected in the LWRP, which seeks to maintain the state of high naturalness waterbodies and Hāpua in a healthy state, or improve them where they are degraded.<sup>4</sup> The WCWARP identifies High Natural-Character Waterbodies in Policy 2 and states that the consent authority will ensure that any taking, using, damming or diverting of water does not, by itself, or in combination with any other take, use, dam, or diversion in the same area, have a more than minor adverse effect on the water quality of these waterbodies.<sup>5</sup> There is general alignment between the regional documents in relation to the water quality outcomes that are sought in relation to specific 'types' of waterbodies.

<sup>2</sup> The Pigeon Bay criteria were the result of an Environment Court case (*Pigeon Bay Aquaculture Ltd v Canterbury Regional Council* [1999] NZRMA 209).

<sup>3</sup> CRPS Objective 7.2.2

<sup>4</sup> LWRP Objective 3.18

<sup>5</sup> WCWARP Policy 32

## Significant gaps

The significant gaps and areas of misalignment have been identified as:

### ***Agricultural conversion and pastoral intensification and irrigation (Biodiversity, Landscapes and Land Use Change)***

This issue has been identified as very significant across a number of the topics analysed in this report. The different approaches that are taken in the WDP and MDP to manage agricultural conversion and intensification (including irrigation, cultivation, top dressing and oversowing) could result in different outcomes on the landscape and biodiversity values of the Mackenzie Basin across both districts.

The MDP states that agricultural conversion or pastoral intensification in the Mackenzie Basin subzone in a Site of Natural Significance is a non-complying activity, but there is no equivalent rule in the WDP (aside from the rules that limit buildings, earthworks and indigenous vegetation clearance).

Both district plans have rules that manage irrigation. In those parts of the Mackenzie Basin ONL located within the Waitaki District, irrigation is a non-complying activity. In the Mackenzie District, irrigation is a permitted activity in defined Farm Base areas in the Mackenzie District, and a controlled activity in areas where water permits were granted prior to 14 November 2015 (and discretionary activities in areas where no water permits were granted prior to 14 November 2015).

The WDP does not manage agricultural conversion and/or pastoral intensification by other means such as oversowing, topdressing, or cultivation in outstanding natural landscapes, whereas the MDP does. This could result in changes to the landscape and biodiversity values of the Mackenzie Basin in the Waitaki District, which might not occur in the Mackenzie District due to the rules that seek to manage these activities within the Mackenzie Basin Subzone.

The combination of the extent of land within the Waitaki District's ONFL layer as compared to the extent of this ONL in the CRLS and the limited management of only irrigation (as compared to direct drilling, cultivation, subdivisional fencing, top dressing and oversowing in the MDP) has the potential to enable ongoing pastoral intensification and agricultural conversion on a permissive basis throughout approximately 38,500 ha of land that is identified as being within the CRLS ONL for the Mackenzie Basin.

In addition, agricultural conversion arising from direct drilling, cultivation, top dressing and oversowing is not managed under the WDP and could occur as a permitted activity throughout the Waitaki District within the Mackenzie Basin.

The implications of these differences could have significant effects on the landscape values and biodiversity values within the Mackenzie Basin in the Waitaki District and could lead to a marked difference in these values between the Mackenzie and Waitaki Districts.

Given the relationship of this issue to the identification of ONL values and protection of biodiversity values, as well as the relationship of this issue to the topic of land use change (addressed elsewhere in this report), and the significance of those values in the context of the Mackenzie Basin, this is

considered to be of very high significance. The significance of this issue could be tempered by general rules managing indigenous vegetation clearance, water allocation limitations and nitrogen loss caps.

### ***Biodiversity – outcomes sought***

While the CRPS, WCWARP and PPC 18 to the MDP recognise the concept of ecologically significant wetlands, the other documents do not. It is recognised that ecologically significant wetlands may already be identified within sites of natural significance in the District Plans (thus being subject to related rules to manage activities within these areas). As the WDP does not appear to reflect the distinction between ecologically significant wetlands, and wetlands generally, it may not fully give effect to the CRPS. It is noted that the WDP does include provisions that manage activities proximate to, and within, wetlands, but within riparian margins that are less than those proposed in PPC 18 for example.

As the WDP does not appear to reflect the distinction between ecologically significant wetlands, and wetlands generally, it may not fully give effect to the CRPS. It is noted that the WDP does include provisions that manage activities proximate to, and within, wetlands, but within riparian margins that are less than those proposed in PPC 18 for example.

### ***Biodiversity – offsetting and no net loss***

Aside from the CRPS, LWRP and PPC 18 to the MDP, none of the other documents reviewed appear to reflect the principle of 'no net loss'. The principle of no net loss is a policy directive in the CRPS, where it is stated that significant biodiversity areas shall be protected so as to ensure no net loss of indigenous biodiversity and indigenous biodiversity values.

While the WDP seeks to achieve the protection of areas assessed as having significant indigenous flora and the significant habitats of indigenous fauna (objective 16.9.2(1)), the objective does not include an outcome statement that refers to this protection achieving no net loss.

While the LWRP refers to the principle of biodiversity offsetting, the policy does not include reference to the criteria that are used in the CRPS and PPC 18 to the MDP. The CRBS, WCWARP, and WDP do not appear to include references to biodiversity offsetting. The practice of biodiversity offsetting relates to the management of significant adverse effects on indigenous biodiversity and achieving no net loss of significant biodiversity values.

Recognising this practice appropriately in the WCWARP and WDP could result in improved outcomes for the protection of significant biodiversity values.

### ***Biodiversity – identification of significant areas***

There is likely to be a gap between the extant ecological values present within the Mackenzie Basin in the Waitaki District, and the formal recognition of these values in the WDP. While preliminary work has been undertaken by WDC to identify SNA's within the Basin (and in other parts of the district) this is not currently part of the planning framework.

It is recognised that there are general rules in the WDP that seek to manage the clearance of indigenous vegetation, and that this may go some way towards addressing a potential gap between the identification of areas of



significant biodiversity and the management of those areas. However, as reflected in the rule framework that relates to significant biodiversity areas elsewhere in the WDP, other activities such as the construction of buildings, forestry and network utilities can also have adverse effects on areas of significant biodiversity and would not be managed unless an area is identified as being significant.

Further, the identification of specific areas of significance can be linked to the provision of support and incentives to landowners to assist with the protection and enhancement of these areas.

The provisions in the plans focus on significant vegetation and not on significant habitats of indigenous fauna (with section 6(c) relating to both flora and fauna). This is not unusual in the district plan context with most plans having focussed on flora and assumed a correlation to protection of fauna values. This approach could contribute to a significant gap in the protection of biodiversity values but is not well understood at this time and there is a growing need to recognise and protect both with a better understanding of where the flora and fauna issues overlap. In our experience this is an issue that is being grappled with around the country and is likely to be better addressed over time.

#### ***Biodiversity – assessment criteria***

The CRPS, Mackenzie Agreement, and both District Plans explicitly set out criteria that will be used to determine the significance of biodiversity areas. The LWRP relies on the criteria in the CRPS.

The criteria in the MDP and the WDP differ from those in the CRPS, as outlined above. The Mackenzie Agreement does not refer to the principles of rarity and distinctiveness; diversity and pattern; and ecological context/connectivity, which are only referred to in the CRPS, MDP and WDP. However, it does refer to the principle of vulnerability.

It is acknowledged that PPC 18 to the MDP proposes to rely upon the CRPS criteria. While the WDC has undertaken some preliminary work in relation to indigenous vegetation clearance rules, it is not known whether it has considered any amendments to the criteria in the WDP.

#### ***Biodiversity – managing vegetation planting***

The rules in the LWRP relate to ‘plants’, whereas the rules in the MDP and the WDP relate to tree planting. The LWRP includes provisions that restrict the introduction of pest plants, but aside from rules relating to wilding pines, neither the MDP or the WDP appear to include rules relating to this issue.

The ways in which tree planting is managed in areas of biodiversity value differs between the district plans.

It is acknowledged that the focus of managing activities within riparian areas differs between regional councils and territorial authorities, and that may explain why the focus in the LWRP is on controlling ‘plants’ generally, as opposed to ‘trees’ in the District Plans.

However, as some plants that are not trees might have the potential to result in adverse effects on the ecological values of significant biodiversity (and in particular pest plants), and there are differences in the way these activities are managed between the districts and the LWRP, this is considered to be of high significance.

### ***Biodiversity – indigenous vegetation clearance***

The LWRP and PPC 18 to the MDP include reference in the policy framework to the management of indigenous vegetation clearance, whereas the operative MDP and WDP do not explicitly refer to this.

The absence of clear direction in the policy framework of the district plans as to what outcomes are sought to be achieved through the management of the clearance of indigenous vegetation could lead to challenges when dealing with resource consent applications seeking to undertake this activity. It is acknowledged that PPC 18 to the MDP seeks to address this issue.

### ***Biodiversity – key definitions***

It is noted that the definitions of ‘indigenous bush’ in the WDP, and of ‘indigenous vegetation’ in the WDP and MDP, all include inherent thresholds that appear to have relationships to the types of thresholds that might be expected in significance criteria. This may be a deliberate approach in order to address the ‘balance’ between the number of identified sites of significance, and the general rules relating to indigenous vegetation clearance.

However as signalled by PPC18, which seeks to adopt the CRPS criteria, and proposes a different definition of indigenous vegetation, an updated approach to this may be required in the WDP.

PPC 18 to the MDP introduces ‘irrigation’ as a means by which vegetation clearance can occur (in the definition of ‘vegetation clearance’). The operative MDP and WDP include definitions of vegetation clearance, which include clearance by way of cultivation, spraying and burning, but do not include irrigation.

This issue is interrelated to the way in which the WDP manages the agricultural conversion and/or intensification of land in respect of landscape values as outlined elsewhere in this report.

PPC18 to the MDP introduces a definition ‘improved pasture’ and provisions for clearance of indigenous vegetation within these areas. The other plans do not contain a comparable definition, and this reflects an evolving issue in the approaches to defining areas of significance and areas in which activity can occur unfettered. This is widely acknowledged as an emerging issue in trying to provide clarity and certainty in the application of clearance rules. As an evolving issue it is likely that this will be further addressed over time in plan reviews.

### ***Landscape – identification of Outstanding Natural Landscapes***

The ONLs identified in the operative WDP do not directly align with the extent of the Mackenzie Basin ONL in the CRLS<sup>6</sup>. The most recent landscape assessment undertaken for the WDC does not spatially align with the extent of the Mackenzie Basin ONL in the CRLS, but does align more closely to this than the Operative WDP ONL layer.

It is acknowledged in the CRPS and the CRLS that the extent of district ONLs may differ from those identified at a regional level, and that the recommended amendments to the ONFL layer in the WDP as a result of the

---

<sup>6</sup> No digital maps of ONL areas in the MDP are available at the time of preparing this report to undertake the same analysis.

most recent landscape assessment undertaken for WDC, would result in approximately 12,000ha being added to the ONFL layer.

It is also important to note that further land use changes have occurred since the regional landscape study was prepared.

#### ***Landscape – describing values***

While Appendix 4 to the CRPS sets out a schedule of the regional outstanding natural features and landscapes, neither the MDP or WDP appear to include a similar schedule of the ONF/Ls that are identified in these district plans. However Rural Objective 3B in the MDP sets out in some detail the characteristics and/or values of the Mackenzie Basin that should be protected and enhanced, and descriptions of the Scenic Viewing Areas and Scenic Grasslands are included in Appendix J.

The identification of the values which make a landscape significant is an important way to assist with the management of those values when administering changes within these landscapes.

#### ***Landscape – criteria***

The criteria in the WDP and the MDP do not align with those in the CRPS, but it is noted that the most recent landscape assessment undertaken for WDC relied on the criteria set out in the CRLS (which align with the CRPS). We have not reviewed the extensive PC13 process which informed the identification of the Mackenzie Basin subzone and other associated mapped landscape values, and determined the criteria that were relied upon.

The differences between the criteria for assessing landscape values in the CRPS and the District Plans could arise due to when each of these documents were prepared. The most recent landscape assessment undertaken for the WDC used the CRPS criteria. Therefore, it could be anticipated that the criteria referenced in the MDP and the WDP may well be updated to reflect the CRPS criteria in upcoming district plan review processes.

#### ***Land use change – managing growth***

The strategy reflected in the CRPS to ensure consolidation of urban growth and limited rural residential expansion in and around existing urban areas, is not particularly well reflected in the MDP (where there is a lack of policy support for this concept) but is well reflected in the policy framework and zoning pattern of the WDP.

Some provisions in the MDP could be seen to conflict with this approach e.g. Policy 3B4 (which encourages appropriate large scale residential and rural residential areas in areas of low or medium visual vulnerability in the Mackenzie Basin subzone, by adopting alternative zoning options that incorporate enhancement of landscape and ecological values, including wilding control).

It is recognised however that the differing landscape led spatial approach to managing growth in the MDP, and in particular the Mackenzie Basin subzone, supports achievement of other environmental and economic objectives (e.g. landscape protection, and ecological protection/enhancement) in the CRPS, biodiversity strategy, and the Mackenzie Vision and Agreement. Recognising the validity of this approach,

it is considered that future review of the CRPS growth objectives and policies may need to recognise and incorporate such alternative spatial approaches to managing growth. That may include for example compensatory type provisions which enable rural and rural residential growth and other forms of development, where there is retention and enhancement of significant indigenous biodiversity and landscape values.

# Contents

Executive Summary	i
1.0 Introduction	1
2.0 Documents reviewed	2
2.1 Canterbury Regional Policy Statement 2013	2
2.2 Canterbury Regional Biodiversity Strategy	3
2.3 Canterbury Regional Landscape Study 2010	3
2.4 Canterbury Land and Water Regional Plan	5
2.5 Waitaki Catchment Water Allocation Regional Plan 2006	5
2.6 Waitaki District Plan 2010	6
2.7 Mackenzie District Plan 2004	7
2.8 Mackenzie Vision and the Mackenzie Agreement	8
3.0 Methodology	9
3.1 Assumptions and exclusions	10
4.0 Findings – Biodiversity	11
4.1 Introduction	11
4.2 Extent of alignment	12
4.3 Identified gaps	15
5.0 Findings – Outstanding Natural Landscapes	20
5.1 Introduction	20
5.2 Extent of alignment	21
5.3 Identified gaps	21
6.0 Findings – Land Use Change	24
6.1 Introduction	24
6.2 Extent of alignment	24
6.3 Identified gaps	26
7.0 Findings – Water Quality	28
7.1 Introduction	28
7.2 Extent of alignment	28
7.3 Identified gaps	30
8.0 Conclusion	30



# 1.0 Introduction

Boffa Miskell Ltd (**Boffa Miskell**) has been engaged by Environment Canterbury (**ECan**) to undertake a review of a range of statutory and non-statutory documents that relate to the management of the Mackenzie Basin. This review provides the analysis, commentary and opinions of the Boffa Miskell team and it should be emphasised that these views may not be the same as the views of the Mackenzie Alignment Agencies.

This project was initiated and undertaken on behalf of the 'Mackenzie Alignment Agencies', the five agencies involved in the Mackenzie Alignment Programme (Environment Canterbury, Waitaki and Mackenzie District Councils, the Department of Conservation and Land Information New Zealand). The review was recommended by an earlier report on opportunities for agency alignment, commissioned in 2017<sup>7</sup>.

The objective of the current review is to ascertain the extent of overall alignment between these documents in relation to the topics of landscape, water quality, biodiversity and land use change.

The documents that we have reviewed are:

- Canterbury Regional Policy Statement 2013 (**CRPS**)
- Canterbury Regional Biodiversity Strategy 2008 (**CRBS**)
- The Canterbury Regional Landscape Study 2010 (**CRLS**)
- Canterbury Land and Water Regional Plan as at 2018 (**LWRP**)
- Waitaki Catchment Water Allocation Regional Plan 2006 (**WCWARP**)
- Waitaki District Plan 2010 (**WDP**)
- Mackenzie District Plan 2004 (**MDP**)

The report also reviewed the Mackenzie Vision and the Mackenzie Agreement (**The Mackenzie Agreement**). These documents were included in the scope of this project as part of the wider context in the Mackenzie Basin. We note that these are non-statutory documents, which have little or no consideration in RMA processes but are of relevance to those working within the Basin.

There are other planning documents that could have been included in the analysis, for example the Canterbury Water Management Strategy and the Conservation Management Strategy. However, they were not included in the scope in order to keep the project of a manageable size.

Our review has focussed on ascertaining whether, and the extent to which, there is poor alignment between the planning documents outlined above, and/or there are any gaps in the framework that are allowing activities that have adverse effects on the environment. The key topics that this report focusses on are:

- Biodiversity

---

<sup>7</sup> "Mackenzie Basin – Opportunities for agency alignment", HenleyHutchings, January 2018

- Outstanding Natural Landscapes
- Land Use Change
- Water Quality

It is acknowledged that there are relationships between the issues of indigenous biodiversity values and landscape values and the PC13 hearings spent considerable time considering these links, however these are considered as separate topics in this report for ease of analysis.

This report is structured as follows:

- Section 2 provides a high level overview of each of the documents that have been reviewed to inform the project.
- Section 3 describes the methodology that we used to undertake the work, including the assumptions and exclusions that we have adopted.
- Our findings for each of the project topics are set out in Sections 4, 5, 6, and 7 of this report. Each of these sections includes commentary on key sub-themes, an outline of the extent of alignment between the documents and sets out the gaps or areas of misalignment that have been identified.

Determining the most appropriate way to address the findings outlined in this review was beyond the scope of this project.

## 2.0 Documents reviewed

This section of the report sets out an overview of each of the documents that we have reviewed as part of this project. The reports to be included were specified in our scope of work and while there are some other documents of some relevance to this issue, these are outside the scope of this current project.

### 2.1 Canterbury Regional Policy Statement 2013

The Canterbury Regional Policy Statement 2013 (CRPS) outlines the resource management issues specific to the Canterbury Region. Related objectives and policies set out how the issues will be addressed and implemented. Method statements set out what the Canterbury Regional Council, territorial and local authorities need to do to give effect to the CRPS. The CRPS was made operative on 15 January 2013.

Of specific relevance to this project, the CRPS includes provisions that relate to:

- Land use and infrastructure (Chapter 5)
- Fresh water (Chapter 7 and Appendix 2)
- Ecosystems and biodiversity (Chapter 9 and Appendix 3)
- Landscape (Chapter 12 and Appendix 4)



## 2.2 Canterbury Regional Biodiversity Strategy

The Biodiversity Strategy for the Canterbury Region 2008 (**CRBS**) is a non-statutory document that establishes a framework of goals and priorities for undertaking biodiversity initiatives. 19 organisations are signatories to the Regional Biodiversity Strategy, including ECan, LINZ, DoC, and WDC. The Regional Biodiversity Strategy sets out a vision and six goals, and a series of targets and actions to achieve that vision. It also describes the biodiversity characteristics in Canterbury, a series of priorities for the management of biodiversity in Canterbury, and opportunities for better management.

## 2.3 Canterbury Regional Landscape Study 2010

### Introduction

The Canterbury Landscape Study report identifies areas of outstanding natural features and landscapes (ONF/Ls) at a regional scale within Canterbury. It is a comprehensive, technical, peer-reviewed update of the Canterbury Regional Landscape Study of 1993, which was one of the first regional landscape analyses completed in response to the Resource Management Act 1991 in New Zealand. The 2010 report builds upon the methods used in 1993 and reflects best practice in landscape assessment at the time. The regional study was intended to provide a basis for further detailed landscape studies in the region, which have subsequently been undertaken based on the regional findings.

The focus of the report is on large-scale landscape patterns that are able to be distinguished at a regional level, rather than site specific analysis. Detailed studies at a district level identified, in some instances, more features that are distinguishable at a local level, as well as refine specific boundaries in response to finer grained analysis.

Most districts in the Canterbury Region had prepared landscape assessments following the original 1993 Canterbury Landscape Study. The depth and level of detail of these studies was determined by time and budget and varies significantly between the districts. Most districts had adopted ONL and / or other landscape protection overlays in their first-generation plans, following the preparation of district landscape assessments, and many of these districts have now reviewed those areas based on the 2010 Regional Landscape Study when preparing their second-generation plans.

### Methodology and structure

Section A of the 2010 report discusses updates to the 1993 methods, including descriptions of the main land types, landscape values, and the updated Geographic Information Systems (GIS) used. Gaps were identified in the information provided on landscape values in the 1993 study, so more extensive character and value descriptions were developed for each landscape type. The statutory context for assessing landscape quality has changed since 1993. Assessment matters have now been endorsed through the Environment Court, notably by use of a legally accepted set of values known as the “Amended Pigeon Bay Criteria”.<sup>8</sup>

---

<sup>8</sup> The Pigeon Bay criteria were the result of an Environment Court case (*Pigeon Bay Aquaculture Ltd v Canterbury Regional Council* [1999] NZRMA 209). The criteria are:

- Natural science factors – the geological, topographical, ecological and dynamic components of the landscape.
- Expressiveness or “legibility” – how easy it is to “read” the processes that formed a landscape.

Section B of the 2010 report gives an introduction to the landscapes of the Canterbury Region, including geology, soils, land-use and cultural landscape elements.

Section C gives descriptions of Canterbury's main landscape types. As in the 1993 landscape study, 44 land types derived from a study by Ian Lynn of Landcare Research were grouped into ten broad landscape types based on a combination of landscape criteria e.g. geomorphological and biological characteristics, common perceptions, and general similarities of appearance. Landscape character and value descriptions were based on this land type information, some site investigation, GIS data, district landscape studies and other literature.

Section D focuses on the identification of outstanding natural features and landscapes (ONF/Ls) within Canterbury at the regional scale. The identified ONF/Ls are grouped into 26 areas of distinctive landscape character, with GIS maps showing the proposed areas at a scale of 1:250,000. Section D also contains a description of the landscape values of each of these areas, which have subsequently informed district-wide landscape assessments over the past eight years and their development of management mechanisms to protect these areas from inappropriate development. Where the study team identified discrepancies between the ONL areas identified in the 1993 study and the values identified in 2010, recommendations were made on possible changes to these boundaries.

## Findings

The 2010 study has identified 26 ONF/L areas in Canterbury, comprising 18 high country land types and 8 lowland land types. The review process led to some minor boundary adjustments of the 1993 ONF/Ls and to the inclusion of new ONF/Ls, most of which were previously identified as 'regionally significant' areas. The additions include most mountain ranges and river valleys in the western part of the region.

The application of the Amended Pigeon Bay Criteria throughout the assessment process led to the inclusion of areas with similar qualities to previously identified ONF/Ls. Since the 1993 study, districts have identified ONF/Ls through more detailed landscape assessments and large areas have been included in the DOC estate. Most of the additions to the regional ONF/Ls in the 2010 study were previously identified as 'regionally significant', and many of these areas are already district ONLs, conservation land, or both.

Key findings and boundary changes relating to the high-country landscapes of the Mackenzie and Waitaki Districts are as follows:

- Two Thumb, Hall and Gammack Ranges: identified as a new area of ONF/L, previously a "significant landscape".
- Mackenzie Basin: amendments to the boundary to follow the ridgelines of the surrounding mountain ranges. Two areas were added – the Upper Godley Valley and Lake Benmore. The more modified part of the basin floor around and south of Twizel has been excluded, and the exclusion extends further south, to the Ahuriri River, than in the 1993 study.
- Aoraki/Mt Cook National Park: the boundary of this ONF/L is unchanged since 1993.

- 
- Aesthetic values – including memorability and naturalness.
  - Transient values – including presence of wildlife or seasonal changes.
  - Whether the values are shared and how widely they are recognised.
  - Values to tangata whenua.
  - Historical association.

- Hopkins and Dobson Valley: identified as a new area of ONF/L, previously a “significant landscape”.
- Lindis and Ahuriri: this ONF/L now joins up with other ONF/L areas.
- Hawkdun and St Mary’s Ranges/Oteake: identified as a new area of ONF/L, not previously identified as significant or outstanding.

## 2.4 Canterbury Land and Water Regional Plan

The Canterbury Land and Water Regional Plan as at 2018 (**LWRP**) aims to provide clear direction on how land and water is to be managed in the region. A series of plan changes have been made to the LWRP. Plan changes 1-4 and 6 are all operative. Plan change 5 – Nutrient Management and Waitaki has been subject to appeal, and appeals have recently been resolved. It was made operative on 1 February 2019.

The LWRP contains policy direction targeted towards the management of water quality and quantity and includes a series of rules seeking to manage the effects of activities. The plan includes a region-wide section, which contains the objectives, policies and rules that apply across the region and specific sub-regional sections. There is specific mention in the plan that *“The Waitaki Sub-region includes the iconic Mackenzie Basin, an area recognised as nationally significant for its diverse range of range of dryland and aquatic ecosystems, which provide habitat to a large number of indigenous fish, invertebrates and birds. The Waitaki catchment is a distinct centre of endemism and diversity for native species.”*

## 2.5 Waitaki Catchment Water Allocation Regional Plan 2006

The Waitaki Catchment Water Allocation Regional Plan (WCWARP) was prepared by the Waitaki Catchment Water Allocation Board and outlines how water is allocated in the Waitaki catchment in line with the purpose and principles of the RMA. The Waitaki catchment includes portions of the Mackenzie, Waitaki and Waimate Districts. The requirements for water in the catchment are set out, which includes the ecological environment that relies on water (indigenous fish species, invertebrates, and birds); the Tāngata Whenua cultural requirements; town and community requirements; and those of industry, recreation, and hydro-electricity.

The plan sets out the issues that arise when considering water allocation, and these include landscape issues, water quality, and flood management. There are several matters that need to be considered when allocating water, including a whole of catchment approach, water metering, and restrictions on water during times of low water availability.

Objectives within the plan outline the environmental qualities of the Waitaki River catchment that need protecting; the need to recognise the benefits and adverse effects on the environment when allocating water, and to provide a framework for fair and practical sharing of water when the availability of water is limited. The underlying policies describe the ways in which the objectives will be achieved and incorporates the National Policy Statement for Freshwater Management 2014.

By way of overview the rules in the WCWARP:

- enable the take, use or diversion of up to 10m<sup>3</sup> per day per property at a rate not exceeding 5 litres per second as a permitted activity outside the High Natural-Character water bodies;<sup>9</sup>
- provide for takes, uses and diversions of up to 10m<sup>3</sup> per day per property at a rate not exceeding 5 litres per second from within the High Natural-Character water bodies as a discretionary activity;<sup>10</sup>
- manage other takes, uses, damming and diversions of water depending on:
  - the water body from which it is proposed to take, use, dam or divert water
  - the use to which the water will be put
  - the flow in the relevant water body and whether or not it is above specified minimum flow levels for the particular water body
  - the amount to be taken and whether it exceeds limits on the rate of the take or the allocation to the particular activity
- states that takes, uses, damming or diversion of water from the following are prohibited activities:
  - Lakes Tekapo, Pūkaki and Ōhau that exceed minimum specified lake levels (unless it is for a certain exempted use);<sup>11</sup>
  - Wetlands (which have either not been assessed as to their significance, or have been assessed as being of moderate or higher significance);<sup>12</sup>
  - Lakes Alexandria, McGregor and Middleton and their tributaries; <sup>13</sup> and
  - Lakes upstream of Lakes Tekapo, Pūkaki and Ōhau.<sup>14</sup>

Since the plan was made operative in July 2006, there has been a review of the efficiency and effectiveness of the plan in December 2012. This review made several recommendations including the need to develop an integrated catchment management system, provide clear allocation limits, and ensure input from stakeholders including Tāngata Whenua, Zone Committees, and Statutory Organisations. Three plan changes have been carried out, relating to Lake Pukaki (Plan Change 1, operative from 6 October 2012), Maerewhenua River (Plan Change 2, operative from 19 December 2014), and the replacement of consents (Plan Change 3, operative from 25 August 2016).

## 2.6 Waitaki District Plan 2010

The Waitaki District includes the settlements of Oamaru, Moeraki, Omarama and Lake Ohau, stretching from the eastern coastline, west to the southern alps. The District Plan sets out objectives, policies, and rules for the region, outlining where land development and activities

---

<sup>9</sup> WCWARP Rules 1 and 9

<sup>10</sup> WCWARP Rule 10

<sup>11</sup> WCWARP Rules 3 and 12

<sup>12</sup> WCWARP Rules 4 and 13

<sup>13</sup> WCWARP Rules 5 and 14

<sup>14</sup> n 13

can occur by way of zonings for specific areas (e.g. residential) and rules that apply across the region (restrictions on building in areas at risk from flooding, or limiting the size of signs).

In June 2014, the WDC resolved to commence a full review of the Waitaki District Plan. The WDC has undertaken some work to inform its review of the Waitaki District Plan that is of relevance to this project:

- Analysis of NES Plantation Forestry Regulations 2017 requirements vs Operative Waitaki District Plan (as at Feb 2018).
- Comparison of the Waitaki District Plan provisions that relate to landscape protection and management to similar provisions in the Mackenzie District Plan.
- Decision on an application from Ngai Tahu Forest Estates for Plantation Forestry in the Rural Scenic Zone.

The WDC has undertaken some preliminary work to compare the rules in the WDP that manage activities which have the potential to adversely affect landscape and biodiversity values with equivalent provisions in the MDP. This work has included recommended options for amendments to the rule framework in the WDP. It is understood that this work is preliminary, and has not yet been made publicly available, nor formed the basis of any public consultation and engagement. It is understood that the WDC intends to release a draft District Plan in early 2020.

## 2.7 Mackenzie District Plan 2004

The Mackenzie District Plan 2004 sets out the objectives, policies and rules that apply to activities and land uses in the Mackenzie District. The District includes the townships of Fairlie, Tekapo, and Twizel; and Lakes Tekapo and Pukaki. The plan outlines the objectives for the region, which include the safe guarding of indigenous biodiversity, the natural character of waterbodies and their margins, and the maintenance of amenity and safety of residential areas. Policies outline how the objectives will be achieved and rules assist with the achievement of the policy and objectives.

The district plan was made operative on 24<sup>th</sup> May 2004. There have been nineteen plan changes since the plan came into effect which cover a range of issues including reserve contributions, recreation rezoning, village centre zones, residential zones, heritage, and signage.

The most recent plan changes are Plan Changes 18 and 19 which were notified as part of Stage 1 of the District Plan Review. Plan Change 18 makes amendments to the way in which indigenous vegetation is managed in the District. Plan Change 19 relates to activities on or within waterbodies. Some of the Plan Change 18 rules have immediate legal effect in the Mackenzie Basin Subzone and the plan change is awaiting a hearing. For Plan Change 19, the hearing has been held and decisions are expected to be released soon.

Plan Change 13 was notified in December 2007 and sought to introduce provisions to provide greater protection of the landscape values of the Mackenzie Basin. The Council made its decision on Plan Change 13 on 5 September 2009, which was subject to a number of appeals. The Environment Court released its final decision on the appeals on 18 December 2018.<sup>15</sup>

---

<sup>15</sup> [2018] NZEnvC 240

## 2.8 Mackenzie Vision and the Mackenzie Agreement

The Mackenzie Agreement: A Shared Vision and Strategy, and a Proposal for a Mackenzie Country Trust

The Mackenzie Agreement 2013 sets out an agreed vision, issues and proposed establishment of a Trust to support an integrated approach to agriculture, tourism, and conservation in the Mackenzie Basin. Signatories include landowner groups, farming bodies, representatives of the tourism industry, irrigation companies, the Environmental Defence Society, and community groups.

The extent of the area that is the subject of the Mackenzie Agreement is depicted in Figure 1 below.

Figure 1: The Mackenzie Country as set out in the Mackenzie Agreement



The Mackenzie Country, highlighting the flat and easy country of the inter-montane basin that is the focus of this report.

The Mackenzie Agreement proposed the establishment of a Mackenzie Country Trust to generate revenue and in-kind support from private and public sources to foster long-term, active management of landscapes for biodiversity and landscape protection purposes, and to do so in a way that is supportive of viable public and private land management and community prosperity. The Trust is now in place as a charitable trust established in February 2016.

## Joint Management Agreements

The Agreement proposed the use of JMAs as a mechanism to set out agreements between the Trust and landowners, covering the whole or part of a property. The JMA would set out:

- Landscape and biodiversity conservation objectives
- Recreation objectives (in some cases)
- A description of how the land management for the above purposes would be achieved while assuring the ongoing viability of the property as a viable basis of livelihood for the land manager.

The Agreement envisages two kinds of JMA:

- For the purposes of land protection only
- A combination of land development and land protection

In the case of the dual purpose JMA, the Agreement envisages that RMA consents may be triggered, but that the assessment of these applications would be considered in light of proposed special legislation requiring decision-makers to have particular regard to any agreements reached between the Trust and landowners. However, the special legislation has not eventuated.

## Land warranting protection

The Mackenzie Agreement included advice to the Government on the area for which the Forum considered protection for landscape and biodiversity values should be funded. This advice was based on using information from a variety of sources about biodiversity and landscape values at the time the Forum was held. The tables that inform this analysis set out:

- The total area of land within each of the Mackenzie Country land types;
- The tenure of land within those land types;
- Land that has already been developed, or is proposed for irrigation;
- Land already managed by DOC, identified for biodiversity values, and with landscape value.

The Forum stated that the target area for conservation of biodiversity, landscape, recreation and related values should be 100,000ha, from a combination of DOC land and JMAs.<sup>16</sup> The Agreement does not specify the location of these areas.

## 3.0 Methodology

The approach that we took to undertaking this review was to review each of the project documents to identify the various provisions that related to the project topics. This process helped to distil the key sub-themes that related to each of the topics, which in turn set the

---

<sup>16</sup> Mackenzie Agreement, page 22

framework for our analysis to compare the documents and identify areas of alignment and any gaps.

### 3.1 Assumptions and exclusions

Due to the focus of this analysis on high-level findings as much as possible, a series of assumptions were made in undertaking our analysis, as summarised below:

- Natural character was not a specific topic specifically explored, but elements of natural character are likely to have been captured in the biodiversity, water quality and landscape topics.
- In relation to the Landscape topic, we have focussed on matters relating to outstanding natural landscapes. On this basis, any references to cultural landscapes or coastal landscapes have not been captured in this analysis. In addition, we have not included geological or geomorphological features where they are not addressed as part of an ONL.
- Provisions that relate to the following activities have been reviewed in the context of the land use change topic:
  - Subdivision
  - Residential development in rural areas
  - Urban expansion into rural areas (i.e. rezoning)
  - Farming and intensive (factory) farming
  - Agricultural conversion / pastoral intensification
  - Industrial and commercial development in rural areas
  - Mineral extraction / quarrying
  - Plantation forestry (where rules have not been overridden by NESPF)
  - Earthworks
- We have not considered provisions relating to transportation and servicing infrastructure requirements to support land use change, natural hazard issues relating to land use change, or the integration of development with regionally significant infrastructure.
- Rules relating to indigenous vegetation clearance or activities within sites of natural significance, and wetlands to support land use change are addressed under the Biodiversity topic.
- We have not considered water quantity aspects of the LWRP as it relates to land use change, as all water quantity matters in the Waitaki catchment are covered by the WCWARP (which has been considered).
- In relation to the WCWARP, we have only considered provisions which relate to the taking and use of water for specific land use activities, and not those relating to the setting of the catchment flow and environmental regime. We have not reviewed provisions relating to the Lower Waitaki (e.g. below the Waitaki Dam), as this area falls outside the area of interest.



- Consideration of Plan Change 5 to the LWRP relating to the management of nutrient loss from farming activities has been restricted to those provisions that relate to the Upper Waitaki Freshwater Management Unit, as the other FMU's fall outside the area of interest.

Determining the most appropriate way to address the findings outlined in this review was beyond the scope of this project, nor were we asked to provide recommendations on approaches or priorities for change.

In addition, we were not asked to look at any monitoring or enforcement data or reporting, nor were we requested to provide any analysis in relation to the achievement of directions for water related management. The scope of work originally intended to address water quantity (as well as quality) but this did not remain in the brief due to time and cost implications.

## 4.0 Findings – Biodiversity

### 4.1 Introduction

This section compares the extent to which each of the project documents addresses the following sub-themes relating to biodiversity:

- Issues facing Canterbury's biodiversity
- Outcomes sought
- Biodiversity off-setting
- Identification of biodiversity
- Assessment criteria
- Determining riparian areas
- Indigenous vegetation clearance
- Planting vegetation (excluding forestry)
- Forestry
- Taking, using, damming or diverting water
- Wetlands
- Vegetation burning
- Agricultural conversion and intensification
- Buildings
- Earthworks
- Mining activity
- Subdivision
- Utilities

- Stock disturbance
- Property-specific management plans

The MDP and the WDP each use slightly different terms to refer to areas that have been identified as significant for their biodiversity values. For the purposes of this section, these areas will be referred to collectively as 'significant biodiversity areas', unless specific reference is being made to the particular areas identified in each/either of the district plans.

## 4.2 Extent of alignment

The analysis undertaken highlights the following areas of alignment between the various documents reviewed in relation to the biodiversity topic:

### Issues facing Canterbury's biodiversity

- All of the documents generally recognise that the ongoing loss and degradation of biodiversity is an issue that needs to be addressed, and that land use and development, and plant and animal pests have contributed to this decline.
- The documents also, to varying degrees and levels of specificity, describe the ecological values, habitats and species within the region, area or district to which they relate.

### Outcomes sought

- The notion of protecting significant indigenous biodiversity is generally well reflected throughout all of the reviewed documents but is 'delivered' in the lower order provisions in different ways. All the documents focus more on identification and management of significant biodiversity values and general management rather than the wider maintenance and enhancement of biodiversity values as envisaged by the Act and CRPS.
- In general, all of the documents reviewed recognise the ecological values of wetlands and seek to manage activities that may affect these values to varying degrees.
- The principle of protecting 'ecologically significant wetlands' is reflected in the CRPS; the WCWARP and PPC 18 to the MDP. Some of the high naturalness water bodies identified in the LWRP are nationally or regionally significant wetlands.
- The documents generally reflect some or all of the national priorities for protection set out in the CRPS, but they are not always explicitly identified as such. Generally, the priorities are reflected in the criteria used to determine significance.

### Biodiversity off-setting

- The principle of biodiversity off-setting is recognised in the CRPS, PPC 18 to the MDP, the LWRP and the Mackenzie Agreement.

### Identification of biodiversity

- Of the project documents outlined above, there is broad recognition across the CRBS, the Mackenzie Agreement, the WCWARP and the District Plans that the Mackenzie

Basin has important biodiversity values. The WCWARP describes the species and habitats within the Waitaki catchment, whereas the WDP and the MDP identify specific Sites of Natural Significance on the planning maps, to which specific rules relate.

- The Mackenzie Agreement acknowledges the biodiversity values in the Mackenzie Country and seeks to conserve 'representative examples' of these values through the proposed JMA mechanism, supported by funding from the proposed Trust. At this stage the Mackenzie Agreement does not describe where the target areas for conservation for biodiversity values are located, and it is made explicit that the proposed biodiversity and landscape strategic plan will not contain maps of land identified as being of value for conservation purposes.
- The CRPS, CRBS and LWRP do not identify sites of biodiversity value but this is not unexpected given the nature of these documents.

#### Assessment criteria

- The CRPS, Mackenzie Agreement, WDP and MDP all include criteria to identify areas of significant indigenous biodiversity. The CRPS, WDP and MDP all set out these criteria in policies, and all of the documents include representativeness as one of their criteria for assessing significance of indigenous biodiversity.
- The LWRP relies upon the criteria in the CRPS to determine significant indigenous biodiversity. Similarly, PPC 18 to the MDP proposes to rely on the criteria in the CRPS to determine sites of significant indigenous vegetation or habitat.

#### Riparian areas

- The LWRP, MDP, WDP and PPC 18 to the MDP all include provisions that manage activities within riparian areas of certain types of waterbodies.

#### Indigenous vegetation clearance

- The MDP, PPC 18 to the MDP, and the WDP all include a definition of indigenous vegetation, and the definitions in the MDP and the WDP are the same (PPC 18 proposes a different definition).
- The LWRP, MDP, PPC 18 to the MDP and the WDP all include definitions of what constitutes vegetation clearance, and the definitions in the MDP and the WDP are the same.
- The WDP and the MDP both include rules that manage the clearance of indigenous vegetation within significant biodiversity areas, but in slightly different ways.
- The LWRP, WDP, and MDP all include rules that manage the clearance of vegetation in riparian areas, but in slightly different ways.
- The WDP and the MDP both include rules that manage the clearance of indigenous vegetation within wetlands (however PPC 18 seeks to delete this rule and does not set propose a replacement).

- The WDP and the MDP both include rules that manage the clearance of specific indigenous vegetation species or types, but in slightly different way (PPC 18 deletes these rules from the MDP).

#### Planting vegetation (excluding forestry)

- The LWRP, WDP and MDP all include rules that manage the introduction or planting of plants in the beds of lakes and rivers (the LWRP), and in significant biodiversity areas and riparian areas (the district plans). There are slight differences to the approach taken to managing this activity.

#### Forestry

- Both district plans include rules that manage the planting of forestry in significant biodiversity areas, wetlands and riparian areas.

#### Wetlands

- The LWRP, WDP and MDP all include rules that restrict certain activities within wetlands, but with slight differences.
- The LWRP includes rules that enable the enhancement, restoration and creation of wetlands, but the district plans do not.
- The LWRP includes rules that restrict the reduction of the area of wetlands, and while the WDP includes rules that discourage certain activities within wetlands, neither of the district plans contain rules that prevent the reduction of the area of wetlands. While this may appear to be a gap between the LWRP and the district plans, this is likely due to the distinct and separate functions of regional councils and territorial authorities in relation to controlling activities in wetlands.

#### Vegetation burning

- Rules relating to vegetation burning are only included in the LWRP, however this is to be expected given that regional councils are responsible for managing discharges to air, which includes from burning.

#### Buildings

- The WDP and the MDP both include rules that relate to managing the construction of buildings in significant biodiversity areas and riparian areas.
- Both district plans make exemptions from the rules preventing buildings from establishing in riparian areas in the case that land is subject to specified conservation mechanisms

#### Earthworks

- The LWRP, WDP and the MDP all include rules that manage earthworks in riparian areas, and significant biodiversity areas.

## Mining activity

- The WDP and MDP both include provisions that seek to manage mining activities in respect of significant biodiversity areas and riparian areas.

## Subdivision

- The WDP and the MDP both contain provisions that seek to manage the effects of subdivision on significant biodiversity areas. While neither of the district plans contain any rules specifically restricting the subdivision of land that has been identified for its significant indigenous biodiversity values, the approaches taken differ.

## Utilities

- The overall intent of the approaches to managing utilities in significant biodiversity areas and riparian areas in the WDP and MDP are broadly consistent, and both trigger consent as a discretionary activity. The policy framework in both documents is also broadly similar and is unaffected by PPC 18.

## Property specific management plans

- PPC 18 to the MDP and the Mackenzie Agreement both propose the use of property-specific management plans to identify, protect, and manage the development of properties in order to achieve development and biodiversity protection outcomes. Specific reference to these types of agreements (between Trust and landowners for biodiversity and landscape protection) is made in Policy 3B13(5) in the MDP in relation to the policy that manages pastoral intensification and agricultural conversion.

## 4.3 Identified gaps

The following highly significant gaps and areas of misalignment have been identified between the various documents reviewed in relation to the biodiversity topic:

Table 1: Summary of identified gaps and areas of misalignment - biodiversity

Issue	Commentary
<b>Outcomes sought</b>	
While the CRPS, WCWARP and PPC 18 to the MDP all reflect the concept of managing 'ecologically significant wetlands', the other documents do not, noting that some of the high naturalness water bodies identified in the LWRP are nationally or regionally significant wetlands.	<p>It is recognised that ecologically significant wetlands may already be identified within sites of natural significance in the District Plans (thus being subject to related rules to manage activities within these areas).</p> <p>As the WDP does not appear to reflect the distinction between ecologically significant wetlands, and wetlands generally, it may not fully give effect to the CRPS. It is noted that the WDP does include provisions that manage activities proximate to, and within, wetlands, but the riparian</p>

Issue	Commentary
<p>Aside from the CRPS, LWRP and PPC 18 to the MDP, none of the other documents reviewed appear to reflect the principle of 'no net loss'.</p>	<p>margins are less than those proposed in PPC 18 for example.</p> <p>Given that this reflects a potential disconnect between the WDP and the CRPS, and a difference in the way that this issue is addressed in the District Plans it is considered to be of high significance.</p> <p>The principle of no net loss is a policy directive in the CRPS, where it is stated that significant biodiversity areas shall be protected so as to ensure no net loss of indigenous biodiversity and indigenous biodiversity values.</p> <p>While the WDP seeks to achieve the protection of areas assessed as having significant indigenous flora and the significant habitats of indigenous fauna (objective 16.9.2(1)), the objective does not include an outcome statement that refers to this protection achieving no net loss.</p> <p>Given that this reflects a potential disconnect between the WDP and the CRPS, and a difference in the way that this issue is addressed in the District Plans it is considered to be of high significance</p>

<b>Biodiversity offsetting</b>	
<p>While the LWRP refers to the principle of biodiversity offsetting, the policy does not include reference to the criteria that are used in the CRPS and PPC 18 to the MDP.</p> <p>The CRBS, WCWARP, and WDP do not appear to include references to biodiversity offsetting.</p>	<p>The practice of biodiversity offsetting relates to the management of significant adverse effects on indigenous biodiversity and achieving no net loss of significant biodiversity values.</p> <p>Recognising this practice appropriately in the WCWARP and WDP could result in improved overall outcomes for the protection of significant biodiversity values.</p> <p>Given that this reflects a potential disconnect between the WDP and the CRPS, and a difference in the way that this issue is addressed in the District Plans it is considered to be of high significance.</p>

<b>Identified sites</b>	
<p>The WDP identifies two sites of natural significance within the Mackenzie Basin.</p> <p>There may be a gap between the extant ecological values present within the Mackenzie Basin in the Waitaki District, and the recognition of these values in the WDP.</p>	<p>It is recognised that there are general rules in the WDP that seek to manage the clearance of indigenous vegetation, and that this may go some way towards addressing a potential gap between the identification of areas of significant biodiversity and the management of those areas. However, as reflected in the rule framework that relates to significant biodiversity areas elsewhere in the WDP, other activities such as the construction of buildings, forestry and network utilities can also have adverse effects on areas of significant</p>

Issue	Commentary
-------	------------

biodiversity and would not be explicitly managed unless an area is identified as being significant. Further, the identification of specific areas of significance can be linked to the provision of support and incentives to landowners to assist with the protection and enhancement of these areas. As this issue relates to the identification (and subsequent management) of ecological values in the Mackenzie Basin, this is considered to be of high significance.

<b>Assessment criteria</b>
----------------------------

The CRPS, Mackenzie Agreement, and both District Plans explicitly set out criteria that will be used to determine the significance of biodiversity areas. The definition of 'significant indigenous biodiversity' in the LWRP cross references to the criteria in the CRPS.

The criteria in the MDP and the WDP differ from those in the CRPS, as outlined above.

Of particular note the Mackenzie Agreement does not refer to the principles of rarity and distinctiveness; diversity and pattern; and ecological context/connectivity, which are only referred to in the CRPS, MDP and WDP. However, it does refer to the principle of vulnerability.

It is acknowledged that PPC 18 to the MDP proposes to rely upon the CRPS criteria. The WDC has undertaken some preliminary work in relation to indigenous vegetation clearance rules and associated criteria.

As this issue relates to the identification (and subsequent management) of ecological values in the Mackenzie Basin, this is considered to be of high significance.

<b>Indigenous vegetation clearance</b>
--

The LWRP and PPC 18 to the MDP include reference in the policy framework to the management of indigenous vegetation clearance, whereas the operative MDP and WDP do not explicitly refer to this.

The absence of clear direction in the policy framework of the district plans as to what outcomes are sought to be achieved through the management of the clearance of indigenous vegetation could lead to challenges when dealing with resource consent applications seeking to undertake this activity. It is acknowledged that PPC 18 to the MDP seeks to address this issue.

As this relates to an inconsistency in the way in which this activity is managed between the districts at a policy framework level, this is considered to be of high significance.

Issue	Commentary
<p>The WDP includes a definition of ‘indigenous bush’ which relates to a rule that limits its clearance. It is distinct from the definition of ‘indigenous vegetation’.</p> <p>PPC 18 to the MDP introduces a different definition of ‘indigenous vegetation’ to that which is currently in the operative MDP and the WDP.</p>	<p>It is noted that the definitions of indigenous bush in the WDP, and of indigenous vegetation in the WDP and MDP all include inherent thresholds that appear to have relationships to the types of thresholds that might be expected in significance criteria. This may be a deliberate approach in order to address the ‘balance’ between the number of identified sites of significance and the general rules relating to indigenous vegetation clearance.</p> <p>However as signalled by PPC18, which seeks to adopt the CRPS criteria, and proposes a different definition of indigenous vegetation, an updated approach to this may be required in the WDP.</p> <p>As this issue relates to an inconsistency in the way in which indigenous vegetation clearance is managed between the districts and has interrelationships with the way in which significant areas are identified, this is of high significance.</p>
<p>PPC 18 to the MDP introduces ‘irrigation’ as a means by which vegetation clearance can occur (in the definition of ‘vegetation clearance’).</p> <p>The operative MDP and WDP include definitions of vegetation clearance, which include clearance by way of cultivation, spraying and burning, but does not include irrigation.</p>	<p>This issue is interrelated to the way in which the WDP manages the agricultural conversion and/or intensification of land in respect of landscape values as outlined elsewhere in this report.</p> <p>Given the potential pressure for land use change to enable greater irrigation of land in the Mackenzie Basin, the potential for this activity to affect landscape and ecological values, and the differences in the way that this issue is managed by the districts, this is considered to be of high significance.</p>

**Planting vegetation**

<p>The rules in the LWRP relate to ‘plants’, whereas the rules in the MDP and the WDP relate to ‘tree planting’.</p> <p>The LWRP includes provisions that restrict the introduction of pest plants, but aside from rules relating to wilding pines, neither the MDP or the WDP include rules relating to this issue.</p> <p>The activity status for tree planting in significant biodiversity areas in the MDP is non-complying, whereas it is a discretionary activity in the WDP.</p> <p>The WDP makes exemptions for tree planting if it is provided for in specified conservation mechanisms, whereas the MDP does not.</p>	<p>It is acknowledged that the focus of managing activities within riparian areas may differ between regional councils and territorial authorities, and that may explain why the focus in the LWRP is on controlling ‘plants’ generally, as opposed to ‘trees’ in the District Plans.</p> <p>However, as some plants that are not trees might have the potential to result in adverse effects on the ecological values of significant biodiversity (and in particular pest plants), and there are differences in the way these activities are managed between the districts and the LWRP, this is considered to be of high significance.</p>
---	--



Issue	Commentary
<p>The WDP controls tree planting in riparian areas, and while the MDP controls forestry in riparian areas, it does not manage other types of tree planting in riparian areas.</p>	
<p>The WDP controls tree planting in wetlands, and the MDP controls forestry in wetlands, but not other types of tree planting.</p>	
<p>Amenity tree planting is restricted in areas of significant indigenous vegetation and significant indigenous habitats in the Waitaki District but is provided for in areas of Otago and Grand skink habitat.</p>	

**Agricultural conversion and intensification**

<p>The MDP states that agricultural conversion or pastoral intensification in the Mackenzie Basin subzone in a Site of Natural Significance is a non-complying activity, but there is no equivalent rule in the WDP (aside from the rules that limit buildings, earthworks and indigenous vegetation clearance).</p>	<p>It is acknowledged that the general rules seeking to prevent the clearance of indigenous vegetation (including by cultivation) may go some way towards managing the potential effects of agricultural conversion and intensification on biodiversity values, as well as the rule in the WDP preventing irrigation in an ONL.</p> <p>However, given the interrelationship of this issue with the management of landscape values, the likely pressure for this type of activity, and the difference in the way this activity is managed between the districts, this is considered to be of high significance.</p>
--	--

In addition to the highly significant gaps identified above, other gaps of low to medium significance have been identified which relate to:

- Determining riparian areas: the distances from waterbodies that trigger various rules relating to biodiversity values differ between the LWRP, MDP and the WDP and this is likely to be related to the different focus in managing activities within riparian areas between regional councils and territorial authorities.
- Indigenous vegetation clearance: the way in which the various plans manage the clearance of vegetation in significant biodiversity areas differs, including the approach to activity status, the use of clearance thresholds, the application of rules to wetlands and the identification of specific indigenous vegetation communities and species. The extent to which this is a significant issue has a certain relationship to the number of sites of significance that are identified in each of the District Plans and also may reflect the different focus between district and regional authorities.
- It also is noted that the majority of the provisions in the plans focus on significant vegetation and not on significant habitats of indigenous fauna (with section 6(c) relating to both flora and fauna). This is not unusual in the district plan context with most plans having focussed on flora and assumed a correlation to protection of fauna values. This approach could contribute to a significant gap in the protection of biodiversity values

but is not well understood at this time. It appears likely this issue will be addressed in future changes to planning documents.

- PPC18 to the MDP introduces a definition 'improved pasture' and provisions for clearance of indigenous vegetation within these areas. There is no comparable definition in the other documents and reflects an evolving issue in the approaches to defining areas of significance and areas in which activity can occur unfettered. As an evolving issue it is likely that this will be further addressed over time in plan reviews.
- Forestry: at present this is an area of discrepancy between the district plans, however this is likely to be resolved through alignment with the NES-PF and through changes in upcoming plan review processes.
- Buildings, Earthworks and Mining activities: there are a range of differences in the approach to rules for buildings, earthworks and mining activities, particularly between the two district plans. This is largely linked to the activity status' and implications for significant biodiversity areas, riparian areas and wetlands.
- Subdivision and Utilities: these gaps relate to inconsistencies in the approach between the two district plans for activity status of subdivision and the types of utility structures in biodiversity areas.
- Stock disturbance: the district plans do not include methods to support the outcomes being sought in the LWRP to manage the use and disturbance of lakes, wetlands and rivers by stock (acknowledging the different responsibilities of regional and territorial authorities).

## 5.0 Findings – Outstanding Natural Landscapes

### 5.1 Introduction

This section compares the extent to which each of the project documents addresses the following sub-themes relating to outstanding natural landscapes:

- Identification of landscape values
- Description of landscape values
- Assessment criteria
- Identification of 'other' landscapes
- Pastoral intensification, agricultural conversion and irrigators
- Earthworks
- Buildings
- Forestry
- Subdivision

- Utilities
- Information and guidelines

## 5.2 Extent of alignment

The analysis undertaken highlights the following areas of alignment between the various documents reviewed in relation to the outstanding natural landscape topic:

### Identification and description

- The recommended outstanding natural features and landscapes in the CLRS are reflected in Appendix 4 of the CRPS.

### Assessment criteria

- The criteria for assessing landscape values in the CRPS directly correspond to the modified Pigeon Bay criteria, and the CRPS and the MDP both set out the criteria for assessing landscape values in policies.

### Managing effects on landscape values – activities

- The MDP and the WDP both include rules that relate to the following activities, but take different approaches:
  - limiting the irrigation of land in outstanding natural landscapes;
  - managing earthworks;
  - buildings;
  - forestry;
  - subdivision; and
  - utilities.

### Information and guidelines

- Landscape guidelines addressing the activities above are included in both the WDP and the MDP. The content appears to be generally the same.

## 5.3 Identified gaps

The following highly significant gaps and areas of misalignment have been identified between the various documents reviewed in relation to the outstanding natural landscapes topic:

Table 2: Summary of identified gaps and areas of misalignment – outstanding natural landscapes

Issue	Commentary
<b>Identification and description of landscape values</b>	
<p>The ONLs identified in the operative WDP do not directly align with the extent of the Mackenzie Basin ONL in the CRLS.</p> <p>The most recent landscape assessment undertaken for WDC does not directly align with the extent of the Mackenzie Basin ONL in the CRLS, but does more closely align than the Operative WDP ONL layer.</p> <p>While Appendix 4 to the CRPS sets out a schedule of the regional outstanding natural features and landscapes, neither the MDP or WDP appear to include a similar schedule of the ONF/Ls that are identified in these district plans.</p> <p>However Rural Objective 3B in the MDP sets out the characteristics and/or values of the Mackenzie Basin that should be protected and enhanced, and descriptions of the Scenic Viewing Areas and Scenic Grasslands are included in Appendix J.</p>	<p>The implications of this gap on potential land use changes within the areas of the Waitaki District that are not included within the ONFL layer, but are identified in the CRLS, are set out in the land use section of this report.</p> <p>It is acknowledged in the CRPS and the CRLS that the extent of district ONLs may differ from those identified at a regional level.</p> <p>As this issue relates to the identification (and subsequent management) of landscape values in the Mackenzie Basin this is considered to be of high significance.</p> <p>The identification of the values for which a landscape has been identified as being significant is an important way to assist with the management of those values when administering changes within these landscapes.</p> <p>Given that this issue could have implications on the appropriate management of landscape values particularly in the Waitaki District, this issue is considered to be of high significance.</p>
<b>Assessment criteria</b>	
<p>The criteria in the WDP and the MDP do not align with those in the CRPS, but it is noted that the most recent landscape assessment for WDC relied on the criteria set out in the CRLS (which align with the CRPS). It is not known how the landscape values of the Mackenzie Basin that informed the identification of the Mackenzie Basin subzone and other associated mapped landscape values were determined, including the criteria that were relied upon.</p>	<p>The differences between the criteria for assessing landscape values in the CRPS and the District Plans could arise from the times at which each of these documents were prepared, and for the MDP, the extensive PC13 process. The most recent landscape assessment undertaken for the WDC used the CRPS criteria and therefore it could be anticipated that the criteria referenced in the MDP and the WDP may well be updated to reflect the CRPS criteria in upcoming district plan review processes.</p> <p>As this issue relates to the identification (and subsequent management) of landscape values in the Mackenzie Basin this is considered to be of high significance.</p>

Issue	Commentary
<b><i>Pastoral intensification, agricultural conversion, and irrigation</i></b>	
<p>Irrigation of land for pastoral or crop production in an ONL is a non-complying activity in the WDP.</p> <p>By way of contrast, the MDP manages irrigators (as structures), as well as agricultural conversion and/or pastoral intensification (which includes irrigation).</p> <p>Additionally, the MDP provides for irrigators, agricultural conversion and pastoral intensification on a more permissive basis in certain parts of the Mackenzie Basin Subzone than the WDP does for those parts of the basin that are in an ONL.</p> <p>The more nuanced approach to managing these activities in the MDP is also reflected in the policy framework, which contrasts to that set out in the WDP.</p>	<p>The different approaches that are taken in the WDP and MDP could result in different outcomes on the landscape values of the Mackenzie Basin across both districts and may also have operational implications for landowners of any parcels of land that cross the district boundary.</p> <p>Both district plans have rules that manage irrigation, but where this is a non-complying activity in the part of the Mackenzie Basin ONL that is within the Waitaki District, irrigation is a permitted activity in defined Farm Base areas in the Mackenzie District, and a controlled activity in areas where water permits were granted prior to 14 November 2015 (and discretionary activities in areas where no water permits were granted prior to 14 November 2015).</p> <p>The WDP does not manage agricultural conversion and/or pastoral intensification by other means such as oversowing, topdressing, or cultivation, whereas the MDP does. This could result in changes to the landscape values of the Mackenzie Basin in the Waitaki District that might not occur in the Mackenzie District due to the rules that seek to manage these activities within the Mackenzie Basin Subzone.</p> <p>Given the relationship of this issue to the identification of ONL values outlined above, the relationship of this issue to the topic of land use change (addressed elsewhere in this report), and the significance of those values in the context of the Mackenzie Basin this is considered to be of very high significance.</p>

In addition to the highly significant gaps identified above, other gaps of low to medium significance have been identified which relate to:

- Assessment criteria: the criteria for determining an ONL is listed in explanatory text in the MDP rather than in a policy.
- Identification of 'other' landscapes: while this concept is promoted by the CRPS, neither of the district plans explicitly include these.

- Earthworks and Buildings: there are a range of differences in the approach to rules for earthworks and buildings between the two district plans. This is largely linked to the activity status' and has the potential to result in different landscape outcomes and may also have operational implications for landowners of land that crosses the district boundary.
- Forestry: at present this is an area of discrepancy between the district plans, however this is likely to be resolved through alignment with the NES-PF and through changes in upcoming plan review processes.
- Subdivision: the different approaches to managing subdivision in the Mackenzie Basin across the two districts could result in different landscape outcomes. The minimum lot sizes are very different between the two district plans.
- Utilities: the different approaches to managing utilities in the Mackenzie Basin across the two districts could result in different landscape outcomes and would have implementation implications for network utility providers seeking to establish networks across the two districts.

## 6.0 Findings – Land Use Change

### 6.1 Introduction

This section addresses land use change and has focussed on the following types of activities:

- Managing growth of towns and settlements, including allocation of water to support land use change
- Soil resources
- Pastoral intensification and agricultural conversion
- Mineral extraction / mining
- Tree planting and forestry
- Commercial, industrial and tourism activities
- Earthworks

There are overlaps between the way in which land use change is managed in relation to biodiversity and outstanding natural landscape values.

### 6.2 Extent of alignment

The analysis undertaken highlights the following areas of alignment between the various documents reviewed in relation to the land use change topic:

## Design and location of growth, planning for growth

- The strategy reflected in the CRPS to ensure consolidation of urban growth and limited rural residential expansion in and around existing urban areas is generally well reflected in the policy framework and zoning pattern of the WDP but is not reflected to the same extent in the MDP.

## Allocation of water to support land use change

- The WCWARP generally aligns well with the higher order land use objectives and policies in the CRPS.
- There is no misalignment between the scope of rural development anticipated or sought under the CRPS, Mackenzie Vision and Agreement, District Plans; and the restrictions on the take and use of water in the WCWARP for such development. This conclusion is reached on the basis of the *types* of activities envisaged and provided for in the CRPS and District Plans, and the allocation of water to those same types of activities in the WCWARP. It is not based on an assessment of the ultimate development 'capacity' for these land uses, and the extent to which there is available water to provide for that development capacity. If there is insufficient remaining water to be allocated to activities in particular locations in accordance with the WCWARP, the level of rural development enabled in District Plans may need to be constrained accordingly.

## Soil resources

- Without having undertaken detailed analysis of the location and extent to which high class soils can 'absorb' development, the minimum net lot area requirements in the Rural Scenic zone and the Mackenzie Basin subzone generally give effect to the policy direction in the CRPS to avoid the fragmentation of highly productive land.

## Pastoral intensification and agricultural conversion

- There could appear to be some conflict between the rule framework in the MDP that manages agricultural conversion and pastoral intensification within the Mackenzie Basin Subzone, and the objectives of the Mackenzie Agreement. However, Policy 3B13 enables JMAs to be taken into account when considering applications for these activities, and the LWRP as amended by Plan Change 5 enables a degree of farming intensification in the Haldon and Mid Catchment zones, subject to discharge limits and no net loss of significant indigenous biodiversity. The CRPS, MDP, LWRP and the Mackenzie generally align on this matter at a high-level policy level but there are some specific geographic constraints in PC13 that are not reflected or referenced in the LWRP.

## Mineral extraction / mining

- The provisions of the LWRP, MDP and WDP broadly align in relation to the management of mining activities, noting that analysis of the way in which the provisions manage mining activities in respect of biodiversity and landscape values are set out in other parts of this report.

## Commercial, industrial and tourism activities in the rural zone

- The approach taken to managing these activities generally aligns between the district plans, except that the approach taken to commercial recreation in the MDP is slightly more general and permissive than the WDP. Similarly, the permitted baseline for visitor accommodation in the MDP is more permissive than the WDP in relation to the numbers of guests that can be accommodated.
- There is broad alignment between the WCWARP and the types of activities managed in the district plans, subject to the availability of water.

## Conflicts between rural activities (reverse sensitivity)

- Both the WDP and MDP include objectives that seek a level of rural amenity consistent with the range of activities anticipated in rural areas, but which does not create unacceptably unpleasant living or working conditions for the District's residents and visitors. This is generally consistent with the CRPS. Policy support for these objectives is however variable between the plans.

## 6.3 Identified gaps

The following highly significant gaps and areas of misalignment have been identified between the various documents reviewed in relation to the land use change topic:

*Table 3: Summary of identified gaps and areas of misalignment - land use change*

Issue	Commentary
<b><i>Design and location of growth, planning for growth</i></b>	
<p>The strategy reflected in the CRPS to ensure consolidation of urban growth and limited rural residential expansion in and around existing urban areas is not particularly well reflected in the MDP, where there is a lack of policy support for this concept.</p> <p>Some provisions in the MDP could be seen to conflict with this approach e.g. Policy 3B4 (which encourages appropriate large scale residential and rural residential areas in areas of low or medium visual vulnerability in the Mackenzie Basin subzone by adopting alternative zoning options that incorporate enhancement of landscape and ecological values, including wilding control).</p>	<p>It is recognised however that the differing landscape led spatial approaches to managing growth in the MDP, and in particular the Mackenzie Basin subzone, supports achievement of other environmental and economic objectives (e.g. landscape protection, and ecological protection/enhancement) in the CRPS, biodiversity strategy, and Mackenzie Vision and Agreement. Recognising the validity of this approach, it is considered that future review of the CRPS growth objectives and policies may need to recognise and incorporate such alternative spatial approaches to managing growth. That may include for example compensatory type provisions which enable rural and rural residential growth and other forms of development, where there is retention and enhancement of significant indigenous biodiversity and landscape values.</p>



Issue	Commentary
-------	------------

As this is a misalignment that relates to broad strategic growth issues, it is of high significance.

<b>Pastoral intensification and agricultural conversion</b>	
---	--

The combination of the extent of land within the Waitaki District's ONFL layer as compared to the extent of this ONL in the CRLS and the limited management of only irrigation (as compared to direct drilling, cultivation, subdivisional fencing, top dressing and oversowing in the MDP) has the potential to enable ongoing pastoral intensification and agricultural conversion on a permissive basis throughout approximately 38,500 ha of land that is identified as being within the CRLS ONL for the Mackenzie Basin.

In addition, agricultural conversion arising from direct drilling, cultivation, top dressing and oversowing is not managed under the WDP and could occur as a permitted activity throughout the Waitaki District within the Mackenzie Basin.

The implications of these differences could have significant effects on the landscape values and biodiversity values within the Mackenzie Basin in the Waitaki District and could lead to a marked difference in these values between the Mackenzie and Waitaki Districts.

As this issue relates to a key land use change in the Basin, relates to a distinct difference in land use approaches between the District Plans; relates to a marked difference in the way that landscape values are identified at a regional and district level; and could have significant implications on biodiversity and landscape values in the Basin, the significance of this gap is considered to be very high.

The significance of this issue could be tempered by water allocation limitations and nitrogen loss caps through the LWRP. This is a matter of very high significance due to its strategic importance.

In addition to the highly significant gaps identified above, other gaps of low to medium significance have been identified which relate to:

- Effects on water arising from land use: There is a degree of misalignment between the use of water for irrigation and the management of effects on biodiversity and landscape values. This in part a result of the division of functions between the regional and districts, and in part a result of the relative timing of the plan processes.
- Design and location of growth, and planning for growth: there is a general lack of provisions in the MDP and WDP which ensure that rural growth gives effect to the CRPS policy seeking to ensure that substantial developments are built to a high quality, and are robust, and resilient, and the related methods which require an ODP or outline/concept plan to be submitted as part of an application for substantial developments. There is also general lack of provisions in the MDP and WDP which promote good planning, building design, and urban design to give effect to the NZ Urban Design protocol, as sought by the CRPS methods.
- Commercial, industrial and tourism activities in the rural zone: the objectives and policies for the rural zone in the MDP do not appear to explicitly refer to the way in which commercial, industrial, recreational and visitor accommodation activities should be managed in the rural zone, beyond those that relate to rural amenity generally. This

is inconsistent with the policy framework set out in the CRPS and the WDP and does not provide a policy direction that aligns with the outcomes sought in relation to tourism activities in the Mackenzie Agreement.

- Conflicts between rural activities: while both District Plans include varying rural amenity controls, there is a general lack of policy recognition of managing reverse sensitivity effects and this could result in increasing conflicts between rural and non-rural activities.

## 7.0 Findings – Water Quality

### 7.1 Introduction

This section addresses water quality and has focussed on the following sub-themes:

- Recognising Ngāi Tahu relationships with water
- Intrinsic values of water
- The need for high quality fresh water
- Water quality outcomes
- Way in which fresh water quality outcomes shall be managed
- Farming activities and nitrogen loss
- Stormwater and wastewater systems
- Earthworks and vegetation clearance
- Hazardous substances and hazardous activities
- Exclusion of stock
- Animal effluent and offal pits

### 7.2 Extent of alignment

The analysis undertaken highlights the following areas of alignment between the various documents reviewed in relation to the water quality topic:

#### Recognising Ngāi Tahu relationships with water

- While there is recognition throughout the CRPS, LWRP, WCWARP and the District Plans of Ngāi Tahu's relationships with water, the provisions in the CRPS, LWRP and WCWARP are generally more extensive and specific than those in the District Plans.

### Intrinsic values of water

- The CRPS, LWRP and WCWARP all include references to the importance of the intrinsic values of water.

### Need for high quality fresh water

- In general, the CRPS, LWRP, WCWARP and the District Plans all recognise that high water quality is important in the continuing supply of water for drinking water and recreation, however only the regional documents also acknowledge that high water quality is important for customary uses.

### Water quality outcomes

- The CRPS seeks to maintain water quality where it is of a high standard, and to improve, restore, and enhance degraded fresh water bodies and their surroundings.<sup>17</sup> This principle is reflected in the LWRP, which seeks to maintain the state of high naturalness waterbodies and Hāpua in a healthy state, or improve them where they are degraded.<sup>18</sup>
- The WCWARP identifies High Natural-Character Waterbodies in Policy 2 and states that the consent authority will ensure that any taking, using, damming or diverting of water does not, by itself, or in combination with any other take, use, dam, or diversion in the same area, have a more than minor adverse effect on the water quality of these waterbodies.<sup>19</sup> There is general alignment between the regional documents in relation to the water quality outcomes that are sought in relation to specific 'types' of waterbodies.

### Way in which fresh water quality should be managed

- At a high level the provisions of the LWRP that relate to the management of water quality appear to be broadly consistent with the management approach set out in the CRPS.

### Farming activities and nitrogen losses

- Collectively the provisions that relate to nutrient losses from farming activities to manage effects on water quality in the LWRP have very recently been through the resolution of appeals on decisions on Plan Change 5 and made operative.

### Earthworks and vegetation clearance

- The LWRP seeks to avoid sediment laden discharges to surface water, and related provisions manage earthworks in riparian areas and on erosion prone land. There are rules to manage discharges to water from dust suppressants; and earthworks and

---

<sup>17</sup> CRPS Objective 7.2.2

<sup>18</sup> LWRP Objective 3.18

<sup>19</sup> WCWARP Policy 32

vegetation clearance in riparian areas and erosion prone land. Both district plans also include rules that manage earthworks generally in the rural zone and in riparian areas. There are however some differences in the way that the district plans manage earthworks.

#### Hazardous substances and hazardous activities

- In general, the LWRP and the District Plans both appear to manage the land use and discharge related aspects of these types of activities in a manner that should enable potential effects on water quality to be avoided.

### 7.3 Identified gaps

All gaps identified in relation to the Water Quality topic are considered to be of low to medium significance. Within these, the nature of the gaps is largely associated with areas in which it would be useful for there to be greater acknowledgement of the relationships between regional and district functions (e.g. management of stormwater and wastewater systems).

In particular, it could be useful to reflect the principles of protection of waterbodies within the district level policy framework, to reflect the higher order documents, given that the district plans manage land use activities that could have adverse effects on water quality. Better coordination between the management of similar activities across multiple documents would assist in achieving better water quality outcomes. This relates to aspects such as exclusion of stock and management of animal effluent and offal pits.

## 8.0 Conclusion

Undertaking this review has identified the number and complexity of documents relevant to management of the Mackenzie Basin. The review demonstrates the quantum of provisions that seek to manage significant environmental values in the Mackenzie Basin alongside managing the effects of land use change.

As set out in the findings above, there is general high level alignment across all of the project documents that managing the effects of land use on water quality, biodiversity, and outstanding natural landscapes is important. However, the findings show that the manner in which the various documents seek to identify what is important, manage various land use activities in respect of those important values, and specify the outcomes that are sought to be achieved can differ to varying levels of degree and therefore significance.

This review identifies a number of areas of significant misalignment between the documents and approaches that are relevant to the Mackenzie Basin.