

**Proposed Plan Change 2  
(Regionally Significant Wetlands)**

**to the  
Regional Plan: Water for Otago**

**Officer's Report on  
Decisions Requested**

**Addendum to  
Chapter 3:  
Schedules and Maps**

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### **Abbreviations**

Plan	Regional Plan: Water for Otago
Proposed plan change / plan change 2	Proposed Plan Change 2 (Regionally Significant Wetlands) to the Regional Plan: Water for Otago
RSW	Regionally Significant Wetland
RMA	Resource Management Act 1991

## Introduction

The Otago Regional Council (ORC) has prepared Plan Change 2 (Regionally Significant Wetlands) to the Regional Plan: Water for Otago (the Plan). Proposed Plan Change 2 builds on existing provisions for Regional Significant Wetlands by:

- Protecting more wetlands that are regionally significant
- Strengthening regulatory protection for Regionally Significant Wetlands
- Making provisions easier to read and understand
- Providing better wetland information.

### Notification process

Plan Change 2 was publicly notified in the Otago Daily Times on Saturday 2 July 2011 and submissions closed on Friday 29 July 2011. A total of 49 submissions were received (2 of which were received after the formal submission period).

The *Summary of Decisions Requested*, which enabled further submissions, was notified on Saturday 10 September 2011, with further submissions closing on Friday 23 September 2011. There were 9 further submissions received.

The *Officer's Report on Decisions Requested* ("the Officer's Report") which evaluates decisions requested by submitters and further submitters and makes recommendations to the Hearing Committee, was released on Monday 5 December 2011. The Officer's Report addresses submission points on the policy framework, the rules proposed under Plan Change 2 and the extent of individual wetlands.

### The purpose of this report

A number of submitters opposed the mapping of specific wetlands and/or their inclusion in Schedule 9 of the Plan. In a number of cases it was considered appropriate to undertake further ecological assessments to confirm the presence (or absence) of regionally significant wetland values within the portion of the wetland located on those submitter's property, or to carry out additional field visits to more accurately determine the wetland boundaries on the property.

The practical implications of undertaking this additional field work did not allow for these submissions to be considered in the Officer's Report. This *Addendum to Chapter 3: Schedules and Maps of the Officer's Report on Decisions Requested* complements the Officer's Report by summarising the results of these ecological value and boundary assessments, and by making further recommendations to the Hearing Committee.

### Documents referred to in this report

This report should be read in conjunction with the following documents:

- Proposed Plan Change 2 (Regionally Significant Wetlands) to the Regional Plan: Water for Otago (2 July 2011).
- Summary of Decisions Requested (23 November 2011).
- Officer's Report on Decisions Requested (5 December 2011)



## 3.2A Specific Schedule 9 Wetlands

Schedule 9 of the Regional Plan: Water for Otago

Plan Change 2 reference: R200-399 (pages 84-89)

Summary of Decisions Requested: pages 117-134

Officer's Report on Decisions Requested: Section 3.2 pp. 38-43

### 3.2A.1 Introduction

Four submitters opposed the following wetlands being included in Schedule 9:

- Lower Manorburn Dam Margins (Operative Plan: Schedule 10)
- Shotover River Confluence Swamp (Operative Plan: Schedule 10)
- Trig Q Ephemeral Pond (Operative Plan: Schedule 9)
- Te Hua Taki Wetland (newly identified wetland)

The absence of any RSW values is the main reason for opposition to the inclusion of the Shotover River Confluence Swamp and Te Hua Taki Wetland in Schedule 9, while the Scheduling of Trig Q Ephemeral Pool is opposed on the claim that it is not a wetland. The inclusion of Lower Manorburn Dam Margins in Schedule 9 was opposed as the wetland is located on the margins of an artificial lake used for irrigation supply, and this continued use may not be compatible with maintaining wetland values.

It was considered appropriate to undertake further ecological assessments in response to these submissions. The ORC commissioned Wildland Consultants to undertake the ecological assessments ("the Wildland assessment"). More specifically, the ecologist was tasked to:

- Determine if the wetland is a wetland according to the RMA/Plan definition.
- Identify the presence of any regionally significant wetland values (Policy 10.4.1 of Proposed Plan Change 2).
- Identify the wetland class (or classes) occupied by the wetland.
- Determine the physical extent occupied by the wetland.

The assessments of these four wetlands were undertaken in December 2011, and the full report by Wildland Consultants *Ecological Evaluation of Seven Wetlands in relation to proposed Plan Change 2, Regional Plan: Water for Otago (2011)* is available upon request.

### 3.2A.2 Discussion

#### Lower Manorburn Dam Margins

The Lower Manor Burn Margins is included in Schedule 9 based on information from Landcare Research, which found **RSW value A5** (*Wetland scarce in Otago in terms of its ecological or physical character*).<sup>1</sup>

The Wildland assessment (Wildland Consultants, 2011, pp 7 – 8) found that the site supports **RSW value A1** (*Habitat for nationally or internationally rare or threatened species or communities*) due to the presence of little shag (At Risk-Naturally Uncommon). The Wildland assessment also found the site supports **RSW value A5** (*Wetland scarce in Otago in terms of its ecological or physical character*) as it is located in Manorburn Ecological District where only about 2% of land cover comprises lakes and ponds and herbaceous freshwater vegetation (Landcover Database v2).

The Wildland ecologist did not recommend any changes to the boundaries of the Lower Manorburn Dam Margins as shown in the proposed Map F15 of the Regional Plan: Water for Otago.

#### Shotover River Confluence Swamp

The Shotover River Confluence Swamp is included in Schedule 9 based on the information included in an ecological report prepared by Natural Solutions for Nature Ltd for Ladies Mile Partnership Ltd (2010)<sup>2</sup>. This information indicates the presence of **RSW value A1** (*Habitat for nationally or internationally rare or threatened species or communities*) due to the presence of *Olearia lineata* (At Risk – Declining), as well **RSW value A3** (*High diversity of habitat types*).

The Wildland assessment (Wildland Consultants, 2011, p 9) concludes that the site supports **RSW value A1** (*Habitat for nationally or internationally rare or threatened species or communities*) due to the presence of *Olearia lineata*, as well as **RSW value A5** (*Wetland scarce in Otago in terms of its ecological or physical character*) as it is located in Shotover Ecological District where only about 0.01% of land cover comprises herbaceous freshwater vegetation and about 7.25% lakes and ponds (Landcover Database v2).

The ecologist did not recommend any changes to the boundaries of the Shotover River Confluence Swamp as shown in the proposed Map F5 of the Regional Plan: Water for Otago.

#### Trig Q Ephemeral Pond

Trig Q Ephemeral Pond is included as regionally significant in the operative Plan, as a wetland that provides habitat for nationally or internationally rare or threatened species or communities (**RSW value A1**). This was due to the presence of *Crassula peduncularis* (Threatened-Nationally Critical in de Lange *et al.* 2009).

During the Wildland assessment of this wetland, *Crassula peduncularis* was not observed, nor did the ecologist identify the presence of any other RSW values (Wildland Consultants, 2011, pp 3 – 4)

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<sup>1</sup> Ausseil, A.G., Newsome, P., Johnson, P. (2008) *Wetland Mapping in the Otago Region*. Landcare Research Contract Report prepared for the Otago Regional Council.

<sup>2</sup> Natural Solutions for Nature Ltd. (2010) *Ecological Assessment and Recommendations for Enhancement. Shotover Country, Stalker Road, Queenstown*. Report prepared for Ladies Mile Partnership.  
*Addendum to the Officer's report on decisions requested to Proposed Plan Change 2 (Regionally Significant Wetlands) to the Regional Plan: Water for Otago 17 February 2012*

The Wildland assessment (Wildland Consultants, 2011, p3) also revealed that the actual wetland is located slightly to the southwest of the area marked as wetland in the proposed new F-series of the Maps to the Regional Plan: Water for Otago and that the wetland is much smaller, see Figure 1.



Figure 1: Trig Q Ephemeral Pool (The thin line shows the wetland boundary proposed under Plan Change 2. The darkened area shows the approximate location of the wetland as identified during the Wildland assessment).

### **Te Hua Taki Wetland**

Te Hua Taki Wetland is included in Schedule 9 based on an ecological report prepared by Boffa Miskell (2006) for Meridian Energy.<sup>3</sup> The information included in the Boffa Miskell report suggests that the wetland meets **RSW value A5** (*Wetland scarce in Otago in terms of its ecological or physical character*).

The Wildland assessment (Wildland Consultants, 2011, pp 2 – 3) states that the site meets **RSW value A5** (*Wetland scarce in Otago in terms of its ecological or physical character*) as it is located in

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<sup>3</sup> Boffa Miskell (2006) *North Bank Tunnel Concept. Water Consents. Wetland Assessment*. Prepared for Meridian Energy Limited.



Glenavy Ecological District where less than 1% of land cover comprises flaxland, lakes and ponds, or freshwater wetlands (Landcover Database v2).

The Wildland assessment did not recommend any changes to the boundaries of the wetland as shown in the proposed new Map F66 of the Regional Plan: Water for Otago.

### 3.2A.3 Recommendations

a) Retain the following wetlands in Schedule 9 and the F-series of the Maps as proposed:

- Lower Manorburn Dam Margins (Map F15)
- Shotover River Confluence Swamp (Map F5)
- Te Hua Taki Wetland (Map F66)

b) Remove Trig Q Ephemeral Pool from Schedule 9 and the F-series of the Maps.

#### Reasons

- The Wildland Assessment shows that the Lower Manorburn Dam Margins, Shotover River Confluence Swamp and Te Hua Taki Wetland all meet **RSW value A5** (*Wetland scarce in Otago in terms of its ecological or physical character*), and that the Lower Manorburn Dam Margins and Shotover River Confluence Swamp also meet **RSW value A1** (*Habitat for nationally or internationally rare or threatened species or communities*).
- The Wildland Assessment shows that none of the RSW values listed in Policy of 10.4.1 were recorded within or near the mapped extent of Te Hua Taki Wetland.

### 3.2AA Mapping of specific wetlands in Schedule 9

F-series of the Maps of the Regional Plan: Water for Otago

Plan Change 2 reference: R200-399 (pages 84-89)

Summary of Decisions Requested: pages 117-134

Officer's Report on Decisions Requested: Section 3.2 | pp. 38-43

#### 3.2AA.1 Introduction

Various submitters requested a review of or amendments to the mapped boundaries of specific wetlands included in Schedule 9. Most of these submissions requested the exclusion of areas that were currently part of a farming or forestry operation, or to facilitate the ongoing use and maintenance of existing structures (e.g. pumping station, drains, stop banks, driveway). For some of these wetlands it was considered appropriate to undertake further site studies to resolve the mapping issues raised in submissions.

Between August 2011 and January 2012 the following wetlands were visited by ORC staff to ground-truth their boundaries:

- Akatore Creek Swamp (Operative Plan: part in Schedule 9, part in Schedule 10)

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- Waipori/Waihola Wetland Complex (Operative Plan: Schedule 9)
- Chapman Road Inland Saline Wetland (Operative Plan: Schedule 9)
- Pleasant River Estuary Wetland Complex (Operative Plan: part in Schedule 9, part in Schedule 10)
- Three Stones Fen Complex (Operative Plan: Schedule 10)

Between December 2011 and February 2012 the ecologist from Wildland Consultants assessed the extent of the following wetlands:

- Akatore Creek Swamp (Operative Plan: part in Schedule 9, part in Schedule 10)
- Stirling Marsh Complex (Operative Plan: Schedule 10)
- Diamond Lake Wetland (Operative Plan: Schedule 9)
- Lake Reid Wetland (Operative Plan: Schedule 9)

The data gathered in the site visits, and the full reports by Wildland Consultants *Ecological Evaluation of Seven Wetlands in relation to proposed Plan Change 2, Regional Plan: Water for Otago* (2011) and *Ecological Assessment of Akatore Creek Swamp* (2012) are available upon request.

### **3.2AA.2 Discussion**

#### **Mapping of Akatore Creek Swamp**

Akatore Creek Swamp as shown on the proposed Map F-series comprises two abutting wetlands. The southernmost wetland is included in Schedule 9 of the operative Plan as Akatore Creek, while the northernmost wetland is listed in Schedule 10 of the operative Plan as Stoneygrove Wetland.

A site visit was carried out by an ORC officer in December 2011 to reassess the proposed boundaries of Akatore Creek Swamp.

One submitter requested that the proposed boundary of the southernmost part of the Akatore Creek Swamp be amended. The site visit showed that the proposed wetland boundary for this part of the wetland currently encroaches onto a forest plantation which is unlikely to support any wetland value. An area adjacent to the proposed wetland was also identified as wetland.

A second submitter requested reconsideration of the boundary of the northernmost wetland of Akatore Creek Swamp.

The results of the December 2011 site visit remained inconclusive as to which areas should be included or excluded from the proposed boundary of this part of the wetland and highlighted the need for further ecological assessment of the contested areas. Consequently, Wildland Consultants was engaged to reconsider the proposed boundary of the Akatore Creek Swamp located on the submitter's property. The ecologist, who visited the wetland in February 2012, recommended to retain all wetland habitats (sphagnum bog, rautahi sedgeland, oioi rushland, and saltmarsh herffield) within the proposed wetland boundary and to further add a smaller area of oioi rushland, as well as mudflat and open water habitat to the Regionally Significant Wetland area (Wildland Consultant, 2012, p.11). The ecologist also proposed to remove an area of gorse shrubland from the mapped wetland because this area is dominated by exotic species and the presence of gorse is indicative of the wetland having dried out (Wildland Consultant, 2012, p.11).

The Wildland assessment (Wildland Consultant, 2012, pp 10-11) concluded that the site supports **RSW value A1** (*Habitat for nationally or internationally rare or threatened species or communities*) due to the presence of Fernbird (At Risk – Declining) and *Mimulus repens* (At Risk – Naturally Uncommon) *Olearia lineate*, **RSW value A3** (*High diversity of habitat types*) as the site comprises four different vegetation/habitat types dominated by indigenous species, and **RSW value A7** (*Wetland with a high diversity of indigenous flora and fauna*). The site also meets **RSW value A5**. (*Wetland scarce in Otago in terms of its ecological or physical character*) as the wetland contains an intact ecological sequence from mudflat to saltmarsh to swamp, as bogs at or near sea level are regionally uncommon and as it is located in the Tokomairiro Ecological District where all potential wetland classes cover less than 2.59% of all land cover (Landcover Database v2). Finally, the assessment also indicates that the wetland is likely to support **RSW value A9** (*Significant hydrological values including maintaining water quality or low flows, or reducing flood flows*).

### **Mapping of Waipori/Waihola Wetland Complex**

The boundary of the Waipori/Waihola Wetlands Complex as shown on the proposed Map F-series currently extends over an existing pump station, floodbank and drain, which are located between the wetland that surrounds the western edge of Lake Waihola and adjacent pastureland.

The purpose of the floodbank is to prevent inundation of pastureland at times when the water level of Lake Waihola rises to flood level. The presence of the floodbank, however, hampers the run-off of excess rainwater from this pastureland into the Lake during severe rainfall events. Runoff from the pasture land is therefore collected in a drain located between the floodbank and the pasture land (Figure 2). The pump station is used for the pumping of water from productive land (pasture) into the Waipori/Waihola Wetland Complex.



Figure 2: The floodbank, drain and pumpstation that separate the pastureland on the Beaton property from the Waipori/Waihola Wetlands Complex.

The data collected during a site visit undertaken by an ORC officer in December 2011 shows that the vegetation in and around the floodbank and drain are not wetland species.

#### **Mapping of Chapman Road Inland Saline Wetland**

The majority of this wetland is located within a reserve administered by the Department of Conservation. However, the north-western boundary of the wetland currently encroaches onto a driveway in the adjacent property.

A site visit was carried out by an ORC officer in December 2012. This visit identified the driveway area as “highly modified”, with “no evidence of a natural ecosystem in place. Three other areas were identified where the wetland boundary goes onto the adjacent property. The site visit identified that it was “better suited to align [the wetland boundary] with the property boundary line”. The proposed wetland is approximately 7.4ha, while the three areas on the adjoining property add to approximately 0.0319ha (or 319sqm).

#### **Mapping of Diamond Lake Wetland**

Diamond Lake Wetland was visited by the Wildland Consultant in December 2011. Some areas of rough pasture were found within the proposed boundary (Wildland Consultant, 2011, pp 9 – 10).

The assessment confirmed the presence of **RSW value A1** (*Habitat for nationally or internationally rare or threatened species or communities*) due to the presence of *Olearia lineata* (At Risk – Declining). As well as being likely to support **RSW value A5** (*Wetland scarce in Otago in terms of its ecological or physical character*) and **RSW value A9** (*Significant hydrological values including maintaining water quality or low flows, or reducing flood flows*).

The assessment stated that the areas of rough pasture could be excluded, but that this may reduce the **RSW value A9**, and would mean the *Olearia lineata* specimen would be located right on the wetland boundary.

#### **Mapping of Lake Reid Wetland**

Lake Reid Wetland was visited by the Wildland Consultant in December 2011. Two areas were identified as being able to be removed, as they were dryland habitats or pasture (Wildland Consultant, 2011, pp 11 – 12).

The assessment also indicated that the wetland is likely to support **RSW value A5** (*Wetland scarce in Otago in terms of its ecological or physical character*) and **RSW value A9** (*Significant hydrological values including maintaining water quality or low flows, or reducing flood flows*). Further, the assessment noted that Tufted Hair Grass *Deschampsia cespitosa* (At Risk – Declining) has been previously recorded within the wetland.<sup>4</sup> The Wildlands Assessment did not record this species, but stated that it “may still be present on the Thomson property.”

This wetland is included as regionally significant in the operative Plan as part of the Diamond lake/Earnslaw Burn Wetland management Area. It is identified as having **RSW value A1** (*Habitat for*

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<sup>4</sup> Land Information New Zealand (2002) *Crown Pastoral Land Tenure Review: Earnslaw Station*. Conservation Resources Report for the Commissioner of Crown Lands. Published by Land Information New Zealand, Wellington.

*nationally or internationally rare or threatened species or communities), RSW value A6 (Wetland which is highly valued by kai Tahu for mahika kai or other waahi taoka), and RSW value A7 (High diversity of indigenous flora and fauna).*

### **Mapping of Three Stones Fen**

A site visit was carried out by an ORC officer in August 2011 to reassess the proposed boundaries of Three Stones Fen Complex. This visit revealed the presence of various drains and creeks within and along the perimeter of the portion of the wetland located on the submitter's property.

The visit identified areas that could be excluded from the proposed boundary to allow for the continuation of existing farm practices:

1. Exclude drains along the perimeter of the wetland, and cutting across one tip of the wetland; and
2. Exclude two tracks through the wetland.

### **Mapping of Pleasant River Estuary Wetland Complex**

A site visit was carried out by an ORC officer in December 2012 to reassess the proposed boundaries of Pleasant River Estuary Wetland Complex. This reassessment identified an area within the proposed boundary that had been infilled and was in pasture. Another area adjacent to the proposed boundary was identified as being tidal. This area is in the Coastal Marine Area (being below Mean High Water Springs) and is covered by the Regional Plan: Coast.

### **Mapping of Stirling Marsh Complex**

Stirling Marsh Complex was visited by the Wildland Consultant in December 2011. A variety of wetland plants were found, and no changes were recommended to the proposed boundaries of the Stirling Marsh Complex. This assessment also confirmed that the wetland currently supports **RSW value A5** (*Wetland scarce in Otago in terms of its ecological or physical character*) (Wildland Consultant, 2011, pp 4 – 6).

## **3.2AA.3 Recommendations**

- a) Amend the wetland boundaries in the proposed F-series of the Maps as shown in Appendix 1:
  - Akatore Creek Swamp
  - Waipori/Waihola Wetland Complex
  - Chapman Road Inland Saline Wetland
  - Diamond Lake Wetland
  - Lake Reid Wetland
  - Three Stones Fen Complex
  - Pleasant River Estuary Wetland Complex
- b) Retain the wetland boundary of Stirling Marsh Complex in the proposed F-series of the Maps as recommended by Wildland Consultants Ltd.

## Reasons

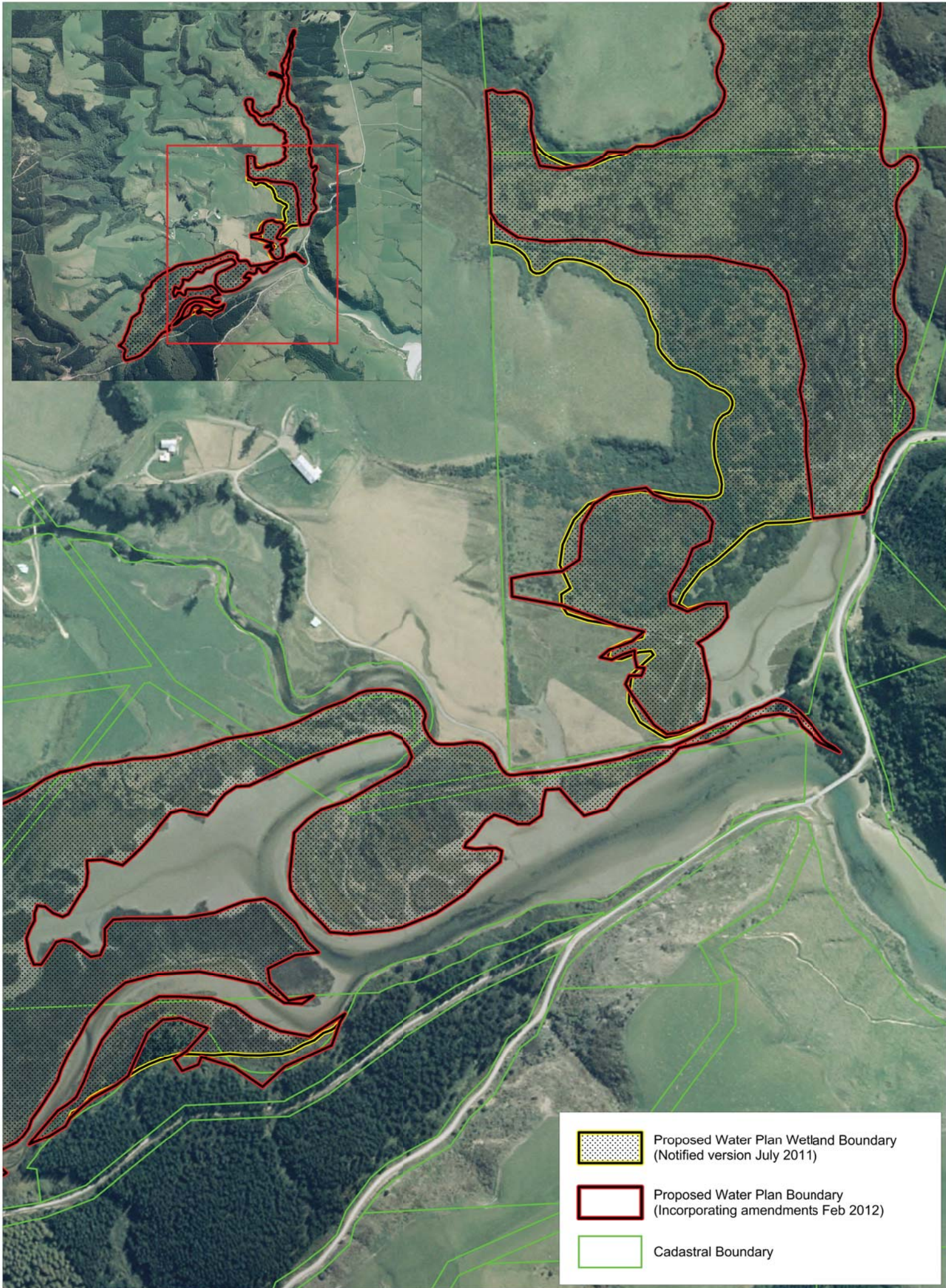
- A site visit to the southernmost part of **Akatore Creek Swamp** found the proposed wetland boundary contained areas that were not wetland, and areas abutting the boundary that were wetland.
- The Wildland Consultant confirmed the presence of **RSW value A1, RSW value A3, RSW value A5, and RSW value A7** in the northernmost portion of **Akatore Creek Swamp** and indicated the likely presence of **RSW value A9** in the wetland. The ecologist found the proposed boundary contained an area that does not classify as a wetland, but also identified additional wetland areas located outside the proposed wetland boundary. Some of these areas are located below Mean High Water Spring and are regulated by the rule framework of the Regional Plan: Coast for Otago.
- A site visit to **Waipori/Waihola Wetland Complex** found the proposed wetland boundary encompassed a pump station, floodbank and drain which are not wetland areas.
- A site visit to **Chapman Road Inland Saline Wetland** found the proposed wetland boundary encompassed a driveway which was not a wetland area. This wetland is predominantly on a Department of Conservation reserve. Aligning the wetland boundary with the property boundaries is unlikely to impact on the wetland hydrology or values.
- The Wildland Consultant confirmed the presence of **RSW value A1** in **Diamond Lake Wetland**, and found the proposed wetland boundary contained areas that were not wetland. The rule framework provides protection to RSWs and RSW values from activities occurring outside the wetland boundary.
- The Wildland Consultant found that the proposed wetland boundary of **Lake Reid Wetland** contained areas that were not wetland. He also indicated the likely presence of **RSW value A5 and RSW value A9** in the wetland. This wetland is indentified in the operative Plan as having **RSW value A1, RSW value A6, and RSW value A7**.
- A site visit to **Three Stones Fen Complex** found the proposed wetland boundary encompassed two tracks that were not wetland areas. Drains within the proposed wetland boundary are wetland areas. The issue of drain maintenance is addressed through the rule framework.
- A site visit to **Pleasant River Estuary Wetland Complex** found that the proposed wetland boundary contains areas that are not wetland, and also found areas abutting the boundary that are wetland. The Plan does not cover the extra wetland area identified as it is in the Coastal Marine Area, and is covered by the Regional Plan: Coast.
- The Wildland Consultant indicated the presence of **RSW value A5** in **Stirling Marsh Complex**, and did not recommend any changes to the proposed wetland boundary.




## **Appendix 1**

**Aerial photographs showing recommended changes to the proposed boundaries of Regionally Significant Wetlands.**













	Proposed Water Plan Wetland Boundary (Notified version July 2011)
	Proposed Water Plan Boundary (Incorporating amendments Feb 2012)
	Cadastral Boundary






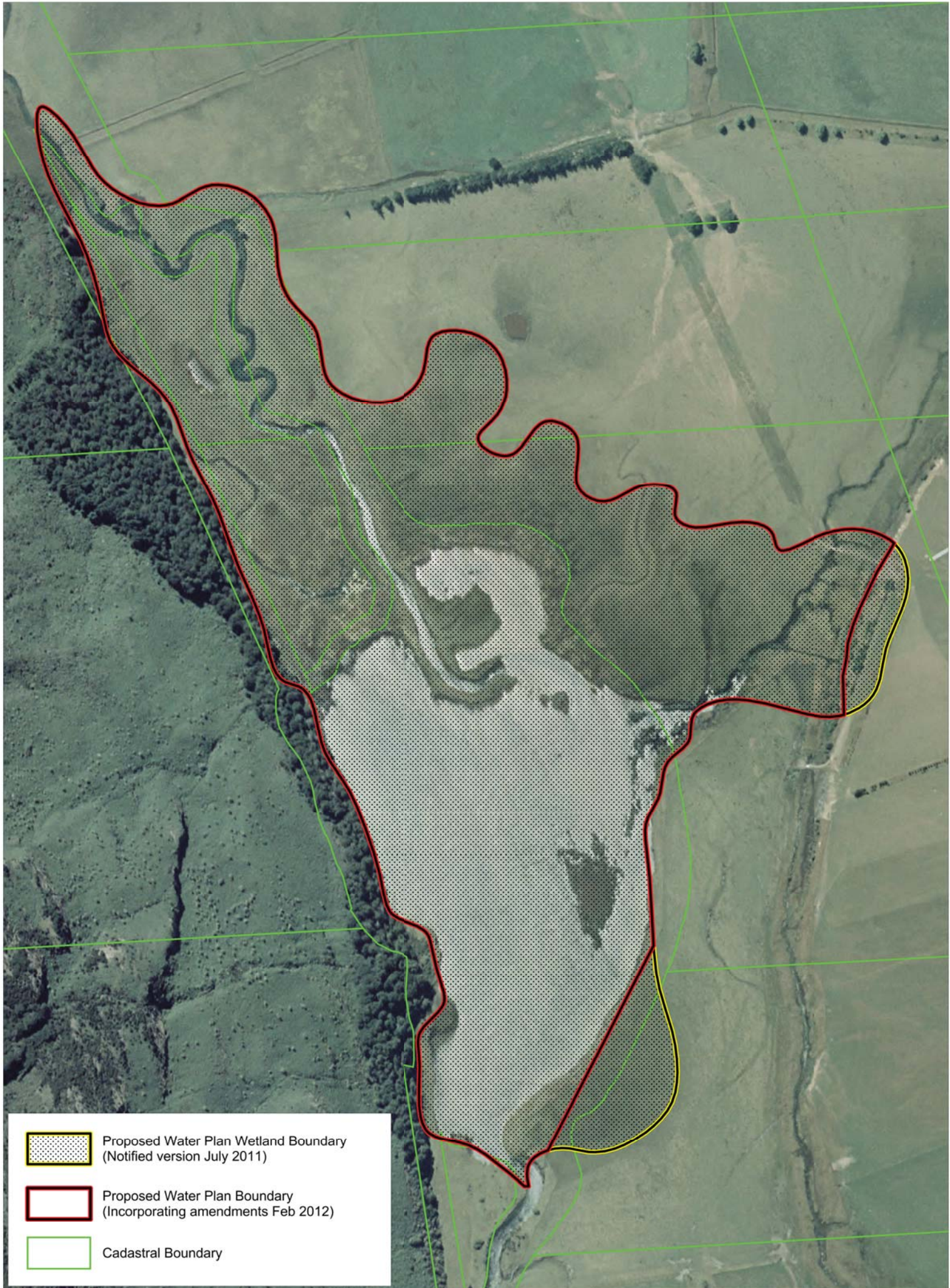
	Proposed Water Plan Wetland Boundary (Notified version July 2011)
	Proposed Water Plan Boundary (Incorporating amendments Feb 2012)
	Cadastral Boundary



	Proposed Water Plan Wetland Boundary (Notified version July 2011)
	Proposed Water Plan Boundary (Incorporating amendments Feb 2012)
	Cadastral Boundary



	Proposed Water Plan Wetland Boundary (Notified version July 2011)
	Proposed Water Plan Boundary (Incorporating amendments Feb 2012)
	Cadastral Boundary



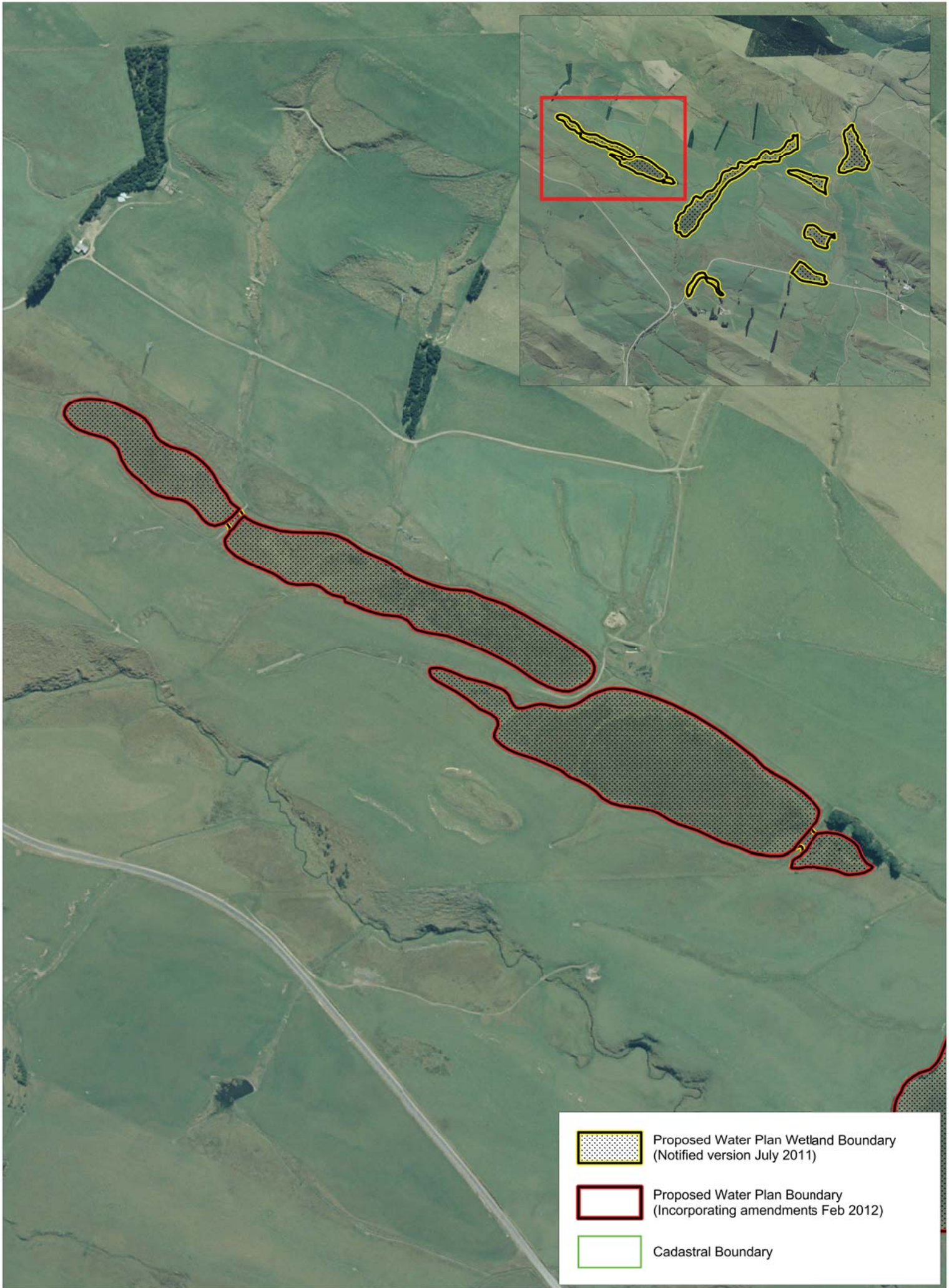
Proposed Water Plan Wetland Boundary  
(Notified version July 2011)



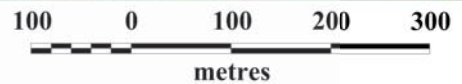
Proposed Water Plan Boundary  
(Incorporating amendments Feb 2012)

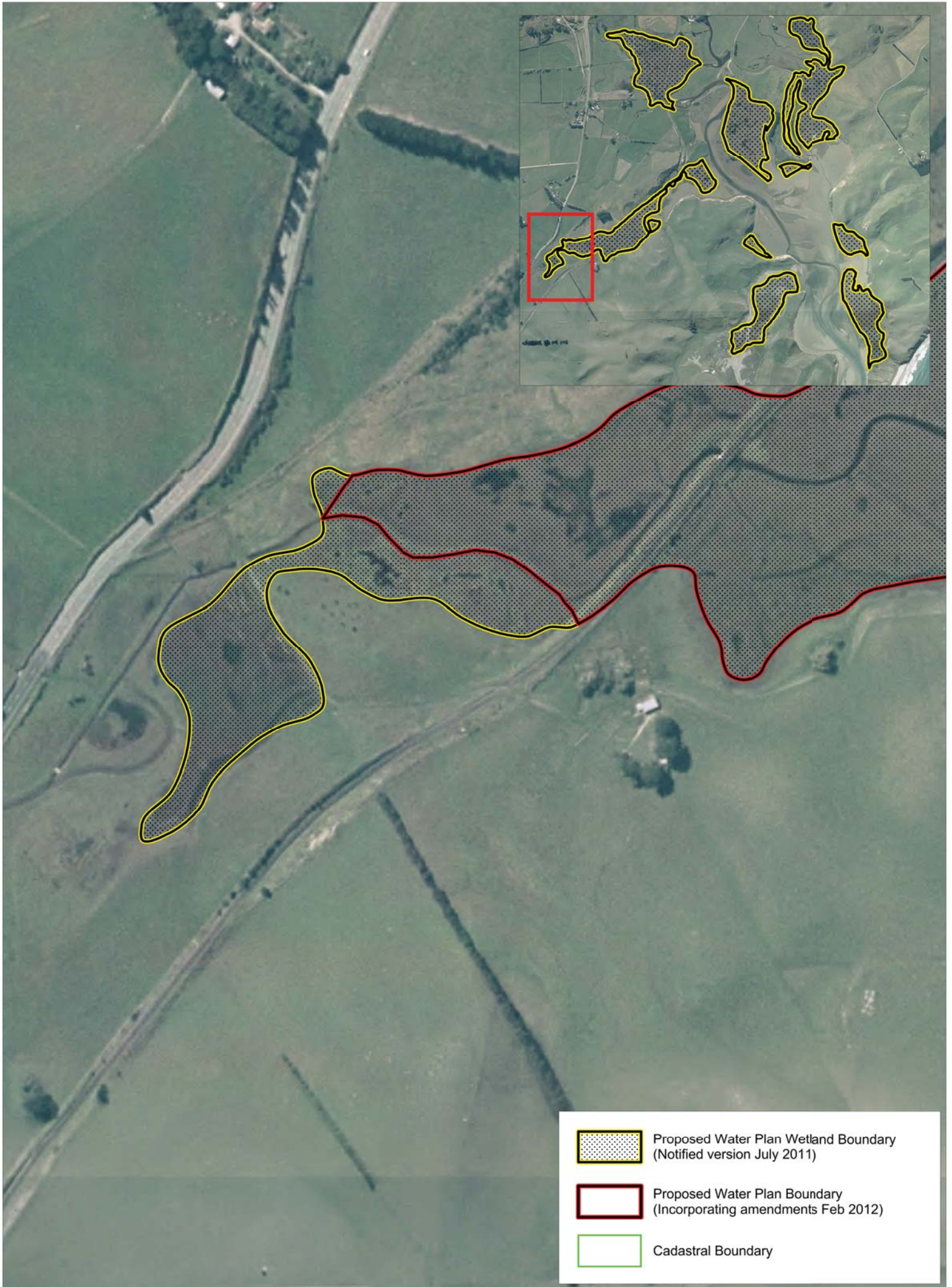





Cadastral Boundary



### Three Stones Fen Complex (Map F53)





	Proposed Water Plan Wetland Boundary (Notified version July 2011)
	Proposed Water Plan Boundary (Incorporating amendments Feb 2012)
	Cadastral Boundary

**Pleasant River Estuary  
Wetland Complex (Map F67)**

