

# Christchurch District Plan Site of Ecological Significance

## Site Significance Statement

**Site name:** Travis Wetland

**Site number:** SES/LP/2

**Physical address of site:** 280 Beach Road  
Parklands  
Christchurch 8083

### Summary of Significance:

The Travis Wetland site is significant because it contains a large area of vegetation that is representative of the Low Plains Ecological District including threatened and locally rare plant species, and also provides habitat that supports representative assemblages of native wetland birds including several threatened, at risk and locally rare species.

### Site Map



## **Additional Site Information**

**Central point NZTM:** N5185083, E1575291

**Area of SES (ha):** 134.60 ha

## **Site Description**

Travis wetland is the largest area of freshwater wetland in Christchurch, and supports a range of wetland vegetation communities, open freshwater water bodies planted native forest and both planted and remnant shrubland communities. The site was listed as a Primary Conservation Evaluation 'Category A' site by Meurk *et al.* (1993) on account of its high biodiversity values (more than 50 native plant species), large area, high representativeness and unusualness scores, and also a reasonably high score in terms of long-term viability. The wetland is of national importance for its soil and vegetation system, and of regional importance in terms of its pukeko population (CCC 1999).

## **Extent of Site of Ecological Significance**

The extent of the Travis Wetland SES is defined by a) the roadside edge of the dune restoration plantings along the Mairehau Road northern frontage, b) the private property rear boundaries of the Mairehau Road residential properties along the north eastern side, c) the edge of the Frosts Road road reserve boundary along the eastern boundary, d) the northern edge of the shared pedestrian/cycleway along the Travis Road frontage, and e) along the private property rear boundary line along the west side of the SES to meet Mairehau Road. South of Travis Road, the SES extends to include the series of waterbodies and wetlands on both sides of ANZAC Drive as far south as New Brighton Road as shown on the location map.

## Assessment Summary

The Travis Wetland SES has been evaluated against the criteria for determining significant indigenous vegetation and significant habitat of indigenous fauna listed in Appendix 3 of the Canterbury Regional Policy Statement (Environment Canterbury, 2013) (see below) referring also to the Wildland Consultants (2013) Guidelines and advice from the relevant Specialist Ecologist Groups. Under these criteria the site is ecologically significant because it meets the representativeness (criteria 1 & 2), rarity/distinctiveness (criteria 3, 4 & 5), diversity and pattern (criterion 7) and ecological context criteria (criterion 10).

## Assessment against Significance Criteria

### Representativeness

- 1. Indigenous vegetation or habitat of indigenous fauna that is representative, typical or characteristic of the natural diversity of the relevant ecological district. This can include degraded examples where they are some of the best remaining examples of their type, or represent all that remains of indigenous biodiversity in some areas.***

The site is significant under this criterion.

Travis Wetland is considered the best representative example of wetlands that were once widespread in Low Plains Ecological District. It contains native plant species representing nearly 80% of the pre-European Christchurch wetland flora (Meurk 1995). Since Travis Wetland Park was created in 1992, Skilton (2010) reports that 82 indigenous plant species have been added to the original 83 species that existed prior to its creation.

The aquatic invertebrate community was identified by Sagar *et al.* (1996) as being representative of habitats and biological communities that have declined to less than 10% of their former extent of their pre-European distribution in Canterbury.

Forty-three species of native bird have been recorded within the Travis Wetland SES, as well as five Australian visitors and two northern hemisphere migrants (Refer Crossland 2013; 2014a; 2014b; Appendix 1). These species include a) all 24 species listed by Crossland (2014b) as being associated with freshwater lakes and ponds, b) all 23 species associated with freshwater rivers and streams, c) 19 out of 20 non-bush bird species associated with freshwater wetlands (swamps), d) all 17 inland wet grassland species, and e) 19 out of 20 bird species associated with coastal wet grasslands.

**2. Indigenous vegetation or habitat of indigenous fauna that is a relatively large example of its type within the relevant ecological district.**

The site is significant under this criterion.

Travis Wetland is one of the three largest lowland, freshwater wetlands in eastern South Island (Meurk 1995), one of the largest freshwater wetlands in the Low Plains Ecological District, and the largest area of freshwater wetland remaining within the Christchurch City boundary (Sagar *et al.* 1996).

**Rarity/Distinctiveness**

**3. Indigenous vegetation or habitat of indigenous fauna that has been reduced to less than 20% of its former extent in the Region, or relevant land environment, ecological district, or freshwater environment.**

The site is significant under this criterion.

Travis Wetland is an example of a wetland type that was once widespread in Low Plains Ecological District, but has now been reduced to less than 20% of their former extent. The Threatened Environment Classification reports that less than 10% of indigenous cover remains in the Low Plains Ecological District (See Walker *et al.* 2007; Lloyd *et al.* 2013).

**4. Indigenous vegetation or habitat of indigenous fauna that supports an indigenous species that is threatened, at risk, or uncommon, nationally or within the relevant ecological district.**

The site is significant under this criterion.

This site supports feeding and roosting habitat for 22 resident, seasonal or vagrant visitors that are classified as threatened or at risk bird species by Robertson *et al.* (2012), including the following (Refer CCC 1999; Crossland 2014a):

<b>Species</b>	<b>Threat Status</b>
• Grey Duck	Threatened/Nationally Critical
• White Heron	Threatened/Nationally Critical
• Black-billed Gull	Threatened/Nationally Critical
• Black Stilt	Threatened/Nationally Critical
• Black-fronted Tern	Threatened/Nationally Endangered
• Australasian Bittern	Threatened/Nationally Endangered
• Red Billed Gull	Threatened/Nationally Vulnerable
• Banded Dotterel	Threatened/Nationally Vulnerable
• Pied Cormorant	Threatened/Nationally Vulnerable
• Caspian Tern	Threatened/Nationally Vulnerable
• SI Pied Oystercatcher	At Risk/Declining
• Pied Stilt	At Risk/Declining
• Bar Tailed Godwit	At Risk/Declining
• New Zealand Pipit	At Risk/Declining
• Variable Oystercatcher	At Risk/Recovering
• Brown Teal	At Risk/Recovering

- Eastern NZ Falcon At Risk/Recovering
- Marsh Crake At Risk/Relict
- Spotless Crake At Risk/Relict<sup>1</sup>
- Black Cormorant At Risk/Naturally Uncommon
- Little Black Cormorant At Risk/Naturally Uncommon
- Royal Spoonbill At Risk/Naturally Uncommon

The following plant species occur at Travis Wetland, and although classified by de Lange (2013) as 'Not Threatened', they are considered regionally vulnerable (CCC 1996\*, 1999\*):

<b>Botanical Name</b>	<b>Common Name</b>
• <i>Baumea rubiginosa</i> <sup>+</sup>	swamp sedge
• <i>Carex flaviformis</i> <sup>+</sup>	swamp sedge
• <i>Nematoceras iridescens</i> <sup>+</sup>	spider orchid
• <i>Drosera binata</i> <sup>+</sup>	native sundew
• <i>Luzula spp</i> <sup>+</sup>	wood rush
• <i>Polygonum salicifolium</i> <sup>*</sup>	
• <i>Ranunculus glabifolius</i> <sup>+</sup>	buttercup

Locally rare plant species occurring within the Travis Wetland SES include the native buttercup (*Ranunculus glabrifolius*), a spider orchid (*Corybas macranthus*) (Skilton 2010), and another locally rare spider orchid (*Nematoceras iridescens*) that is not recorded elsewhere in Canterbury (Bissell 2014). The SES also contains the only substantial stand of manuka (*Leptospermum scoparium*) on the Canterbury Plains (CCC 1999).

Since 2002, more than 400 of the Threatened/Nationally Endangered (de Lange *et al.* 2013) shrubby tororaro (*Muehlenbeckia astonii*) that were collected at Kaitorete Spit have been planted into the dry coastal bush plant communities being established on the old dunes and other dry sites within the Travis Wetland SES area (Skilton 2011).

The Threatened/Nationally Vulnerable flightless crane fly (*Gynoplistia pedestris*) has been recorded on six occasions at Travis Wetland (Ford 2014).

Two species of skink have been recorded from the SES; common skink (*Oligosoma polychroma*) and McCanns skink (*O. maccanni*) (Travis Wetland Trust 2012). Although Hitchmough *et al.* (2013) list both species as Not Threatened under the NZ Threat Classification System, the common skink is a cryptic species complex, and this classification refers to one described clade only (*O. polychroma* Clade 1). Of the four un-described clades, Clade 4 and Clade 5 occur in the Low Canterbury Plains Ecological District (see Liggins *et al.* 2008), and are both described by Hitchmough *et al.* (2013) as being At Risk, where their total area of occupancy is estimated to be in excess of 10,000 ha, but with a predicted decline of 10-70% across their range.

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<sup>1</sup> Spotless Crake photographed by CCC Regional Parks Ranger Kenny Rose on 22<sup>nd</sup> February 2015 at Travis Wetland

**5. The site contains indigenous vegetation or an indigenous species at its distribution limit within Canterbury Region or nationally.**

The site is significant under this criterion.

Travis Wetland is the northern distribution limit for the rare moth, *Glyphipterix aulogramma* (Brian Patrick *pers comms*<sup>2</sup>).

**6. Indigenous vegetation or an association of indigenous species that is distinctive, of restricted occurrence, occurs within an originally rare ecosystem, or has developed as a result of an unusual environmental factor or combinations of factors.**

Site not assessed under this criterion

### **Diversity and Pattern**

**7. Indigenous vegetation or habitat of indigenous fauna that contains a high diversity of indigenous ecosystem or habitat types, indigenous taxa, or has changes in species composition reflecting the existence of diverse natural features or ecological gradients.**

The site is significant under this criterion.

The estimated diversity of 700 – 900 insect species is a moderately high number compared with other lowland, largely non-wooded sites (CCC 1999).

### **Ecological Context**

**8. Vegetation or habitat of indigenous fauna that provides or contributes to an important ecological linkage or network, or provides an important buffering function.**

Site not assessed under this criterion

**9. A wetland which plays an important hydrological, biological or ecological role in the natural functioning of a river or coastal system.**

Site not assessed under this criterion

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<sup>2</sup> Email Communication with Wildlands Consultants Entomologist Brian Patrick, 1<sup>st</sup> December 2014 (TRIM Reference 14/1471010).

**10. Indigenous vegetation or habitat of indigenous fauna that provides important habitat (including refuges from predation, or key habitat for feeding, breeding, or resting) for indigenous species, either seasonally or permanently.**

The site is significant under this criterion.

Travis Wetland provides a significant habitat for shortfin eels, where almost 1000 individuals were captured in 2009 compared with only 84 individuals in 1996 despite using similar inventory methods (Main and Taylor, 2010).

Travis wetland provides habitat for 8 species of native fish including inanga, giant bully, common bully, upland bully, black flounder, smelt, short-finned eel, lamprey and is important habitat/refuge for inanga to mature.

The wetland is of regional importance in terms of its pukeko population (CCC 1999; Refer also Appendix 1 & Crossland 2014a).

## Site Management

### Existing Protection Status

Protected under the Reserves Act

<b>Threats and risks</b>	<b>Management recommendations</b>	<b>Support package options</b>
<ul style="list-style-type: none"><li>• Pest plant incursion</li></ul>	<ul style="list-style-type: none"><li>• Monitor pest plant infestations and implement control as required.</li><li>• Assess new pest plant incursions and implement control as required</li></ul>	
<ul style="list-style-type: none"><li>• Further species loss</li></ul>	<ul style="list-style-type: none"><li>• Identify and mark existing threatened and/or uncommon native plant populations</li><li>• Re-introduce recently locally extinct species</li></ul>	
<ul style="list-style-type: none"><li>• Anthropogenic and/or earthquake related change to water regime</li></ul>	<ul style="list-style-type: none"><li>• Any action relating to changes in the water regime need to be assessed in relation to impacts upon ecological state and functioning of wetlands.</li><li>• Identify sites with in SES where populations and plant associations of rare plants can be established</li></ul>	

<ul style="list-style-type: none"> <li>Natural process of change</li> </ul>	<ul style="list-style-type: none"> <li>If natural changes in wetland ecology, composition or functioning are determined to be detrimental to the ongoing viability of the values of the site, a recovery action plan should be initiated.</li> </ul>	
<ul style="list-style-type: none"> <li>Habitat loss through encroachment of infrastructure (e.g sewer pipes, biofilters)</li> </ul>	<ul style="list-style-type: none"> <li>Ensure thorough assessments of affects on ecological systems and processes of proposals are carried out by an ecologist</li> </ul>	
<ul style="list-style-type: none"> <li>Mammalian predators</li> </ul>	<ul style="list-style-type: none"> <li>Continue monitoring, trapping and poisoning maintain current level of mammalian pest control.</li> </ul>	
<ul style="list-style-type: none"> <li>Pest Fish are threat to aquatic ecosystem including macrophytes, native fish and water quality</li> </ul>	<ul style="list-style-type: none"> <li>Maintain current annual monitoring and control programme for rudd</li> </ul>	

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**Assessment completed by:** Dr Antony Shadbolt  
**Date:** 8<sup>th</sup> April 2014

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**Date:** 8<sup>th</sup> April 2014

**Statement updated by:** XXX  
**Date:** XXX

*PLEASE NOTE THIS STATEMENT IS BASED ON INFORMATION AVAILABLE AT THE TIME OF WRITING. DUE TO THE DYNAMIC NATURE OF ECOSYSTEMS, FUTURE REASSESSMENT OF THE SITE MAY BE NECESSARY TO REFLECT ANY CHANGES IN KNOWLEDGE OF ITS ECOLOGICAL SIGNIFICANCE.*

## Appendix 1: Wetland Bird Monitoring

Recent Wetland Bird Monitoring: Travis Wetland (Source: Crossland 2014). Note: Australasian Crested Grebes recorded at Travis Wetland and reported by Travis Wetland Trust, September 2013 (Source [www.traviswetland.org.nz](http://www.traviswetland.org.nz)).

Species	15/08/13	10/12/13	6/01/14	27/02/14	19/05/14	12/06/14	24/06/14
Black Cormorant		2		2	5	4	6
Pied Cormorant		1		0		0	
Little Cormorant		2		6		1	
Little Black Cormorant			1	0		0	
Spotted Shag				0		0	
White-faced Heron			1	6		1	
White Heron				0		0	
Cattle Egret				0		0	
Australasian Crested Grebe*							
Australasian Bittern				0		n.c.	
Royal Spoonbill				0		0	
Glossy Ibis				1		1	1
Black Swan	13	8		22		20	
Cape Barren Goose				0		0	
Paradise Shelduck	75	229		184		n.c.	83
Mallard/Grey Duck				133		n.c.	
Grey Duck				0		n.c.	
Grey Teal				156	430	n.c.	
Brown Teal	1			0		n.c.	
New Zealand Shoveler				86		n.c.	
NZ Scaup				16		n.c.	
Australasian Harrier				3	2	3	
New Zealand Falcon				1		0	
Marsh Crake				1		n.c.	
Pukeko				140		345	
Australasian Coot			2	1		2	
Variable Oystercatcher				0		0	
SIPO				0		1	1
Spur-winged Plover				31		51	43
Banded Dotterel				0		0	
Black-fronted Dotterel				0		0	
Bar-tailed Godwit				0		0	
Pectoral Sandpiper				0		0	
Pied Stilt				10		38	15
Black Stilt				0		0	
Black-backed Gull				1		n.c.	
Red-billed Gull				0		n.c.	
Black-billed Gull				0		n.c.	
Caspian Tern				0		0	
Whiskered Tern				0		0	
Black-fronted Tern				0		0	
NZ Kingfisher				0		2	
Welcome Swallow				1		n.c.	