Christchurch District Plan
Site of Ecological Significance

Site Significance Statement

Site name: Lower Kaituna River

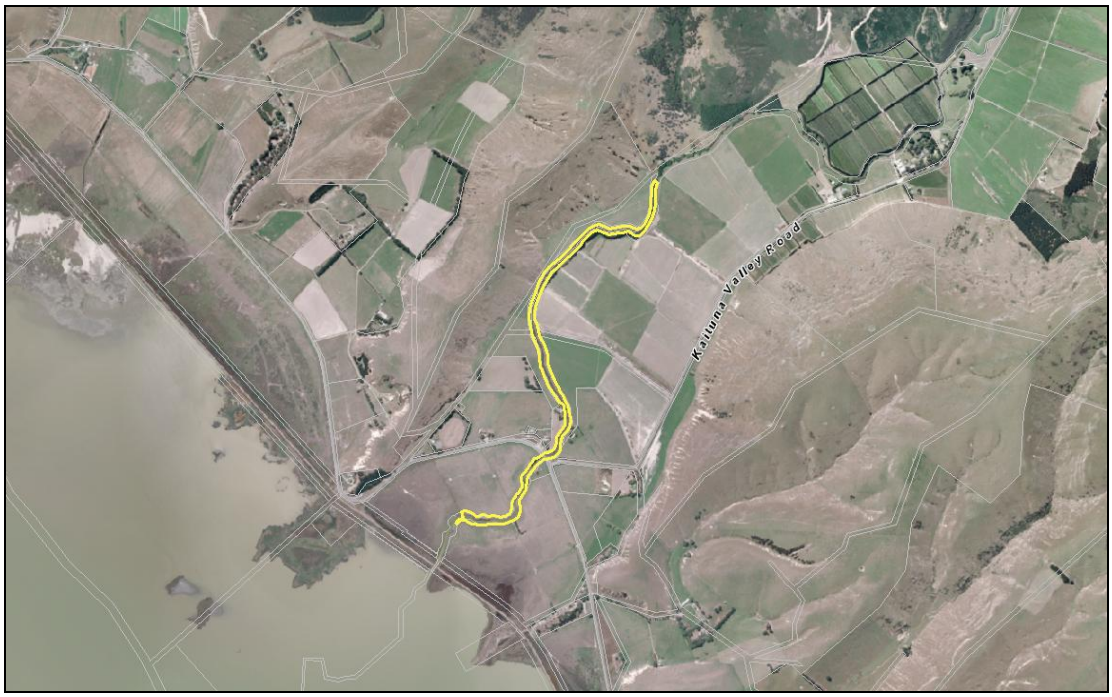
Site number: SES/H/16

Physical address of site: Kaituna Valley, Little River

Summary of Significance:

This site is significant because it provides important habitat for indigenous birds and freshwater fish. It contains a diverse and representative assemblage of indigenous freshwater fish including four species that are nationally At Risk. The ecological linkage that the lower river provides between Lake Ellesmere and the catchment is essential for these fish. The river also supports two bird species that are nationally Threatened, and one that is nationally At Risk. It is distinctive as one of only two lowland rivers in New Zealand where Australasian crested grebe are known to breed.

Site Map



Additional Site Information

Ecological District: Herbert and Ellesmere

Area of SES (ha): 6.41

Central point (NZTM): E1572298, N5153595

Site Description

Kaituna River is located on the south-western side of Banks Peninsula and flows into Lake Ellesmere/ Te Waihora. The lower Kaituna River has a long and varied riparian margin that comprises lowland river edge and riparian wetland habitat. It provides habitat for a high diversity of indigenous bird and fish species. Australasian crested grebe (Threatened - Nationally Vulnerable) breed in the lower reaches of the river (DOC 2013).

Extent of Site of Ecological Significance

This site includes the lower reaches of the Kaituna River and its riparian banks. It extends from the northern boundary of the salt marsh and wetland communities within the "Lake Ellesmere/Te Waihora and margins" site of ecological significance (SES) and follows the river channel approximately 1.8 km upstream of the Christchurch to Akaroa Road.

Assessment Summary

The Lower Kaituna River Site has been evaluated against the criteria for determining significant indigenous vegetation and significant habitat of indigenous biodiversity 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 (criterion 1) rarity/distinctiveness (criteria 4, 6), diversity and pattern (criterion 7) and ecological context criteria (criteria 8 and 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.

The Lower Kaituna River supports a representative assemblage of indigenous freshwater fish. Six species have been recorded from the Kaituna River (DOC 2013, EOS Ecology Ltd unpubl. data 2014). A list of those species recorded in the river is provided in Appendix 1.

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 not significant under this criterion. It is not a large example of its type.

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.***

There is insufficient information available to assess this criterion for rivers and streams.

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.

It supports two bird species (Crossland unpubl. data 2014a) that are nationally Threatened and one bird species and four indigenous freshwater fish that are nationally At Risk.

Birds

The site is known to support two bird species (Crossland unpubl. data 2014a) that are nationally Threatened (Robertson et al. 2012):

- Australasian crested grebe (Threatened - Nationally Vulnerable, At Risk and uncommon in the ED) – between 3 and 6 pairs nest in the lower river (DOC 2013)
- Pied cormorant (Threatened - Nationally Vulnerable)

It also supports a breeding colony of a nationally At Risk (Robertson et al. 2012) bird species (Crossland unpubl. data 2014)[1]:

- Black cormorant (At Risk - Naturally Uncommon, uncommon in the ED)

[1] Although for mobile fauna such as birds, species classified as nationally At Risk do not trigger significance (Wildland Consultants 2013).

Freshwater fish

Kaituna River supports four fish species (EOS Ecology Ltd unpubl. data 2014) that are nationally Threatened or At Risk (Goodman et al. 2014):

- Lamprey (Threatened - Nationally Vulnerable) (EOS Ecology Ltd 2014)
- Longfin eel (At Risk – Declining) (EOS Ecology Ltd 2014)
- Bluegill bully (At Risk – Declining) (EOS Ecology Ltd 2014)
- Inanga (At Risk – Declining) (Taylor and Marshall 2014)

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.

   The site, together with adjacent Lake Ellesmere, Lake Forsyth, and Okana Rivers is the eastern national distributional limit for Australasian crested grebe. The site is one of a small number of locations where this species breeds on the lowlands of the eastern South Island (other locations are The Groynes and Clearwater Resort north-west of Christchurch, and on Lake Ellesmere, Lake Forsyth, and the Okana River (Crossland 2014b).

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.***

   The site is significant under this criterion.

   It is one of only two lowland rivers in New Zealand where Australasian crested grebe (Threatened - Nationally Vulnerable) are known to breed (Crossland 2010).

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 Kaituna River has a high diversity of indigenous freshwater fish species. At least six species occur in the Kaituna River and are either resident in, or pass through the site (EOS Ecology Ltd unpubl. data 2014).

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.***

   The site is significant under this criterion.

   The Kaituna River supports at least five species of migratory freshwater fish (longfin eel, shortfin eel, lamprey, bluegill bully, and common bully) (EOS Ecology Ltd unpubl. data 2014). The ecological linkage between Lake Ellesmere and the catchment is essential for these fish.

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

   The site is not significant under this criterion. Other than riparian wetland vegetation on the river banks, there are no wetlands within the site. Wetlands at the mouth of the Kaituna River are significant under this criterion and have been identified as part of the Te Waihora/Lake Ellesmere (and margins) Site.

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.

    The site provides important breeding habitat for Australasian crested grebe (Threatened - Nationally Vulnerable) (Robertson et al. 2012). This species typically breeds on inland lakes in the South Island and this site is one of only two lowland rivers in New Zealand – the other being the Okana River, Little River) where this species breeds (Crossland 2010).

    A line of shelter belts growing on the immediate true right river bank near the river mouth (below the Christchurch to Akaroa Road) supports a large nesting colony of pied cormorants (Threatened Nationally Vulnerable) and little cormorants. It is also an important night roost for royal spoonbill.

    The lower Kaituna River also provides important habitat for at least six freshwater fish species, including nationally Threatened and At Risk species (EOS Ecology Ltd unpubl. data 2014) and is an important corridor for at least five species of migratory freshwater fish.

    The site also provides spawning habitat for inanga (At Risk – Declining) (Taylor and Marshall 2014). Taylor and Marshall (2014) regard the lower river as having a high suitability for inanga rearing.

Site Management

Existing Protection Status

Part of the site is within the Kaituna River Esplanade (administered by the Christchurch City Council) and the remainder is on private land and is not legally protected.

Threats and risks	Management recommendations	Support package options
• Barriers to fish passage. Based on a boat survey upstream from Lake Ellesmere, it appears that there are currently no barriers to fish migration (Taylor and Marshall 2014).	• Ensure no instream barriers to fish migration are constructed in the waterway.	• N/A
• Human disturbance to pied and little shag breeding colonies and royal spoonbill roost site	• Restrict access to the vicinity of the nesting colony (specifically to anglers and Council staff undertaking maintenance of restoration plantings) during the breeding season. Dates of preferred access to this area should be discussed with Council Ranger staff.	• Discussion with Fish and Game about restricting anglers' access at breeding season.
• Removal of, or damage to, Australasian crested grebe nesting habitat	• Australasian crested grebes typically nest in or near willows. Maintaining this habitat is therefore important. Consider undertaking maintenance work in the river or on its banks outside of the breeding season.	• Discussion with landowners about benefits to biodiversity of maintenance of willow habitat in the river and permissions for Council staff to assist with this work.
• Progressive loss of riparian habitat for birds	• Consider excluding stock from the fenced riparian margins. • Consider planting locally sourced indigenous emergent wetland riparian vegetation (in conjunction with riparian restoration planting already underway) to enhance habitat for indigenous birds.	• In collaboration with ECan discuss with landowners the benefits to biodiversity of stock control along riparian areas.
• Stock. Stock have the potential to increase bank erosion and	• Consider fencing all un-fenced riparian margins to keep stock out. Priority	• In collaboration with ECan discuss with landowners the benefits

reduce water quality. Upstream of the Christchurch to Akaroa Road, both banks of the river are well fenced (Taylor and Marshall 2014) and the true left bank has been fenced by DOC (DOC 2013).	areas for fencing are the lower true left fence (approx. 1km) and the upper true right above the section of fencing erected on CCC land) (DOC 2013). • Ensure existing fences are maintained in stock proof condition.	to biodiversity of stock control along riparian areas.
• Pest animals. DOC trap predators along the river margins during the breeding season to protect nesting crested grebes and other birdlife from a suite of introduced predators (DOC 2013).	• Continue predator control work.	• N/A

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EOS Ecology Ltd. (2014). Aquatic ecology survey data. Unpublished data collected for Christchurch City Council. (Trim: 14/534218).

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Assessment completed by: Scott Hooson
Date: 22 January 2015

Statement completed by: Scott Hooson
Date: 22 January 2015

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: Indigenous Freshwater Fish Species List

Indigenous freshwater fish species recorded in the Kaituna River (Source: DOC 2013, EOS Ecology Ltd unpubl. data 2014).

Species
Common bully
Upland bully
Bluegill bully
Longfin eel
Shortfin eel
Inanga
Lamprey

Appendix 2: Indigenous Bird Species List

Indigenous bird species recorded from the lower Kaituna River during Council monitoring, August 2013 to January 2014. Sourced from Crossland unpubl. data (2014) (note that these counts exclude the saltmarsh wetland habitats at the mouth of the Kaituna River – this area is included within the Lake Ellesmere/Te Waihora and margins SES).

Species	**6/08/2013**	**26/01/2014**
Australasian crested grebe	n.c.	6
Black cormorant	0	6
Pied cormorant	20	1
Little cormorant	60	6
Black swan	n.c.	2
Mallard/grey hybrid	n.c.	8
NZ scaup	n.c.	2
Pukeko	n.c.	12

n.c. = not counted