

Christchurch District Plan Site of Ecological Significance

Site Significance Statement

Site name: French Farm Wetland

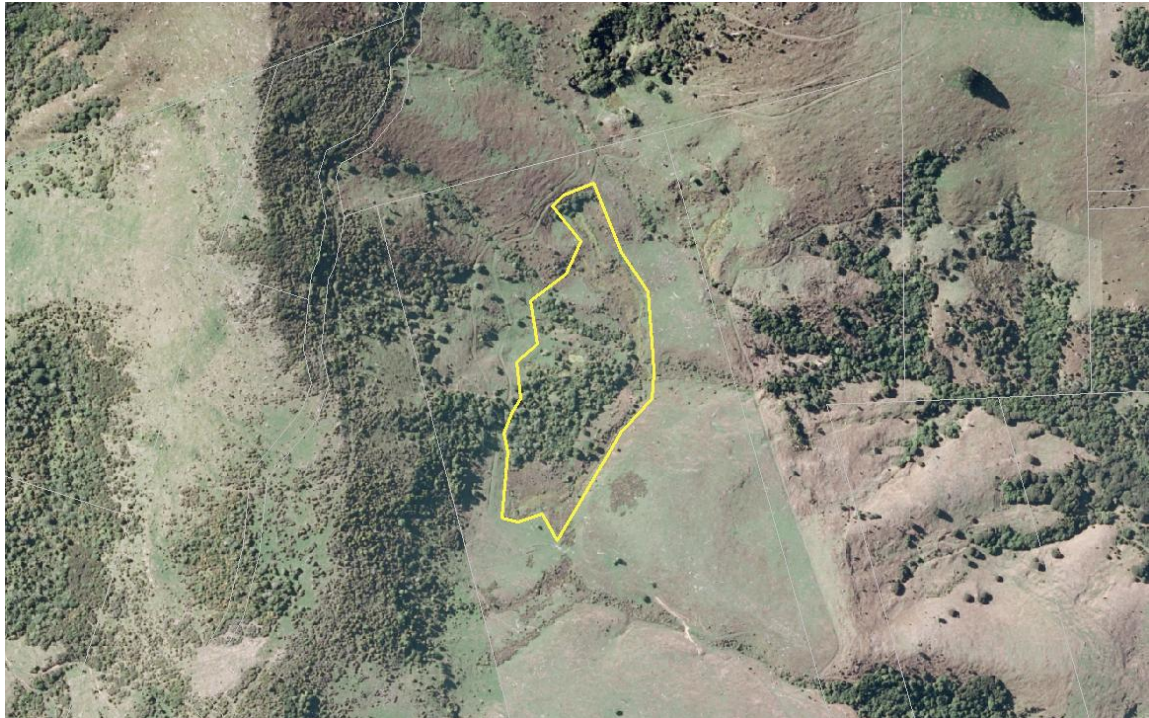
Site number: SES/A/1

Physical address of site: 23 Winery Road, Wainui.

Summary of Significance:

The site is significant because it has a rare and representative mesotrophic spring-fed seepage wetland that is one of the largest examples of its type within the Akaroa ED. There is a small area of peat-based wetland with “stunted bog forest” that is a distinctive vegetation community and the only known example of its type on Banks Peninsula. The site supports indigenous plant species that are either nationally At Risk or uncommon within the ecological region or ecological district and indigenous invertebrate species that are either nationally At Risk, endemic to Banks Peninsula or uncommon within the ecological district.

Site Map



Additional Site Information

Ecological District: Akaroa

Area of SES (ha): 4.12

Central point (NZTM): E1589646, N5153205

Site Description

The site includes spring-fed seepage wetlands and adjoining drier indigenous forest and treeland on an area of gently sloping east facing hill country. It is north-east of Wainui Pass and above French Farm at between 470 and 520 m above sea level. The area has not been grazed for 2 years after being fenced to exclude stock as part of the BPCT covenanting process (Jensen unpubl. data 2014).

The following description of the site is from Grove (2010) and Jensen unpubl. data (2014).

Wetlands cover much of the unforested area within the site. They originate from springs seeping down the hill and support a mix of native and introduced species. The indigenous rush wiwi (*Juncus edgariae*) and cutty grass (*Carex geminata*) dominate the canopy of the flush wetlands that occupy the gullies below the spring heads. The ground cover of these wetlands is mostly introduced grass and herbaceous species. In the south-east corner of the area, the gully wetlands coalesce to form the headwaters of French Farm Stream.

A notable feature of the site, identified by Wilson (unpubl. data) is a narrow strip of “stunted bog forest” on the edge of the forest next to the wetland at the southern end of the block. This distinctive peat-based wetland supports a diverse number of species and has a fringe of native shrubs, small trees and ferns around its margins.

The steeper well drained slopes and spurs within the site are covered in mixed hardwood forest. The main forest area occupies much of the southern half of the site. A smaller patch of forest covers the headwall above the spring and wetland at the northern end of the site, and another patch is separated from the main forest by grassy clearings and treeland.

A cluster of large old growth thin-barked totara (*Podocarpus cunninghamii*) with several other hardwood and broad-leaved tree species are scattered over a gentle grassy spur at the southern end of the block and scattered *Coprosma* are also present. Another area of treeland with scattered trees and shrubs over pasture separates the forested areas in the middle of the block.

Birds seen and heard during the botanical survey (Jensen unpubl. data 2014) include New Zealand pigeon (*Hemiphaga novaeseelandiae novaeseelandiae*), bellbird (*Anthornis melanura melanura*), brown creeper (*Mohoua novaeseelandiae*), silvereye (*Zosterops lateralis lateralis*), and South Island tomtit (*Petroica macrocephala macrocephala*).

Extent of Site of Ecological Significance

The boundary of the site is the Banks Peninsula Conservation Trust Covenant boundary.

Assessment Summary

The French Farm Wetland 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) 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 and 2), rarity/distinctiveness (criteria 3, 4 and 6), 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.

Mesotrophic wetlands are of restricted occurrence in the Akaroa Ecological District (Grove and Parker 2013) so the site is distinctive (refer to criterion 6), rather than representative of the natural diversity of the ecological district. However, the mixed hardwood forest has many tree and shrub seedlings on the forest floor (Jensen unpubl. data 2014) and is representative.

The wetland supports a characteristic invertebrate assemblage across several insect orders. This reflects the intactness of the wetland habitat (Wildland Consultants unpubl. data 2014).

- 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.

Although small, it is one of the largest examples of a spring-fed seepage wetland within the Akaroa ED.

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.

Wetland ecosystems have been reduced to less than 20% of their former extent at the regional and freshwater biogeographic unit scales. Ausseil *et al.* (2008) estimate that wetlands have been reduced to 10.6% of their original extent in the Canterbury Region and 7.0% in the Canterbury freshwater biogeographic unit. On Banks Peninsula, most of the original wetlands have been cleared and drained and only remnants remain.

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 has indigenous plant species that are either nationally At Risk or uncommon within the ecological region or ecological district and indigenous invertebrate species that are nationally At Risk and endemic to Banks Peninsula.

Plants

Nationally At Risk plant species (de Lange *et al.* 2013) recorded from the site (Jensen unpubl. data 2014) are:

- climbing groundsel (*Brachyglottis sciadophila*) (At Risk – Declining)

Plant species recorded from the site that are “uncommon to rare or very local” on Banks Peninsula (Wilson 2013) are:

- *Coprosma ciliata* (Wilson unpubl. data, Grove 2010)
- *Hymenophyllum sanguinolentum* (Wilson unpubl. data, Grove 2010, Jensen unpubl. data 2014)

Invertebrates

Nationally At Risk invertebrate species recorded from the site (Wildland Consultants unpubl. data 2014) are:

- Mistletoe miner (*Zelleria spenota*) mistletoe miner (At Risk – Declining)
- Ward's stonefly (*Zelandobius wardi*) (At Risk – Naturally Uncommon and endemic to Banks Peninsula)

The species that is endemic to Banks Peninsula (Wildland Consultants unpubl. data 2014) is:

- Green cicada (*Kikihia* ‘new species’)

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

The site does not contain any indigenous vegetation or an indigenous species that are at their distribution limit within Canterbury Region or nationally.

- 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 contains seepage wetlands and a small area of peat-based wetland. Wetlands are of restricted occurrence in the Akaroa ED (Grove and Parker 2013). Seepages and flushes, although relatively common on Banks Peninsula (Grove and Parker 2013), are classified as 'originally rare' ecosystems at a national scale (Williams et al. 2007). The small area of peat-based wetland with a fringe of native shrubs, small trees and ferns around the margins, described by Wilson (unpubl. data) as "stunted bog forest" is a distinctive vegetation community and the only known example of its type on Banks Peninsula.

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 "stunted bog forest" has a high diversity of ferns, trees and shrubs (Grove 2010, Jensen unpubl. data 2014).

The diversity of indigenous invertebrates recorded at the site is also high relative to other wetland sites on Banks Peninsula (Wildland Consultants unpubl. data 2014). A list of the invertebrate species recorded at the site is provided in Appendix 2.

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 not significant under this criterion. It is small and relatively isolated and is unlikely to provide or contribute to an important ecological linkage or network, or provide an important buffering function.

- 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. The relatively small wetland areas within the site are unlikely to provide important benefits to the areas and ecosystems beyond their immediate boundaries. They are spring-fed and situated high on a hill slope in the head of a small stream catchment and do not play an important hydrological, biological or ecological role in the natural functioning of a river or coastal system.

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.

It provides important permanent habitat for indigenous invertebrates. It supports two nationally At Risk invertebrate species (one of which is endemic to Banks Peninsula), and another that is endemic to Banks Peninsula (a new species of *Kikihia*). It also provides habitat for a diverse and characteristic range of common indigenous invertebrates (Wildland Consultants unpubl. data 2014).

Site Management

Existing Protection Status

The entire site is protected by a Banks Peninsula Conservation Trust covenant.

The site is fenced (post and netting) and there are few weed issues (Grove 2010).

Threats and risks	Management recommendations	Support package options
Blackberry (<i>Rubus fruticosus</i> agg.) occurs near the top fence at the southern end (Jensen unpubl. data 2014).	Consider controlling blackberry	Advice and guidance to landowner about pest plants. Possible assistance with control.
Stock. The fence around the site is in good condition and stock proof.	Consider periodic inspections of the fence to ensure it is stock-proof with maintenance as required.	Assistance to landowner with monitoring of stock fence on regular basis. Guidance and assistance with any maintenance as required.
Weed invasion	Consider regular surveillance for widely-dispersed weeds with appropriate control if/when required.	Advice and guidance to landowner about monitoring pest plant incursions and possible assistance with control as required.

References

- Ausseil, A-G.; Gerbeaux, P.; Chadderton, W.L.; Stephens, T.; Brown, D.; and Leathwick, J. (2008). *Wetland ecosystems of national importance for biodiversity: Criteria, methods and candidate list of nationally important inland wetlands*. Landcare Research Contract Report: LC0708/158. 174pp.
- Environment Canterbury. (2013). *Canterbury Regional Policy Statement 2013*. Environment Canterbury.
- Grove, P. (2010). *French Farm - Wainui Pass Wetland*. Unpublished Report. August 2010.
- Grove, P. and Parker, M. (2013). *Banks Peninsula Wetlands – a discussion paper prepared for the Banks Peninsula Water Management Zone*. Unpublished report prepared for the Banks Peninsula Water Management Zone Committee, May 2013. 6 pp.
- Jensen, C. (2014). *Botanical Survey Report for Site 318, Above French Farm NE of Wainui Pass*. Unpublished data collected by Carol Jensen for the Christchurch City Council. (CCC TRIM: 13/233167).
- Wildland Consultants (2014). *Banks Peninsula Entomological Survey: French Farm Wetland*. Unpublished data collected by Brian Patrick for the Christchurch City Council. (CCC TRIM: 14/476714).
- Williams, P. A., Wiser, S., Clarkson, B. R., & Stanley, M. C. (2007). New Zealand's historically rare terrestrial ecosystems set in a physical and physiognomic framework. *New Zealand Journal of Ecology* 31(2), 119–128.
- Wilson, H.D. *Banks Peninsula Botanical Survey card number 318, Akaroa. Small Wetland NE of Wainui Pass, Above French Farm*. Unpublished data.
- Wilson, H.D. (2013). *Plant Life on Banks Peninsula*. Manuka Press, Cromwell. 412 pp.

Assessment completed by: Scott Hooson
Date: 4 July 2014

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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: Plant Species List

Sourced from unpublished field survey data (Jensen unpubl. data 2014)

Scientific Name	Common Name
Indigenous species	
<i>Acaena anserinifolia</i>	bidibidi, piripiri
<i>Arisotelia serrata</i>	wineberry, makomako
<i>Asplenium appendiculatum</i>	ground spleenwort
<i>Asplenium flabellifolium</i>	necklace fern
<i>Asplenium gracillimum</i>	
<i>Blechnum chambersii</i>	lance fern
<i>Blechnum discolor</i>	crown fern, piupiu
<i>Blechnum fluviatile</i>	kiwakiwa
<i>Blechnum penna-marina</i>	little hard fern
<i>Blechnum procerum</i>	small kiokio
<i>Brachyglottis sciadophila</i>	climbing groundsel
<i>Calystegia tuguriorum</i>	NZ bindweed, pōwhiwhi
<i>Carex geminata</i>	cutty grass, rautahi
<i>Carpodetus serratus</i>	marbleleaf, putaputāwētā
<i>Clematis paniculata</i>	puawananga
<i>Coprosma dumosa</i>	mikimiki
<i>Coprosma propinqua</i>	mingimingi, mikimiki
<i>Coprosma rhamnoides</i>	mingimingi, mikimiki
<i>Coprosma rigida</i>	stiff coprosma
<i>Coprosma rotundifolia</i>	round-leaved coprosma, mikimiki
<i>Cyathea smithii</i>	Smith's tree fern, kātote
<i>Dacrycarpus dacrydioides</i>	kahikatea, white pine
<i>Dichondra repens</i>	dichondra
<i>Fuchsia excorticata</i>	tree fuchsia, kōtukutuku
<i>Griselinia littoralis</i>	broadleaf, kāpuka
<i>Hebe salicifolia</i>	koromiko
<i>Hoheria angustifolia</i>	narrow-leaved lacebark, houhere
<i>Hymenophyllum sanguinolentum</i>	filmy fern
<i>Hypolepis rufobarbata</i>	sticky pig fern
<i>Ileostylus micranthus</i>	green mistletoe
<i>Juncus edgariae</i>	leafless rush, wi
<i>Kunzea ericoides</i>	kānuka
<i>Melicope simplex</i>	poataniwha
<i>Melicytus ramiflorus</i>	māhoe, whiteywood
<i>Microsorium pustulatum</i>	hounds tongue, kōwaowao
<i>Muehlenbeckia australis</i>	large-leaved pōhuehue
<i>Myrsine divaricata</i>	weeping matipo, weeping māpou
<i>Parsonsia heterophylla</i>	native jasmine, akakaikiore
<i>Pellaea rotundifolia</i>	round-leaved fern, tarawera
<i>Pennantia corymbifera</i>	kaikōmako, ducks foot
<i>Pittosporum eugeniioides</i>	lemonwood, tarātā
<i>Plagianthus regius</i>	lowland ribbonwood, mānatu
<i>Podocarpus cunninghamii</i>	mountain tōtara, thin-barked tōtara
<i>Polystichum vestitum</i>	prickly shield fern, pūniu

<i>Prumnopitys taxifolia</i>	mataī, black pine
<i>Pseudopanax arboreus</i>	five-finger, whauwhaupaku
<i>Pseudopanax crassifolius</i>	lancewood, horoeka
<i>Pseudowintera colorata</i>	horopito, peppertree
<i>Pteridium esculentum</i>	bracken, rārahu, rauaruhe
<i>Ranunculus reflexus</i>	hairy buttercup, maruru
<i>Rubus cissoides</i>	bush lawyer, tātarāmoa
<i>Rubus schmidelioides</i>	bush lawyer, tātarāmoa
<i>Schefflera digitata</i>	patē, seven-finger
<i>Sophora microphylla</i>	small-leaved kōwhai
<i>Uncinia uncinata</i>	hook grass
<i>Urtica ferox</i>	ongaonga, tree nettle
Exotic species	
<i>Agrostis capillaris</i>	brown top
<i>Erythranthe guttata</i>	monkey musk
<i>Holcus lanatus</i>	Yorkshire fog

Appendix 2: Invertebrate Species List

Sourced from Wildland Consultants unpubl. data (2014).

* = exotic species

ORDER/Family/genus/species	Common Name
MECOPTERA	scorpionfly
Nannochoristidae	
<i>Nannochorista philpotti</i>	
HEMIPTERA	
Tibicinidae	cicada
<i>Amphipsalta zelandica</i>	clapping cicada
<i>Kikihia new species</i>	
Acanthosomatidae	shield bug
<i>Rhopalimorpha obscura</i>	
Cixiidae	
<i>Cixiid bug</i>	
ORTHOPTERA	
Tettigoniidae	katydid
<i>Conocephalus bilineatus</i>	
Gryllidae	cricket
<i>Pteronemobius bigelowi</i>	
Acrididae	grasshoppers
<i>Phaulacridium marginale</i>	
COLEOPTERA	
Carabidae	ground beetles
<i>Megadromus antarcticus</i>	
HYMENOPTERA	
Formicidae	ant
<i>Monomorium antarcticum</i>	
Pompilidae	spider wasp
<i>Epipompilus insularis</i>	
Sphecidae	hunting wasp
<i>Podagritis albipes</i>	
LEPIDOPTERA	
Glyphipterigidae	
<i>Glyphipterix alchyoesa</i>	
<i>Glyphipterix triselena</i>	
Elachistidae	
<i>Cosmiotes ombrodona</i>	
Yponomeutidae	
<i>Zelleria spenota</i>	
Oecophoridae	
<i>Barea exarcha</i>	
<i>Gymnobathra parca</i>	
<i>Gymnobathra tholodella</i>	
<i>Hierodoris s-fractum</i>	
<i>Izatha huttoni</i>	

<i>Leptocroca scholaea</i>	
<i>Stathmopoda horticola</i>	
<i>Tingena melinella</i>	
Pterophoridae	plumemoth
<i>Platyptilia repletalis</i>	
Tortricidae	leaf rollers
<i>Capua semiferana</i>	
<i>Cnephasia jactatana</i>	
<i>Ctenopseustis obliquana</i>	
<i>Epichorista siriana</i>	
<i>Merophyas leucaniana</i>	
<i>Planotortrix excessana</i>	
<i>New genus and species</i>	
Thyrididae	
<i>Morova subfasciata</i>	
Crambidae	
<i>Deana hybreasalis</i>	
<i>Eudonia feredayi</i>	
<i>Eudonia luminatrix</i>	
<i>Eudonia leptalea</i>	
<i>Eudonia sabulosella</i>	
<i>Eudonia submarginalis</i>	
<i>Glaucocharis auriscriptella</i>	
<i>Glaucocharis lepidella</i>	
<i>Hygraula nitens</i>	
<i>Orocrambus flexuosellus</i>	
<i>Orocrambus ramosellus</i>	
<i>Orocrambus vittellus</i>	
<i>Udea flavidalis</i>	
<i>Udea marmarina</i>	
GEOMETRIDAE	
<i>Asaphodes abrogata</i>	
<i>Asaphodes beata</i>	
<i>Austrocidaria gobiata</i>	
<i>Austrocidaria similata</i>	
<i>Epiphyrne undosata</i>	
<i>Epyaxa rosearia</i>	
<i>Homodotis megaspilata</i>	
<i>Helastia corcularia</i>	
<i>Hydriomena deltoidata</i>	
<i>Hydriomena rixata</i>	
<i>Xanthorhoe semifissata</i>	
Noctuidae	
<i>Graphania insignis</i>	
<i>Graphania morosa</i>	
<i>Graphania mutans</i>	
<i>Graphania plena</i>	
<i>Meterana ochthistis</i>	
<i>Meterana stipata</i>	
<i>Persectania aversa</i>	
<i>Proteuxoa comma</i>	
<i>Tmetolophota atristriga</i>	
<i>Tmetolophota propria</i>	

<i>Tmetolophota semivittata</i>	
Lycaenidae	coppers/ blues
<i>Lycaena "comon copper" complex</i>	
<i>Zizina oxleyi</i>	southern blue
Nymphalidae	admirals
<i>Vanessa gonerilla</i>	red admiral
Pieridae	white butterfly
<i>*Pieris rapae</i>	
PLECOPTERA	stonefly
Gripopterygidae	
<i>Zelandobius wardi</i>	
ODONATA	
Coenagrionidae	damselfly
<i>Xanthocnemis zelandica</i>	