

Christchurch District Plan Site of Ecological Significance

Site Significance Statement

Site name: Otepatotu

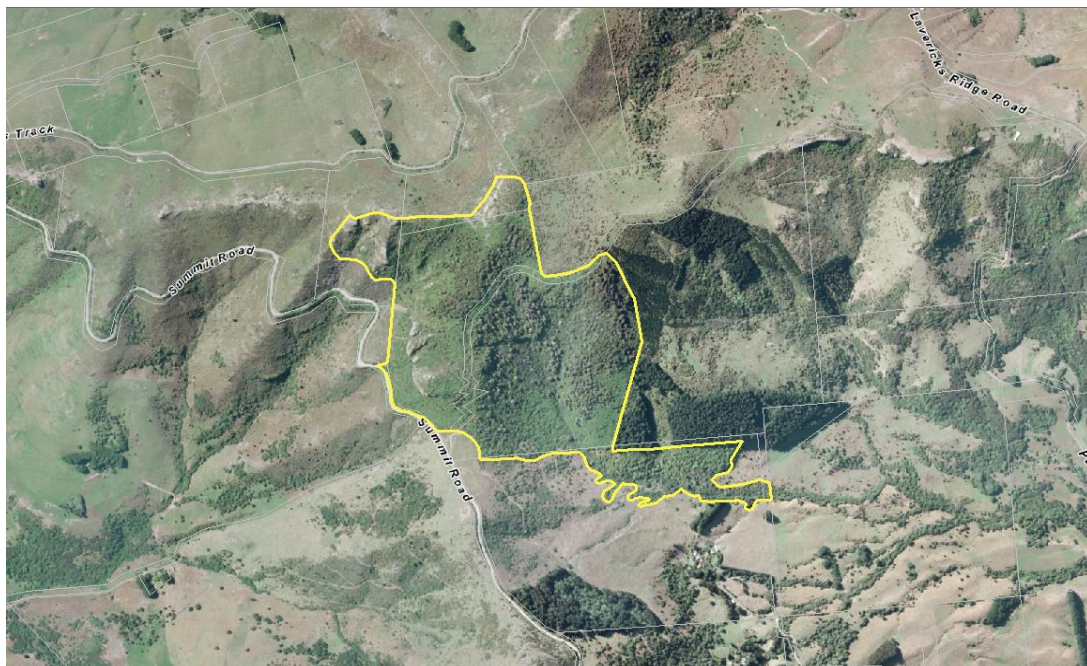
Site number: SES/A/24

Physical address of site: 1933 Summit Road, Akaroa

Summary of Significance:

This site is significant because it contains a large example of rare, diverse and highly representative old growth montane thin-barked totara forest. It supports two nationally At Risk plant species and a large number of plant species that are uncommon within the ecological region or ecological district, four terrestrial invertebrates that are nationally At Risk or endemic to Banks Peninsula, one bird species that is uncommon in the ecological district and two plant species at their regional distributional limits on Banks Peninsula. It has contains large basic igneous bluffs, and rock outcrops are an originally rare ecosystem and is also distinctive for the large number of mountain cabbage tree plants present. The site is well buffered and contributes to an important ecological linkage of connected indigenous vegetation and habitats in the wider area.

Site Map



Additional Site Information

Ecological District: Akaroa

Area of SES (ha): 28.96

Central point (NZTM): E1601423, N5155923

Site Description

The site is located in the Akaroa Ecological District on the northern side of the Summit Road between Camerons Track and Le Bons Bay. The aspect is generally south facing and the altitudinal range of the site is from approximately 500 above sea level to the summit of Lavericks Peak at 755 m above sea level. The majority of the site (39.9 ha) is protected as the Otepatoto Scenic Reserve (conservation unit no. N36088) administered by the Department of Conservation.

The scenic reserve contains extensive areas of old-growth montane thin-bark totara/hardwood forest (with conspicuous lichen (*Usnea* sp.) and goblin moss (*Weymouthia* sp.)), montane second-growth mixed hardwood forest with abundant mountain five-finger and tree fuchsia, holygrass grassland and shrubland, montane scrub and shrubland, *Chionochloa conspicua* tall tussockland, tall tussock shrubland, and scattered plants on montane bluffs. Totara and mountain five-finger regeneration is abundant. Species of particular note in the reserve are: *Cordyline indivisa*, filmy ferns (*Hymenophyllum multifidum*, *H. sanguinolentum*, *H. flabellatum*), *Leptolepia novae-zelandiae*, *Leptopteris hymenophylloides*, *Hebe strictissima*, *Pseudopanax anomalus*, *Brachyglottis lagopus*, *Rytidosperma corinum*, *Olearia ilicifolia*, *Cyathea colensoi*, *C. smithii*, *Clematis paniculata* and *Ourisia lacteal* (Wilson 1992).

South-east of the reserve is an area (matai-thin barked totara)/ montane second-growth mixed hardwood forest with abundant mountain five-finger broadleaf and mahoe. Other main canopy species include small-leaved hoheria, lemonwood, fuchsia, lancewood and kaikomako. There is abundant regeneration in this part of the site with numerous seedlings and saplings of all the above trees including totara and matai. *Coprosma rotundifolia*, pate, mountain five-finger and horopito form a dense understorey and ferns are also abundant (Jensen unpubl. data 2012).

Extent of Site of Ecological Significance

The site includes the Otepatotu Scenic Reserve, the area of (matai-thin barked totara)/ montane second-growth mixed hardwood forest south east of the reserve and the rocky bluffs on the western side of the reserve above the Summit Road.

Assessment Summary

The Otepatoto Site has been evaluated against the criteria for determining significant indigenous vegetation and significant habitats 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 and 2), rarity/distinctiveness (criteria 3, 4, 5, and 6), diversity and pattern (criterion 7) and ecological context criteria (criterion 8).

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.

It contains highly representative old growth montane thin-barked totara forest. Stock have been excluded from the site (both the Otepatotu Scenic Reserve and the area of forest to the south-east of the reserve) for many years and the vegetation is very intact, both structurally and compositionally relative to other examples. The forest south-east of the reserve is also in excellent condition with high species diversity, abundant regeneration, few exotic pest plants and little evidence of animal pest damage (Jensen unpubl. data 2012).

- 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.

It contains a large stand of thin-barked totara totara/ hardwood forest that is a relatively large example of its type within the Akaroa Ecological District.

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.

The site contains old-growth montane thin-bark totara/hardwood forest and second-growth mixed hardwood forest with emergent podocarp trees. This forest is significant under this criterion because forest has been reduced to less than 20% of its former extent in the ecological district (and ecological region). Banks Peninsula, including the Akaroa Ecological District, was almost entirely forested prior to the arrival of humans (Harding 2009, Wilson 2013). The present extent of all indigenous forest (excluding manuka and/or kanuka) in the ED is estimated to be 10% of the ecological district (New Zealand Landcover Database (Version 4)).

Of particular significance is the presence of montane old growth thin-barked totara forest within the site. Old growth forest (of any type) has been reduced to

approximately 800 ha or <1% of its original extent on Banks Peninsula (Wilson 2009).

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 two nationally At Risk plant species and a large number of plant species that are uncommon within the ecological region or ecological district. It also has four terrestrial invertebrates that are either nationally At Risk or endemic to Banks Peninsula and one bird species that is uncommon in the ecological district.

Plants

Nationally At Risk plant species (de Lange et al. 2013) recorded from the site are:

- *Brachyglottis sciadophila* (At Risk – Declining) (Wilson 1992) – also south-east of the reserve (Jensen unpubl. data 2012)
- *Hebe strictissima* (At Risk - Naturally Uncommon, endemic to banks Peninsula) (Wilson 1992, Wiser unpubl. data)
- *Senecio glaucophyllus* subsp. *basinudus* (At Risk - Naturally Uncommon) (Wiser unpubl. data)

Plant species recorded from the site (Wilson unpubl. data n.d.), unless cited otherwise) that are “uncommon to rare or very local” on Banks Peninsula (Wilson 2013) are:

- *Anisotome aromatica* (also Wiser unpubl. data)
- *Asplenium richardii* (also Wiser unpubl. data)
- *Chionochloa conspicua*
- *Coprosma ciliata*
- *Cordyline indivisa* (rare in the ecological region (Wilson 1992))
- *Histiopteris incisa*
- *Hymenophyllum flabellatum*
- *Hymenophyllum multifidum*
- *Hymenophyllum sanguinolentum* 'Canterbury'
- *Leptolepia novae-zelandiae*
- *Lycopodium fastigiatum*
- *Lycopodium scariosum* – south-east of the reserve (Jensen unpubl. data 2012)
- *Microlaena avenacea*
- *Notogrammitis heterophylla* (also Wiser unpubl. data)
- *Olearia ilicifolia*
- *Ourisia macrophylla* subsp. *lacteal*
- *Paesia scaberula*
- *Phlegmariurus varius* (also Wiser unpubl. data)
- *Poa colensoi*
- *Pyrrosia eleagnifolia* (also Wiser unpubl. data)
- *Raukaua anomalus*
- *Rytidosperma corinum* (also Wiser unpubl. data)
- *Schizellema trifoliolatum*

- *Senecio wairauensis*
- *Uncinia clavata* (also Wiser unpubl. data)
- *Uncinia ferruginea*
- *Uncinia rupestris*

Birds

One bird species that is uncommon in the ecological district has been recorded at the site (DOC 2002):

- South Island rifleman.

Invertebrates

Nationally At Risk and endemic invertebrate species recorded from the site are:

- *Mecodema howitti* (carabid beetle) (At Risk - Declining, endemic to eastern Banks Peninsula) (Bowie et al. 2011)
- Banks Peninsula tree weta (*Hemideina ricta*) (At Risk – Naturally Uncommon, endemic to eastern Banks Peninsula) (Townsend et al. 1997).
- *Periegops suterii* (six-eyed spider) (At Risk - Relict) (Bowie et al. 2011)
- *Holcaspis* 'new species' (carabid beetle) - one of only 5 sites (Bowie et al. 2011), endemic to Banks Peninsula and uncommon in the Akaroa ED.

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.

There is one species at its southern regional limit on Banks Peninsula and one species at its northern regional limit on Banks Peninsula:

- Pigeonwood (*Hedycarya arborea*) (southern regional limit)
- *Rytidosperma corinum* (northern regional limit)

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.

The western side of the site in particular contains large basic igneous bluffs, and rock outcrops that support indigenous vegetation. At a national scale, basic cliffs, scarps and tors are an originally rare ecosystem (Williams et al. 2007).

The site is also distinctive for the large number of mountain cabbage tree (*Cordyline indivisia*) plants present (DOC 2002). This species is rare in the Banks Ecological Region.

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.

It supports a relatively high diversity of indigenous vascular plant species (Jensen unpubl. data 2012, Wilson 1992) including a large number of species that are “uncommon to rare or very local” on Banks Peninsula (Wilson 2013) (see criterion 4).

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 indigenous vegetation and habitats within the site, particularly the relatively intact old-growth forest, contribute to an important ecological linkage of connected indigenous vegetation and habitats on the northern side of Le Bons Bay and on the eastern side of Banks Peninsula.

Montane second-growth mixed hardwood forest and regenerating scrub and shrublands provide an important buffer to the core area of montane thin-barked totara forest within the Scenic Reserve.

- 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. There are no wetlands within the 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 presence of relatively intact old-growth forest within the site means it provides important habitat for indigenous fauna. A number of indigenous forest birds use the site for feeding, breeding and resting, including brown creeper, South Island rifleman, South Island tomtit, bellbird and New Zealand pigeon (DOC 2002).

Site Management

Existing Protection Status

A large part of the site (39.9 ha) is protected as the Otepatoto Scenic Reserve (conservation unit no. N36088) which is administered by the Department of Conservation. The remainder is not legally protected.

Threats and risks	Management recommendations	Support package options
Biodiversity pest plants: Spanish heath (<i>Erica lusitanica</i>), <i>Pinus radiata</i> spreading from adjoining plantations and <i>Pinus ponderosa</i> (originating from a former plantation between the Summit Road and the Otepatotu Bluffs (Wilson 1992).	- Consider ongoing control of wilding conifers (<i>Pinus radiata</i> and <i>P. ponderosa</i>). - If it is still a threat, consider annual surveillance for Spanish heath near the slip between Summit Road and reserve boundary. Remove any plants to prevent re-establishment (Wilson unpubl. data n.d.).	- Advice and guidance for private landowner about wilding pine control options and assistance where appropriate. - Discuss with adjoining landowner/s the potential impact of pest plants upon the biodiversity of the site and options for control, with assistance as appropriate.
Rock climbing damaging indigenous rock bluff communities.	Department of Conservation to liaise with rock climbing groups to raise awareness of the importance of rock bluff communities and ensure any damage is minimised.	N/A

References

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Assessment completed by: Scott Hooson
Date: 3 March 2015

Statement completed by: Scott Hooson
Date: 3 March 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: Plant Species List - South-east of Otepatotu Scenic Reserve

Sourced from Jensen unpubl. data (2012).

Note: exotic plant species were not recorded during this survey.

Scientific Name	
Indigenous species	Common Name(s)
<i>Acaena anserinifolia</i>	bidibidi, piripiri
<i>Anaphalioides bellidioides</i>	everlasting daisy, hells bells
<i>Aristotelia serrata</i>	wineberry, makomako
<i>Asplenium appendiculatum</i>	ground spleenwort
<i>Asplenium bulbiferum</i>	hen & chicken's fern
<i>Asplenium flaccidum</i>	hanging spleenwort, raukatauri
<i>Asplenium gracillimum</i>	
<i>Asplenium hookerianum</i>	Hooker's spleenwort
<i>Astelia fragrans</i>	kakaha, bush lily
<i>Blechnum chambersii</i>	lance fern
<i>Blechnum fluviatile</i>	kiwakiwa
<i>Blechnum procerum</i>	small kiokio
<i>Brachyglottis sciadophila</i>	climbing groundsel
<i>Carpodetus serratus</i>	marbleleaf, putaputāwētā
<i>Coprosma dumosa</i>	mikimiki
<i>Coprosma rhamnoides</i>	mingimingi, mikimiki
<i>Coprosma rigida</i>	stiff coprosma
<i>Coprosma rotundifolia</i>	round-leaved coprosma, mikimiki
<i>Cordyline australis</i>	cabbage tree, tī kōuka
<i>Cyathea colensoi</i>	rough tree fern, mountain tree fern
<i>Cyathea smithii</i>	Smith's tree fern, kātote
<i>Fuchsia excorticata</i>	tree fuchsia, kōtukutuku
<i>Griselinia littoralis</i>	broadleaf, kāpuka
<i>Hebe salicifolia</i>	koromiko
<i>Helichrysum lanceolatum</i>	niniaio
<i>Hoheria angustifolia</i>	narrow-leaved lacebark, houhere
<i>Hydrocotyle moschata</i>	pennywort
<i>Hypolepis ambigua</i>	pig fern
<i>Kunzea robusta</i>	kānuka
<i>Leptopteris hymenophylloides</i>	crepe fern, heruheru
<i>Lycopodium scariosum</i>	creeping clubmoss
<i>Melicytus ramiflorus</i>	māhoe, whiteywood
<i>Metrosideros diffusa</i>	white climbing rātā
<i>Microsorium pustulatum</i>	hounds tongue, kōwaowao
<i>Muehlenbeckia australis</i>	large-leaved pōhuehue
<i>Parsonsia heterophylla</i>	native jasmine, akakaikiore
<i>Pennantia corymbosa</i>	kaikōmako, ducks foot
<i>Phormium cookianum</i>	mountain flax, wharariki
<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 colensoi</i>	mountain five-finger
<i>Pseudopanax crassifolius</i>	lancewood, horoeka
<i>Pseudowintera colorata</i>	horopito, peppertree
<i>Pteridium esculentum</i>	bracken, rārahu, rauaruhe
<i>Pterostylis graminea</i>	green-hooded orchid
<i>Rubus cissoides</i>	bush lawyer, tātarāmoa
<i>Schefflera digitata</i>	patē, seven-finger
<i>Sophora microphylla</i>	small-leaved kōwhai
<i>Urtica ferox</i>	ongaonga, tree nettle

Appendix 2: Plant Species List - Otepatotu Scenic Reserve

Sourced from Wilson unpubl. data (n.d).

Scientific Name
Indigenous species
<i>Anisotome aromatica</i>
<i>Aristotelia serrata</i>
<i>Asplenium appendiculatum</i>
<i>Asplenium bulbiferum</i>
<i>Asplenium flaccidum</i>
<i>Asplenium hookerianum</i>
<i>Astelia fragrans</i>
<i>Blechnum chambersii</i>
<i>Blechnum colensoi</i>
<i>Blechnum discolor</i>
<i>Blechnum fluviatile</i>
<i>Blechnum procerum</i>
<i>Brachyglottis lagopus</i>
<i>Brachyglottis sciadophila</i>
<i>Carpodetus serratus</i>
<i>Chionochloa conspicua</i>
<i>Clematis foetida</i>
<i>Clematis paniculata</i>
<i>Coprosma ciliata</i>
<i>Coprosma linariifolia</i>
<i>Coprosma rhamnoides</i>
<i>Coprosma rigida</i>
<i>Coprosma rotundifolia</i>
<i>Coprosma</i> sp 't'
<i>Coprosma</i> spp
<i>Cordyline australis</i>
<i>Cordyline indivisa</i>
<i>Ctenopteris heterophylla</i>
<i>Cyathea colensoi</i>
<i>Cyathea smithii</i>
<i>Dacrycarpus dacrydioides</i>
<i>Dichelachne crinata</i>
<i>Epilobium alsinoides</i> subsp <i>atriplicifolium</i>
<i>Euchiton audax</i>
<i>Fuchsia excorticata</i>
<i>Fuchsia excorticata</i> x <i>perscandens</i>
<i>Geranium sessiliflorum</i>
<i>Griselinia littoralis</i>
<i>Hebe salicifolia</i>
<i>Hebe strictissima</i>
<i>Hedycarya arborea</i>
<i>Helichrysum filicaule</i>
<i>Helichrysum lanceolata</i>
<i>Helychrysum bellidioides</i>

<i>Hierochloa redolens</i>
<i>Histiopteris incisa</i>
<i>Hoheria angustifolia</i>
<i>Hymenophyllum flabellatum</i>
<i>Hymenophyllum multifidum</i>
<i>Hymenophyllum sanguinolentum</i>
<i>Hypolepis millefolium</i>
<i>Hypolepis rufobarbata</i>
<i>Leptolepia novae-zelandiae</i>
<i>Leptopteris hymenophylloides</i>
<i>Libertia ixioides</i>
<i>Luzula banksiana</i> var <i>orina</i>
<i>Lycopodium fastigiatum</i>
<i>Melicytus ramiflorus</i>
<i>Metrosideros diffusa</i>
<i>Microlaena avenacea</i>
<i>Microsorium pustulatum</i>
<i>Microtis unifolia</i>
<i>Muehlenbeckia australis</i>
<i>Myrsine australis</i>
<i>Myrsine divaricata</i>
<i>Olearia ilicifolia</i>
<i>Ourisia lactea</i>
<i>Paesia scaberula</i>
<i>Parsonsia heterophylla</i>
<i>Pennantia corymbosa</i>
<i>Phormium cookianum</i>
<i>Pittosporum eugenoides</i>
<i>Pittosporum tenuifolium</i>
<i>Poa colensoi</i>
<i>Poa mathewsii</i>
<i>Podocarpus hallii</i>
<i>Podocarpus totara</i>
<i>Polystichum vestitum</i>
<i>Polystichum xvestitum</i>
<i>Pseudopanax colensoi</i>
<i>Pseudopanax crassifolius</i>
<i>Pseudowintera colorata</i>
<i>Pteridium esculentum</i>
<i>Raoulia glabra</i>
<i>Raukawa anomalus</i>
<i>Rubus cissoides</i>
<i>Rytidosperma corinum</i>
<i>Rytidosperma gracile</i>
<i>Schefflera digitata</i>
<i>Schizeilema trifoliolatum</i>
<i>Senecio wairauensis</i>
<i>Stellaria decipiens</i>
<i>Uncinia</i> cf. <i>angustifolia</i> (or <i>silvestris</i>)
<i>Uncinia clavata</i>
<i>Uncinia ferruginea</i>
<i>Uncinia rupestris</i>
<i>Urtica ferox</i>

<i>Urtica incisa</i>
Exotic species
<i>Achillea millefolium</i>
<i>Erica lusitanica</i>
<i>Hieracium caespitosum</i>
<i>Hieracium pilosella</i>
<i>Hieracium praeltum</i>
<i>Hypochoeris radicata</i>
<i>Malus domestica</i>
<i>Mycelis</i>
<i>Ulex europaeus</i>
Non-vascular species
<i>Calomnion laetum</i>
<i>Dicranoloma menziesii</i>
<i>Echinodium hispidum</i>
<i>Neckera pennata</i>
<i>Weymouthia cochleaurifolia</i>
<i>Weymouthia mollis</i>