

# 33 INDIGENOUS VEGETATION AND BIODIVERSITY



## 33.1

## Purpose

The District contains a diverse range of habitats that support indigenous plants and animals. Many of these are endemic, comprising forests, shrubland, herbfields, tussock grasslands, lake and river margins. Indigenous biodiversity is also an important component of ecosystem services and the District's landscapes.

The Council has a responsibility to maintain indigenous biodiversity and to recognise and provide for the protection of significant indigenous vegetation and significant habitats of indigenous fauna, which are collectively referred to as Significant Natural Areas (SNAs).

Activities involving the efficient use of land including ski-field development within identified Ski Area Sub Zones, farming, fence, road and track construction can be reasonably expected to be undertaken providing such activities maintain or enhance the District's indigenous biodiversity values.

The limited removal of indigenous vegetation is permitted, with discretion applied through the resource consent process to ensure that indigenous vegetation clearance activities exceeding the permitted limits protect, maintain or enhance indigenous biodiversity values. Where the removal of indigenous vegetation cannot be avoided or mitigated and would diminish the District's indigenous biodiversity values, opportunities for the enhancement of other areas are encouraged to offset the adverse effects of the loss of those indigenous biodiversity values.

Alpine environments are identified as areas above 1070m and are among the least modified environments in the District. Due to thin and infertile soils and severe climatic factors, establishment and growth rates in plant life are slow, and these areas are sensitive to modification. In addition, because these areas contribute to the District's distinctive landscapes, and are susceptible to exotic pest plants, changes to vegetation at these elevations may be conspicuous and have significant effects on landscape character and indigenous biodiversity.

The District's lowlands comprising the lower slopes of mountain ranges and valley floors have been modified by urban growth, farming activities and rural residential development. Much of the indigenous vegetation habitat has been removed and these areas are identified in the Land Environments of New Zealand Threatened Environment Classification as either acutely or chronically threatened environments, having less than 20% indigenous vegetation remaining.

**Pursuant to Section 86(b)(3) of the RMA, the rules applicable to Significant Natural Areas have immediate legal effect.**

## 33.2

## Objectives and Policies

### 33.2.1 Objective - Protect, maintain and enhance indigenous biodiversity.

- |          |   |
|----------|---|
| Policies | <p><b>33.2.1.1</b> Identify the District's Significant Natural Areas and schedule them in the District Plan, including the ongoing identification of Significant Natural Areas through resource consent applications, using the criteria set out in Policy <b>33.2.1.9</b>.</p> <p><b>33.2.1.2</b> Identify the District's rare or threatened indigenous species and schedule them in the District Plan to assist with the management of their protection.</p> <p><b>33.2.1.3</b> Provide standards in the District Plan for indigenous vegetation that is not identified as a Significant Natural Area or threatened species, which are practical to apply and that permit the removal of a limited area of indigenous vegetation.</p> |
|----------|---|

- 33.2.1.4** Recognise and take into account the values of tangata whenua and kaitiakitanga.
- 33.2.1.5** Recognise anticipated activities in rural areas such as farming and the efficient use of land and resources while having regard to the maintenance, protection or enhancement of indigenous biodiversity values.
- 33.2.1.6** Encourage the long-term protection of indigenous vegetation and in particular Significant Natural Areas by encouraging land owners to consider non-regulatory methods such as open space covenants administered under the Queen Elizabeth II National Trust Act.
- 33.2.1.7** Activities involving the clearance of indigenous vegetation are undertaken in a manner to ensure the District's indigenous biodiversity values are protected, maintained or enhanced.
- 33.2.1.8** Where the adverse effects of an activity on indigenous biodiversity cannot be avoided, remedied or mitigated, consideration will be given to whether there has been any compensation or biodiversity offset proposed and the extent to which any offset will result in a net indigenous biodiversity gain.
- 33.2.1.9** Assess the nature and scale of the adverse effects of indigenous vegetation clearance on the District's indigenous biodiversity values by applying the following criteria:
- a. Representativeness  
Whether the area is an example of an indigenous vegetation type or habitat that is representative of that which formerly covered the Ecological District.
  - b. Rarity  
Whether the area supports;
    - indigenous vegetation and habitats within originally rare ecosystems;
    - indigenous species that are threatened, at risk, uncommon, nationally or within the ecological district;
    - indigenous vegetation or habitats of indigenous fauna that has been reduced to less than 20% of its former extent, regionally or within a relevant Land Environment or Ecological District.
  - c. Diversity  
Whether the area supports a highly diverse assemblage of indigenous vegetation and habitat types, and whether these have a high indigenous biodiversity value.
  - d. Distinctiveness  
Whether the area supports or provides habitats for indigenous species:
    - at their distributional limit within Otago or nationally;
    - are endemic to the Otago region,
    - are distinctive, of restricted occurrence or have developed as a result of unique environmental factors.

e. Ecological Context

The relationship of the area with its surroundings, including whether the area proposed to be cleared:

- has important connectivity value allowing dispersal of indigenous fauna between different areas;
- has an important buffering function to protect values of an adjacent area of feature;
- is important for indigenous fauna during some part of their life cycle.

### 33.2.2 Objective - Protect and enhance Significant Natural Areas.

Policies	<b>33.2.2.1</b>	Avoid the clearance of indigenous vegetation within Significant Natural Areas that would reduce indigenous biodiversity values.
	<b>33.2.2.2</b>	Allow the clearance of indigenous vegetation within Significant Natural Areas only in exceptional circumstances and in circumstances where these activities will have a low impact or offer compensation commensurate to the nature and scale of the clearance.
	<b>33.2.2.3</b>	Recognise that the majority of Significant Natural Areas are located within land used for farming activity and provide for small scale, low impact indigenous vegetation removal, stock grazing, the construction of fences and small scale farm tracks, and the maintenance of existing fences and tracks.

### 33.2.3 Objective - Ensure the efficient use of land, including ski-field development, farming activities and infrastructure improvements, do not reduce the District's indigenous biodiversity values.

Policies	<b>33.2.3.1</b>	Provide standards controlling the clearance of indigenous vegetation within 20 meters of water bodies, and ensure that proposals for clearance do not create erosion, or reduce natural character and indigenous biodiversity values.
	<b>33.2.3.2</b>	Where the permanent removal of indigenous vegetation is proposed, encourage the retention or establishment of the same indigenous vegetation community elsewhere on the site.
	<b>33.2.3.3</b>	Encourage the retention of indigenous vegetation in locations that have potential for regeneration, or provide stability, particularly where productive values are low, or in riparian areas or gullies.
	<b>33.2.3.4</b>	When considering the effects of proposals for the clearance of indigenous vegetation, have particular regard to whether threatened species are present, or the area to be cleared is within a land environment (defined by the Land Environments of New Zealand at Level IV) identified as having less than 20% indigenous vegetation remaining; and,
	<b>33.2.3.5</b>	Where indigenous vegetation clearance is proposed within an environment identified as having less than 20% indigenous vegetation remaining (defined by the Land Environments of New Zealand at Level IV), have regard to the threatened environment status, the nature and scale of the clearance, potential



for recovery or the merit of any indigenous biodiversity offsets.

**33.2.3.6** Ensure indigenous vegetation removal does not adversely affect the natural character of the margins of water ways.

**33.2.3.7** Have regard to any areas in the vicinity of the indigenous vegetation proposed to be cleared, that constitute the same habitat or species which are protected by covenants or other formal protection mechanisms.

### **33.2.4 Objective - Protect the indigenous biodiversity and landscape values of alpine environments from the effects of vegetation clearance and exotic tree and shrub planting.**

Policies **33.2.4.1** Recognise that alpine environments contribute to the distinct indigenous biodiversity and landscape qualities of the District and are vulnerable to change from vegetation clearance or establishment of exotic plants.

**33.2.4.2** Protect the alpine environment from degradation due to planting and spread of exotic species.

## **33.3**

## **Other Provisions and Rules**

### **33.3.1 District Wide**

Attention is drawn to the following District Wide chapters. All provisions referred to are within Stage 1 of the Proposed District Plan, unless marked as Operative District Plan (ODP).

1 Introduction	2 Definitions	3 Strategic Direction
4 Urban Development	5 Tangata Whenua	6 Landscapes
24 Signs (18 ODP)	25 Earthworks (22 ODP)	26 Historic Heritage
27 Subdivision	28 Natural Hazards	29 Transport (14 ODP)
30 Energy and Utilities	31 Hazardous Substances (16 ODP)	32 Protected Trees
34 Wilding Exotic Trees	35 Temporary Activities and Relocated Buildings	36 Noise
37 Designations	Planning Maps	

### 33.3.2 Clarification

- 33.3.2.1** Compliance with any of the following standards, in particular the permitted standards, does not absolve any commitment to the conditions of any relevant land use consent, consent notice or covenant registered on the site's computer freehold register.
- 33.3.2.2** Where an activity does not comply with a Standard listed in the Standards table, the activity status identified by the 'Non-Compliance Status' column shall apply. Where an activity breaches more than one Standard, the most restrictive status shall apply to the Activity.
- 33.3.2.3** The rules apply to all zones in the District, including formed and unformed roads, whether zoned or not.
- 33.3.2.4** Refer to part 33.7 for the schedule of threatened species.
- 33.3.2.5** Refer to the planning maps and part 33.8 for the schedule of Significant Natural Areas.
- 33.3.2.6** Refer to Part 33.9 for the District's land environment (defined by the Land Environments of New Zealand at Level IV) that has 20 percent or less remaining in indigenous cover.
- 33.3.2.7** Refer to the Landcare Research Threatened Environment Classification:  
[http://www.landcareresearch.co.nz/\\_\\_data/assets/pdf\\_file/0007/21688/TECUserGuideV1\\_1.pdf](http://www.landcareresearch.co.nz/__data/assets/pdf_file/0007/21688/TECUserGuideV1_1.pdf)
- 33.3.2.8** The following abbreviations are used in the tables. Any activity that is not permitted (P) or prohibited (PR) requires resource consent.
- |   |               |    |               |    |                          |
|---|---------------|----|---------------|----|--------------------------|
| P | Permitted     | C  | Controlled    | RD | Restricted Discretionary |
| D | Discretionary | NC | Non Complying | PR | Prohibited               |

### 33.3.3 Application of the indigenous vegetation rules

- 33.3.3.1** For the purposes of determining compliance with Rules 33.4.1 to 33.4.3, indigenous vegetation shall be measured cumulatively over the area(s) to be cleared.
- 33.3.3.2** Rules 33.5.1 to 33.5.4 shall apply where indigenous vegetation attains 'structural dominance' and, the indigenous vegetation exceeds 20% of the total area to be cleared or total number of species present of the total area to be cleared.
- 33.3.3.3** Rules 33.5.1 to 33.5.4 shall apply where indigenous vegetation does not attain structural dominance and exceeds 30% of the total area to be cleared, or total number of species present of the total area to be cleared.
- 33.3.3.4** Structural dominance means indigenous species that are in the tallest stratum



**33.3.3.5** Requirements **(33.3.3.2)** and **(33.3.3.3)**, do not apply to threatened species listed in Schedule 33.7, the clearance of a threatened species applies to any single plant.

**33.3.3.6** Requirements **(33.3.3.2)** and **(33.3.3.3)**, do not apply to Significant Natural Areas listed in Schedule 33.8. Any clearance or activity is applicable to the land identified as a Significant Natural Area and identified in the planning maps.

### 33.3.4 Exemptions

**33.3.4.1** Any area identified in the District Plan maps and scheduled as a Significant Natural Area that is, or becomes protected by a covenant under the Queen Elizabeth II National Trust Act, shall be removed from the schedule and be exempt from rules in Table 3.

**33.3.4.2** Indigenous vegetation clearance for the operation and maintenance of existing and in service/ operational roads, tracks, drains, utilities, structures and/or fence lines, but excludes their expansion.

**33.3.4.3** Indigenous vegetation clearance for the construction of walkways or trails up to 1.5 metres in width provided that it does not involve the clearance of any threatened plants listed in section 33.7 or any tree greater than a height of 4 metres.

## 33.4 Rules - Clearance of Indigenous Vegetation

Table 1	Any activity involving the clearance of indigenous vegetation shall be subject to the following rules:	Non-compliance Status
<b>33.4.1</b>	The clearance of indigenous vegetation complying with all the standards in Table 2 shall be a permitted activity.	D
<b>33.4.2</b>	Activities located within Significant Natural Areas that comply with all the standards in Table 3 shall be a permitted activity.	D
<b>33.4.3</b>	Activities located within alpine environments (any land at an altitude higher than 1070m above sea level) that comply with Table 4 shall be a permitted activity.	D

## 33.5

## Rules - Standards for Permitted Activities

Table 2	Clearance of indigenous vegetation not located within a Significant Natural Area or within Alpine Environments:
<b>33.5.1</b>	Clearance is less than 5000m <sup>2</sup> in area of any site and, 500m <sup>2</sup> in area of any site less than 10ha, in any continuous period of 5 years.
<b>33.5.2</b>	Where indigenous vegetation is greater than 2.0 metres in height, clearance is less than 500m <sup>2</sup> in area of any site and, and 50m <sup>2</sup> in area of any site less than 10ha, in any continuous period of 5 years,
<b>33.5.3</b>	Within a land environment (defined by the Land Environments of New Zealand at Level IV) that has 20 percent or less remaining in indigenous cover, clearance is less than 500m <sup>2</sup> in area of any site and, 50m <sup>2</sup> in area of any site less than 10ha, in any continuous period of 5 years (refer to section 33.9).
<b>33.5.4</b>	Clearance is more than 20m from a water body.
<b>33.5.5</b>	Is for the clearance of indigenous trees that have been windthrown and/or are dead standing as a result of natural causes and have become dangerous to life or property.
<b>33.5.6</b>	Is not the clearance of a plant identified as a threatened species listed in section 33.7.

Table 3	Activities within Significant Natural Areas identified in Schedule 33.8 and on the District Plan maps:
<b>33.5.7</b>	Earthworks shall: <p><b>33.5.7.1</b> be less than 50m<sup>2</sup> in any one hectare in any continuous period of 5 years;</p> <p><b>33.5.7.2</b> not be undertaken on slopes with an angle greater than 20°.</p>
<b>33.5.8</b>	The clearance of indigenous vegetation shall not exceed 50m <sup>2</sup> in area in any continuous period of 5 years.
<b>33.5.9</b>	Does not involve exotic tree or shrub planting.

Table 4	Activities within Alpine Environments – land 1070 metres above sea level:
<b>33.5.10</b>	Does not involve the clearance of indigenous vegetation, the planting of shelterbelts, or any exotic tree or shrub planting.
	<i>Clarification: For the purpose of the clearance of indigenous vegetation by way of burning, the altitude limit of 1070 metres shall mean the average maximum altitude of any land to be burnt, averaged over north and south facing slopes</i>



## 33.6

# Rules - Non-Notification of Applications

The provisions of the RMA apply in determining whether an application needs to be processed on a notified basis. No activities or non-compliances with the standards in this chapter have been identified for processing on a non-notified basis.

## 33.7

# Threatened Plant List

### 33.7.1 Identification of Threatened Plants

Assistance with the identification of threatened plants is available through the New Zealand Plant Conservation Networks' website: <http://www.nzpcn.org.nz/default.aspx>

Scientific Name	Family	Location (Does not preclude location in any other areas)
Threatened - Nationally Critical		
Pseudognaphalium ephemerum	Asteraceae	North Von
Triglochin palustris	Juncaginaceae	Upper Shotover, Moke Lake
Threatened - Nationally Endangered		
Carex uncifolia	Cyperaceae	
Crassula multicaulis	Crassulaceae	
Leonohebe cupressoides	Plantaginaceae	Shotover key population, Wye, Deep Creek, Bullendale
Lepidium sisymbrioides	Brassicaceae	Kawarau
Myosurus minimus subsp. novae-zelandiae	Ranunculaceae	Crown Range
Olearia hectorii	Asteraceae	Lake Dispute, McKinlays Creek
Pittosporum patulum	Pittosporaceae	Dingle Burn
Uncinia strictissima	Cyperaceae	Kingston
Threatened - Nationally Vulnerable		
Anogramma leptophylla	Pteridaceae	Annual fern, Mt. Alta area Wanaka
Carmichaelia crassicaulis var. racemosa	Fabaceae	
Carmichaelia juncea	Fabaceae	Recorded by McCaskill 1999, Makarora
Carmichaelia kirkii	Fabaceae	Cardrona Valley, West Matukituki
Isolepis basillaris	Cyperaceae	
Kirkianella novae-zelandiae	Asteraceae	Shotover
Myosotis brevis	Boraginaceae	
Myosotis glauca	Boraginaceae	Nevis
Olearia fimbriata	Asteraceae	Hawea, Loch Linnhe
Pachycladon cheesemani	Brassicaceae	Wye, Bobs Cove, Kingston
Senecio dunedinensis	Asteraceae	Cliffs

Scientific Name	Family	Location (Does not preclude location in any other areas)
At Risk - Declining		
Acaena buehananii	Rosaceae	
Alepis flauida	Loranthaceae	Sunshine Bay
Carex tenuiculmis	Cyperaceae	
Carmichaelia crassicaulis subsp. crassicaulis	Fabaceae	
Carmichaelia uniflora	Fabaceae	Caples Valley
Carmichaelia vexillata	Fabaceae	
Coprosma intertexta	Rubiaceae	
Coprosma virescens	Rubiaceae	
Deschampsia caespitosa	Poaceae	
Luzula celata	Juncaceae	Shotover
Mentha cunninghamii	Lamiaceae	
Myosotis pygmaea	Boraginaceae	
Olearia fragrantissima	Asteraceae	Kingston
Olearia lineata	Asteraceae	
Peraxilla colensoi	Loranthaceae	
Peraxilla tetrapetala	Loranthaceae	
Pimelea aridula	Thymelaeaceae	
Pimelea sericeovillosa var pulvinaris	Thymelaeaceae	
Ranunculus piliferus	Ranunculaceae	
At Risk - Naturally Uncommon		
Achnatherum petriei	Poaceae	
Aciphylla dissecta	Apiaceae	Alpine
Aciphylla lecomtei	Apiaceae	Alpine
Aciphylla montana var. gracilis	Apiaceae	Alpine
Aciphylla spedenii	Apiaceae	Alpine.
Agrostis petriei	Poaceae	
Anemone tenuicaulis	Ranunculaceae	
Anisotome cauticola	Apiaceae	
Anisotome lanuginosa	Apiaceae	Alpine
Anthosachne aprica	Poaceae	
Anthosachne falcis	Poaceae	
Carex allanii	Cyperaceae	
Carex berggrenii	Cyperaceae	



Scientific Name	Family	Location (Does not preclude location in any other areas)
<i>Carex capillacea</i>	Cyperaceae	
<i>Carex carsei</i>	Cyperaceae	
<i>Carex edgarae</i>	Cyperaceae	
<i>Carex lachenallii</i> subsp. <i>parkeri</i>	Cyperaceae	Alpine
<i>Carex pterocarpa</i>	Cyperaceae	Alpine
<i>Carmichaelia compacta</i>	Fabaceae	Kawarau- Cromwell Gorge endemic
<i>Celmisia graminifolia</i>	Asteraceae	
<i>Celmisia philocremna</i>	Asteraceae	Alpine Eyre Mt endemic
<i>Celmisia spedenii</i>	Asteraceae	Alpine Eyre Mt endemic
<i>Celmisia thomsonii</i>	Asteraceae	Alpine Eyre Mt endemic
<i>Chionochloa crassiuscula</i> subsp. <i>torta</i>	Poaceae	Alpine
<i>Chionochloa crassiuscula</i> subsp. <i>crassiuscula</i>	Poaceae	Alpine
<i>Chionochloa vireta</i>	Poaceae	Alpine
<i>Chionohebe glabra</i>	Plantaginaceae	Alpine
<i>Colobanthus brevisepalus</i>	Caryophyllaceae	
<i>Deschampsia pusilla</i>	Poaceae	Alpine
<i>Epilobium margaretae</i>	Onagraceae	Alpine
<i>Epilobium purpuratum</i>	Onagraceae	Alpine
<i>Euchiton paludosus</i>	Asteraceae	
<i>Euchiton polylepsis</i>	Asteraceae	
<i>Festuca mathewsii</i> subsp. <i>pisamontis</i>	Poaceae	Alpine Pisa
<i>Geranium microphyllum</i>	Geraniaceae	
<i>Gingidia baxterae</i>	Apiaceae	
<i>Hebe annulata</i>	Plantaginaceae	Alpine Wye
<i>Hebe biggarii</i>	Plantaginaceae	
<i>Hebe dilatata</i>	Plantaginaceae	Alpine
<i>Hebe pimelioides</i> subsp. <i>faucicola</i>	Plantaginaceae	Kawarau Gorge. Endemic
<i>Lagenifera barkeri</i>	Asteraceae	
<i>Leptinella albida</i>	Asteraceae	Alpine
<i>Leptinella serrulata</i>	Asteraceae	
<i>Libocedrus plumosa</i>	Cupressaceae	East Matukituki, Siberia both Mt Aspiring National Park
<i>Luzula leptophylla</i>	Juncaceae	
<i>Luzula traversii</i> var. <i>tenuis</i>	Juncaceae	
<i>Myosotis goyenii</i>	Boraginaceae	Alpine. Endemic

Scientific Name	Family	Location (Does not preclude location in any other areas)
Myosotis tenericaulis	Boraginaceae	
Ourisia confertifolia	Plantaginaceae	Alpine. Eyre Mt endemic
Ourisia remotifolia	Plantaginaceae	Alpine. Eyre Mt endemic
Ourisia spathulata	Plantaginaceae	Alpine. Eyre Mt endemic
Pachycladon wallii	Brassicaceae	Alpine
Pimelea poppelwellii	Thymelaeaceae	Alpine. Eyre Mt endemic
Plantago obconica	Plantaginaceae	Alpine. Hector Mts, Cardrona
Plantago triantha	Plantaginaceae	
Poa incrassata	Poaceae	Alpine
Poa pygmaea	Poaceae	Alpine
Poa senex	Poaceae	Alpine
Poa sudicola	Poaceae	Alpine
Pseudopanax ferox	Araliaceae	
Ranunculatus maculatus	Ranunculaceae	
Ranunculua scirithalis	Ranunculaceae	Alpine. Eyre Mt endemic
Raoulia beauverdii	Asteraceae	
Raoulia goyenii	Asteraceae	Alpine
Raoulia hectorii var. mollis	Asteraceae	Alpine. Remarkables
Uncinia elegans	Cyperaceae	
Uncinia purpurata	Cyperaceae	Alpine
Uncinia viridis	Cyperaceae	
Urtica aspera	Urticaceae	Wye Creek
Data Deficient		
Agrostis imbicilla	Poaceae	
Agrostis pallescens	Poaceae	
Brachyscome longiscapa	Asteraceae	Alpine. Remarkables
Brachyscome montana	Asteraceae	Alpine. Remarkables
Carex decurtata	Cyperaceae	
Coprosma brunnea	Rubiaceae	
Epilobium elegans	Onagraceae	
Epilobium insulare	Onagraceae	
Myosotis glabrescens	Boraginaceae	
Poa xenica	Poaceae	
Ranunculus macropus	Ranunculaceae	Lake Dispute



## 33.8

# Schedule of Significant Natural Areas

### 33.8.1 Significant Natural Areas

Identifier	Map Number	SNA Site Name	Property or location Reference	Description/Dominant Indigenous Vegetation
A10C	9	SNA C Mount Alfred Faces	Mt Earnslaw Station, Glenorchy	Mixed beech forest, montane and sub-alpine shrubland and sub-alpine short tussock land.
A8A	12	SNA A Fan Creek Shrublands	Mt Creighton Station	Grey shrubland. Old matagouri with <i>Olearia odorata</i> , <i>Coprosma propinqua</i> , <i>Aristotelia fruticosa</i> , <i>Carmichaelia petriei</i> and briar.
A8B	12	SNA B Lake Face Shrublands	Mt Creighton Station	Broadleaf indigenous hardwood community. Common species within this community include: <i>Griselinia littoralis</i> , <i>Olearia</i> spp., cabbage tree, <i>Pseudopanax</i> sp., marble leaf and <i>Coprosma</i> spp..
A8C	9, 10, 12, 13	SNA C Sites 1 to 9 Manuka Shrublands	Mt Creighton Station	Extensive shrublands of manuka.
A8D	12	SNA D Moke Creek Wetland	Mt Creighton Station	Wetland marsh.
A23A	12, 38	SNA A	Closeburn	Shrubland dominated by manuka and <i>Coprosma propinqua</i> .
B3A	8	SNA A	Mt Burke Station	Shrubland consisting of kanuka ( <i>Kunzea ericoides</i> ), manuka ( <i>Leptospermum scoparium</i> ), matagouri ( <i>Discaria toumatou</i> ), kowhai ( <i>Sophora</i> sp.) and briar ( <i>Rosa rubiginosa</i> ).
B3B	8, 18	SNA B	Mt Burke Station	Woodland dominated by kanuka, but also contains a stand of halls totara ( <i>Podocarpus cunninghamii</i> ) on rubbly slopes at the head of the catchment and kowhai ( <i>Sophora</i> sp.) in the upper kanuka forest.
B3C	8	SNA C	Mt Burke Station	Woodland dominated by halls totara ( <i>Podocarpus cunninghamii</i> ) and mountain toatoa ( <i>Phyllocladus alpinus</i> ).
B11A	4	SNA A Sites 1 to 2 Estuary Burn	Minaret Station	Kanuka woodland with a minor component of matagouri and mingimingi.
B11C	4	SNA C Sites 1 to 6 Bay Burn	Minaret Station	Kanuka dominated woodland with a minor component of matagouri and mingimingi and regenerating broadleaved species.
B11D	4, 7	SNA D Minaret Burn	Minaret Station	Shrubland mosaic consisting of manuka/kanuka woodland and broadleaved indigenous hardwoods and beech forest.
B11F	4	SNA F Minaret Bay Riparian	Minaret Station	Indigenous broadleaved hardwoods.
B15A	4, 5	SNA A Sites 1 to 3 Mt Albert Burn & Craigie Burn Kanuka Woodlands	Mt Albert Station	Lakeshore fan communities - dense kanuka forest on flat river fans where the Craigie Burn and Albert Burn flow into the lake. The wet flats on the north side of the Albert Burn contain an excellent population of <i>Olearia lineata</i> growing along a small stream.
B15B	2, 5	SNA B Sites 1 to 5 Lake face shrublands and forest	Mt Albert Station	Beech forest remnants in several gullies and spreading onto some adjacent rolling country and generally surrounded by regenerating manuka shrubland.

Identifier	Map Number	SNA Site Name	Property or location Reference	Description/Dominant Indigenous Vegetation
B16A	8	SNA A Long Valley Creek	Glen Dene Station	Shrubland mosaic consisting of manuka woodland, broadleaved indigenous hardwoods and beech forest.
B16B	5	SNA B Sites 1 to 3 Lake Wanaka Shrublands	Glen Dene Station	Shrubland mosaic consisting of manuka woodland, broadleaved indigenous hardwoods and beech forest.
C14A	13, 13a	SNA A Sites 1 to 5 Remarkables Face SNA	Remarkables Station	Remnant broadleaf forest forming a buffer to Wye Creek and a good representation of sub-alpine shrubland occurring on several of the south faces of the steep spurs descending from the west faces of the Remarkables, as well as remnant totara logs.
C24A	13	SNA A Wye Creek SNA	Lake Wakatipu Station	Shrubland dominated by bracken fern and <i>Pittosporum tenuifolium</i> , but also including tutu, <i>Coprosma propinqua</i> , <i>Griselinia littoralis</i> , manuka, <i>Hebe salicifolia</i> , matagouri, mistletoe sp., <i>Carmichaelia</i> sp., and <i>Cordyline australis</i> .
D1A	13	SNA A	Loche Linnhe Station	Grey shrubland consisting of <i>Olearia odorata</i> , <i>Olearia fimbriata</i> , <i>Discaria toumatou</i> , <i>Coprosma propinqua</i> , <i>Coprosma rugosa</i> , <i>Melicytus alpinus</i> , <i>Muehlenbeckia complexa</i> , and <i>Rubus schmidelioides</i> .
D1B	13	SNA B Sites 1 to 3	Loche Linnhe Station	Forest and shrubland consisting of <i>Griselinia littoralis</i> , <i>Aristotelia serrata</i> , <i>Olearia arborescens</i> , <i>Metrosideros umbellata</i> , <i>Carpodetus serratus</i> , <i>Fuschia excorticata</i> , <i>Sophora microphylla</i> , <i>Pittosporum tenuifolium</i> , <i>Pseudopanax crassifolium</i> and <i>Coriaria arborea</i> .
D1C	15	SNA C	Loche Linnhe Station	Beech forest dominated by mountain beech ( <i>Nothofagus solandri. cliffortoides</i> ) with occasional mature red beech ( <i>Nothofagus fusca</i> ), located above the highway.
D1D	15	SNA D	Loche Linnhe Station	Grey shrubland and pasture grassland. Species recorded include tree daisies ( <i>Olearia odorata</i> , <i>Olearia fimbriata</i> ), matagouri, <i>Coprosma propinqua</i> , briar and <i>Melicytus alpinus</i> .
D1E	15	SNA E	Loche Linnhe Station	Beech forest dominated by mountain beech ( <i>Nothofagus solandri. cliffortoides</i> ), with occasional mature red beech ( <i>Nothofagus fusca</i> ).
D4A	15	SNA A Halfway Bay Lake Shore	Lake Wakatipu Station	Red and mountain beech forest in gullies, broadleaf lakeshore forest (including kowhai, broadleaf, occasional southern rata, <i>Olearia</i> species and <i>Coprosma</i> species) and regenerating broadleaf forest, shrubland, bracken fernland, occasional gorse and wild conifers.
D5A	13, 13b	SNA A Sites 1 to 7 Lakeshore Gullies	Cecil Peak Station	Beech forest, shrubland, bracken fernland and pasture grasses.
D6A	12, 13	SNA A McKinlays Creek	Walter Peak Station/Cecil Peak Station	Mountain beech forest with remnant and regenerating shrubland on steep, rocky slopes and exotic grassland that follows along a vehicle track.
D6B	14	SNA B Von – White Burn	Walter Peak Station	A series of extensive ponds and bogs with red tussock merging into dryland hard tussockland.

Identifier	Map Number	SNA Site Name	Property or location Reference	Description/Dominant Indigenous Vegetation
D7A	12, 14	SNA A Sites 1 to 2 North Von, Lower Wetlands	Mt Nicholas Station/Walter Peak Station	Lacustrine wetland, swamp, marshland and bog.
D7B	12, 14	SNA B North Von, Central Wetlands	Mt Nicholas Station	Palustrine wetlands and sub alpine bogs.
D7C	12	SNA C Sites 1 to 3 North Von, Upper Wetlands	Mt Nicholas Station	Cushion bog, sedgeland, rushland and turf communities containing plants typical of these communities.
D7D	14	SNA D North Von Lower Wetlands	Mt Nicholas Station	A kettle lake, kettle holes and adjacent wetlands and ephemeral wetlands.
E18B	8, 18	SNA B	Watkins Rd, Hawea Flat	Mosaic of short tussock grassland, cushionfields and herbfields.
E18C	8, 18	SNA C	Mt Iron	Kanuka woodland.
E18D	8, 18	SNA D Sites 1 to 2	Mt Iron	Kanuka woodland.
E18G	8	SNA G	Wanaka-Luggate Hwy, Upper Clutha River	Kanuka woodland with some small areas of short tussock grassland dominated by introduced grasses.
E18H	8, 18	SNA H	Mt Iron	Kanuka woodland.
E19A	8	SNA A	Glenfoyle Station	Kanuka woodland.
E19B	8, 11	SNA B	Glenfoyle Station	Kanuka woodland, dominated by kanuka but also including a more diverse plant assemblage in the gully bottoms including matagouri, Coprosma propinqua and tree daisys (Olearia sp.).
E19C	8, 11	SNA C	Glenfoyle Station	Kanuka woodland.
E30A	8, 11, 11a	SNA A Dead Horse Creek	Lake McKay Station	Kanuka woodland dominated by kanuka, but also includes shrubland species such as matagouri, native broom, Coprosma propinqua and mature stands of Olearia lineata.
E30B	8, 11	SNA B Sites 1 to 4 Tin Hut Creek	Lake McKay Station	Kanuka woodland dominated by kanuka but also includes other shrubland species such as matagouri, native broom, and Coprosma propinqua.
E30C	11	SNA C Alice Burn Tributary	Lake McKay Station	Grey shrubland, which includes significant populations of Olearia lineata.
E30D	8, 11, 18a	SNA D Luggate Creek	Lake McKay Station	Kanuka woodland dominated by kanuka but also includes other shrubland species such as matagouri, native broom, and Coprosma propinqua.
E30E	8, 11	SNA E Sites 1 to 2 Lake McKay	Lake McKay Station	Kanuka woodland dominated by kanuka but also includes other shrubland species such as matagouri, native broom, and Coprosma propinqua.
E30F	8, 11	SNA F Alice Burn	Lake McKay Station	Kanuka woodland dominated by kanuka but also includes other shrubland species such as matagouri, native broom, and Coprosma propinqua.
E35A	8, 11	Sites 1 to 11 Sheepskin Creek	Luggate-Cromwell Road, Upper Clutha.	Diverse kanuka, and mixed kanuka/mingimingi-matagouri, scrub/shrubland communities in mid to lower reaches of the Sheepskin Creek catchment with intervening areas of pasture.



Identifier	Map Number	SNA Site Name	Property or location Reference	Description/Dominant Indigenous Vegetation
E37A	8, 11	SNA A	Kane Road – Hawea Back Road, Hawea Flat	Grey shrubland on rocky outcrop, including <i>Coprosma intertexta</i> , <i>Coprosma propinqua</i> , <i>Coprosma tayloriae</i> , <i>Coprosma rigida</i> , <i>Coprosma crassifolius</i> , <i>Carmichaelia petriei</i> , <i>Melicytus alpinus</i> , <i>Discaria toumatou</i> , <i>Pteridium esculentum</i> , <i>Muehlenbeckia complexa</i> and <i>Cordyline australis</i> .
E38A	8, 18a	SNA A Sites 1 to 5	Stevensons Road, Clutha River	Cushion fields (including <i>Pimelea sericeovillosa</i> subsp. <i>pulvinaris</i> ) and kanuka stands.
E39A	8, 18, 24b	SNA A	Dublin Bay Road, Albert Town, Wanaka.	Short tussock grassland and cushion field.
E44A	8	SNA A Sites 1 to 2	Te Awa Road Hawea River	Hard tussock grassland with shrubland species, including kanuka, <i>Ozothamnus leptophyllus</i> and matagouri.
E45A	8	SNA A Sites 1 to 2	Te Awa Road Hawea River	Kanuka stands with other native species interspersed including <i>Coprosma propinqua</i> , <i>Ozothamnus leptophyllus</i> , matagouri and stands of bracken fern.
F2A	10	SNA A	Branch Creek, Cardrona Valley	Shrubland including <i>Dracophyllum longifolium</i> , <i>Dracophyllum uniflorum</i> , <i>Olearia avicennifolia</i> , <i>Olearia arborens</i> , <i>Olearia nummularifolia</i> , <i>Olearia odorata</i> , and <i>Coprosma propinqua</i> , with a small pocket of silver beech forest.
F2B	10	SNA B Sites 1 to 3	Branch Creek, Cardrona Valley	Shrubland consisting of matagouri, <i>Olearia odorata</i> , <i>Olearia bullata</i> , <i>Aristotelia fruiticosa</i> , <i>Coprosma propinqua</i> , <i>Coprosma tayloriae</i> , <i>Carmichaelia petriei</i> , sweet briar, elderberry, <i>Melicytus alpinus</i> , <i>Rubus schmidelioides</i> and <i>Meuhlenbeckia australis</i> .
F2C	10	SNA C Sites 1 to 2	Branch Creek, Cardrona Valley	Shrubland consisting of matagouri, <i>Olearia odorata</i> , <i>Olearia bullata</i> , <i>Aristotelia fruiticosa</i> , <i>Coprosma propinqua</i> , <i>Carmichaelia petriei</i> , sweet briar, elderberry, <i>Melicytus alpinus</i> , <i>Rubus schmidelioides</i> and <i>Meuhlenbeckia australis</i> .
F2D	10	SNA D	Branch Creek, Cardrona Valley	Shrubland consisting of matagouri, <i>Olearia odorata</i> , <i>Olearia bullata</i> , <i>Aristotelia fruiticosa</i> , <i>Coprosma propinqua</i> , <i>Coprosma tayloriae</i> , <i>Carmichaelia petriei</i> , sweet briar, elderberry, <i>Melicytus alpinus</i> , <i>Rubus schmidelioides</i> and <i>Meuhlenbeckia australis</i> .
F21A	10	SNA A	Hillend Station, Wanaka	<i>Coprosma</i> -matagouri- <i>Olearia</i> shrubland with some elder and briar and a small pocket of silver beech forest.
F21B	10	SNA B Sites 1 to 3	Hillend Station, Wanaka	Shrubland including matagouri, <i>Coprosma propinqua</i> , kanuka – manuka, <i>Olearia odorata</i> , briar and elder.
F21C	10	SNA C Sites 1 to 2	Hillend Station, Wanaka	Beech forest fragments with extensive areas of regenerating shrubland.
F22A	10	SNA A Sites 1 to 2 Back Creek	Back Creek, Cardrona Valley.	Grey shrubland dominated by <i>Olearia odorata</i> , <i>Coprosma propinqua</i> and matagouri.
F26A	10	SNA A	Avalon Station, Cardrona Valley	Grey shrubland including <i>Coprosma propinqua</i> , matagouri, <i>Olearia odorata</i> and briar.

Identifier	Map Number	SNA Site Name	Property or location Reference	Description/Dominant Indigenous Vegetation
F26B	10	SNA B	Avalon Station, Cardrona Valley	Grey shrubland including <i>Olearia</i> spp., <i>Coprosma propinqua</i> , <i>matagouri</i> and <i>Corokia cotoneaster</i> .
F26C	10	SNA C Sites 1 to 3	Avalon Station, Cardrona Valley	Grey shrubland including <i>Olearia lineata</i> , <i>Coprosma propinqua</i> , <i>matagouri</i> , <i>Hebe salicifolia</i> and <i>Carmichaelia kirkii</i> .
F31A	13, 15a	SNA A Kawarau Faces	Waitiri Station, Kawarau Gorge.	Shrubland heavily dominated by <i>matagouri</i> and sweet briar but also includes <i>Coprosma propinqua</i> and to a lesser degree <i>Olearia odorata</i> .
F32A	13, 30	SNA A Sites 1 to 3 Owen Creek	Remarkables Range.	Grey shrubland dominated by <i>Olearia</i> species, <i>Coprosma propinqua</i> , <i>Discaria toumatou</i> , <i>Carmichaelia petriei</i> , <i>Melicytus alpinus</i> , <i>Rubus schmidelioides</i> and <i>Meuhlenbeckia</i> species.
F32B	13, 30	SNA B Rastus Burn	Remarkables Range.	Grey shrubland dominated by <i>Olearia</i> species, <i>Coprosma propinqua</i> , <i>Discaria toumatou</i> , <i>Carmichaelia petriei</i> , <i>Melicytus alpinus</i> , <i>Rubus schmidelioides</i> , and <i>Meuhlenbeckia</i> species.
F40A	13, 15a	SNA A	Gibbston Valley	Grey shrubland largely dominated by <i>matagouri</i> and <i>Coprosma propinqua</i> , but also includes populations of <i>Olearia</i> spp. and <i>Muehlenbeckia complexa</i> .
F40B	13, 15a	SNA B	Gibbston Valley	Grey shrubland including <i>Olearia odorata</i> , <i>Olearia lineata</i> , <i>Discaria toumatou</i> , <i>Coprosma propinqua</i> , <i>Melicytus alpinus</i> , <i>Muehlenbeckia complexa</i> , <i>Rubus schmidelioides</i> , <i>Carmichaelia petriei</i> , <i>Clematis quadribacteolata</i> and <i>Hebe salicifolia</i> .
F40C	13, 15a	SNA C	Gibbston Valley	Grey shrubland.
F40D	13, 15a	SNA D	Gibbston Valley	Grey shrubland dominated by <i>matagouri</i> and <i>kowhai</i> , but also includes <i>Coprosma propinqua</i> , <i>Melicytus alpinus</i> , <i>Coprosma crassifolia</i> and <i>Muehlenbeckia complexa</i> .
G28A	10, 26	SNA A Site 6	Coronet Peak (Bush Creek)	<i>Olearia odorata</i> – <i>matagouri</i> shrubland.
G28A	10, 26	SNA A Site 7	Coronet Peak (Bush Creek)	Mountain beech forest.
G33A	10	SNA A	Ben Lomond Station, Upper Shotover River	Mixed mingimingi– <i>matagouri</i> – <i>Olearia</i> spp. shrubland.
G33B	10	SNA B	Ben Lomond Station, Upper Shotover River	Mixed mingimingi– <i>matagouri</i> – <i>Olearia</i> spp. shrubland.
G33C	9	SNA C	Ben Lomond Station, Upper Shotover River	Extensive manuka scrub & shrubland community and mountain beech forest.
G34A	7	SNA A	Alpha Burn Station, West Wanaka	Kanuka, mingimingi– <i>matagouri</i> – <i>kohuhu</i> –broadleaf–manuka/bracken shrubland.
G34B	7	SNA B	Alpha Burn Station, West Wanaka	<i>Kohuhu</i> –broadleaf shrubland merging with mingimingi– <i>matagouri</i> /bracken shrubland.
G34C	7	SNA C	Alpha Burn Station, West Wanaka	Mixed broadleaf– <i>kohuhu</i> –mingimingi– <i>matagouri</i> –bracken shrubland.
G34D	7	SNA D	Alpha Burn Station, West Wanaka	Mixed beech forest, manuka forest, montane shrubland.

### 33.8.2 Significant Natural Areas (Operative District Plan)

Identifier	Map Number	SNA Site Name	Property or location Reference	Description/Dominant Indigenous Vegetation
2A	5	Hunter River Delta	G38 270 557	WERI: A braided river used for fishing and recreational boating activities. An important site for bird breeding.
16A	10	Caspar Flat Bush	E40 669 936	SSWI: An area with mountain beech. Bird species present include yellow breasted tit, rifleman, grey warbler and silvereye. Reasonable canopy but low plant diversity (natural for environment).
17A	10	Left Branch bush	E40 665 925	SSWI: An area of mountain beech, mountain toatoa, small leaf Coprosma and ferns. A very steep south facing habitat. Reasonable canopy but very little plant diversity (natural for environment). Bird species include yellow breasted tit, rifleman, silvereye and grey warbler. Some large slips.
18A	10	Butchers Gully Bush	E40 665 906	SSWI: An area with mountain beech and mountain toatoa. Bird species include grey warbler, rifleman and yellow breasted tit. A steep south facing habitat. Reasonable canopy but little plant diversity. Some slipping.
35A	9, 10	Mount Aurum Remnants	S123 520 930	SSWI: An area with mountain beech, situated in gullies and on southern faces. Reasonable canopy, but low plant diversity. Yellow breasted tit, rifleman and grey warbler present.
38A	12	Moke Lake	S132 470 738	WERI, SSWI: A steep montane lake surrounded by tussock farmland. Brown trout fishery.
40A	12	Lake Isobel	S132 406 807	WERI: A lake with restiad bog and tussock land (Chionochloa species).
41A	12	Lake Kirkpatrick	S132 477 704	WERI, SSWI: A sub-alpine lake with Carex bog and surrounded by tussock farmland. Common native water-fowl present. More important as trout fishery.
42A	12, 38	Few Creek Bush (includes 127)	S132 440 675	SSWI: A moderate sized plain beech forest (red beech, mountain beech) with common forest birds, including brown creeper, fantail, bellbird, rifleman, grey warbler and yellow breasted tit.
43A	12, 38	Twelve Mile Bush	S132 420 655	SSWI: Reasonable sized bush with more diversity than usual, with red beech, mountain beech, broadleaf shrubbery, bracken and tussock surrounds. Good range of common forest birds, including brown creeper, fantail, bellbird, rifleman, grey warbler and yellow breasted tit. Very good lakeshore diversity.
57A	31	Lake Johnson	F41 735 695	WERI, SSWI: An eutrophied lowland lake, rush and sedge swamp (Carex species - Cyperaceae).
69A	13	Shadow Basin Tarn	F41 798 639	Montane lake and montane flush surrounded by steep slopes of snow tussock, cushion vegetation and herb fields.
71A	13	Lake Alta (adjoins 70)	F41 801 632	WERI: A montane lake surrounded by steep snow tussock slopes with extensive cushion vegetation and herb fields.

Identifier	Map Number	SNA Site Name	Property or location Reference	Description/Dominant Indigenous Vegetation
72A	13	Upper Wye Lakes	F41 812 612	WERI: Four montane lakes surrounded by scree and snow tussock. Cushion vegetation and herb fields.
91A	5	Dingle Lagoon	G39 220 347	WERI SSWI: A lagoon with a sloping edge with good plant communities and populations of paradise shelduck, mallard, grey duck and Canada geese.
114A	6, 9	Mt Earnslaw Forest and Bush Remnants	E40	SSWI: A healthy area of bush with red beech, totara, mountain beech, Grisilinea, fuchsia, wineberry, Coprosma sp., hard fern. Good numbers of bush birds present, including yellow breasted tit, rifleman, bellbird, grey warbler and silvereye.
126A	32	Gorge Road Wetland	S132 555 720	Significant site of insects and plants (Carox soca).

## 33.9

## Threatened Environment Classification Maps

Threatened Environment Classification maps (as defined by Land Environments of New Zealand Level IV), identifying the acutely and chronically threatened environments with less than 20% indigenous cover remaining.

Note: The Council's webmap illustrates this information at a greater scale.























