

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, wetlands, lake and river margins. Indigenous biodiversity is also an important component of ecosystem services and the District's landscapes.

Indigenous biodiversity values can include, but are not limited to, a range of characteristics that can be used to understand the significance of indigenous vegetation or habitat, such as an area's representativeness, the relative rarity of species or ecosystems, the diversity or patterns contained within an ecosystem, the distinctiveness of an area, and its ecological context.

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). Under section 62(1)(h) and (i) of the Resource Management Act 1991, the Otago Regional Policy Statement specifies that Queenstown Lakes District Council has the role of controlling the use of land for the maintenance of indigenous biological diversity outside of the beds of lakes, rivers and wetlands. The Otago Regional Council has the role of controlling the use of land within the beds of lakes, rivers and wetlands for the purpose of maintenance of indigenous biological diversity. As such, none of the provisions in this chapter control the use of land within those waterbodies.

Such activities as 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. In addition, there are ski-field developments where vegetation clearance is already managed under separate legislation such as the Conservation Act or the Land Act.

The limited clearance 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 clearance of indigenous vegetation would have significant residual effects after avoiding, remedying or mitigating adverse effects, opportunities for biodiversity offsetting are encouraged.

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, or modified and the remnants may be vulnerable and important to retain. These areas are identified in the Threatened Environment Classification (TEC) version 2012 as having less than 20% indigenous vegetation remaining.

The Council will continue to work with landowners as part of its responsibilities to maintain indigenous biodiversity in the District. This includes non-regulatory approaches sitting outside of the District Plan, such as guidelines for implementing the provisions of Chapter 33, indigenous biodiversity management, as well as consideration of financial incentives, enhancement projects, and other

funding and setting of fees. to be determined through long-term planning processes and annual plans under the Local Government Act 2002, as appropriate.

33.2 Objectives and Policies

33.2.1 Objective – The District’s indigenous biodiversity is protected, maintained or enhanced.

Policies

33.2.1.1 Identify and protect the District’s Significant Natural Areas and schedule them in the District Plan, including the ongoing identification and protection of Significant Natural Areas through resource consent applications, using the criteria set out in Policy 33.2.1.8.

33.2.1.2 Provide standards in the District Plan for indigenous vegetation that is not identified as a Significant Natural Area, which are practical to apply and that permit the clearance of a limited area of indigenous vegetation in specified circumstances.

33.2.1.3 Have regard to and take into account kaitiakitanga and the values of indigenous vegetation, taonga species and habitats. and biodiversity to tangata whenua.

33.2.1.4 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 covenants administered under the Queen Elizabeth II National Trust Act 1977, Reserves Act, or Conservation Act and other protective mechanisms.

33.2.1.5 Undertake activities involving the clearance of indigenous vegetation in a manner that ensures the District’s indigenous biodiversity is protected, maintained or enhanced.

- 33.2.1.6 a. Manage the adverse effects of activities on indigenous biodiversity by:
- i. avoiding adverse effects as far as practicable;
 - ii. requiring remediation where adverse effects cannot be avoided;
 - iii. requiring mitigation where adverse effects on the areas identified above cannot be avoided or remediated;
 - iv. requiring any residual adverse effects on significant indigenous vegetation or indigenous fauna to be offset through protection, restoration and enhancement actions that achieve no net loss and preferably have a net gain in indigenous biodiversity values, having particular regard to:
 - A. limits to biodiversity offsetting due to the affected biodiversity being irreplaceable or vulnerable;
 - B. the ability of a proposed offset to demonstrate it can achieve no net loss or preferably a net gain;
 - C. Schedule 33.10 – Framework for the use of Biodiversity Offsets;
 - v. enabling any residual adverse effects on other indigenous vegetation or indigenous fauna to be offset through protection, restoration and enhancement actions that achieve no net loss and preferably a net gain in indigenous biodiversity values having particular regard to:

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- A. the ability of a proposed offset to demonstrate it can achieve no net loss or preferably a net gain;
- B. Schedule 33.10 – Framework for the use of Biodiversity Offsets.

b. This policy does not apply to proposals for the upgrading or development of the National Grid (refer to Policy 30.2.8.2A)

33.2.1.7 Protect the habitats of indigenous fauna, and in particular, birds in wetlands, beds of rivers and lakes and their margins for breeding, roosting, feeding and migration.

33.2.1.8 Determine the significance of areas of indigenous vegetation and habitats of indigenous fauna 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, including degraded examples if they are some of the last examples remaining;

OR

b. Rarity

Whether the area supports;

- i. indigenous vegetation and habitats within originally rare ecosystems;
- ii. indigenous species that are threatened, at risk, uncommon, nationally or within the ecological district;
- iii. 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;

OR

c. Diversity and Pattern

Whether the area supports a highly diverse assemblage of indigenous vegetation and habitat types, and whether these have a high indigenous biodiversity value including:

- i. indigenous taxa;
- ii. ecological changes over gradients;

OR

d. Distinctiveness

Whether the area supports or provides habitats for indigenous species:

- i. at their distributional limit within Otago or nationally;
- ii. are endemic to the Otago region;
- iii. are distinctive, of restricted occurrence or have developed as a result of unique environmental factors;

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OR

e. Ecological Context

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

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

33.2.1.9 Recognise opportunities for subdivision, use and development to enhance biodiversity values.

33.2.1.10 Facilitate and support restoration of degraded natural ecosystems and indigenous habitats using indigenous species that naturally occur and/ or previously occurred in the area.

33.2.2 Objective – Significant Natural Areas are protected, maintained and enhanced.

Policies

- 33.2.2.1 a. Protect and enhance indigenous vegetation within scheduled Significant Natural Areas, and those other areas that meet the criteria in Policy 33.2.1.8, by ensuring:
- i. indigenous biodiversity values that contribute to its significance are not reduced; and
 - ii. significant adverse effects on other values of the area or habitat are avoided.
- b. This policy does not apply to proposals for the upgrading or development of the National Grid (refer to Policy 30.2.8.2A).

33.2.2.2 Allow the clearance of indigenous vegetation within Significant Natural Areas only where clearance is undertaken in a manner that retains the indigenous biodiversity values that contribute to the significance of the Significant Natural Area.

33.2.2.3 Provide for small scale, low impact indigenous vegetation clearance to enable the maintenance of existing fences and tracks in recognition that the majority of Significant Natural Areas are located within land used for rural activities.

33.2.2.4 Recognise and encourage opportunities to protect and enhance the values of Significant Natural Areas.

33.2.2.5 Recognise the benefits of enabling access to Significant Natural Areas while maintaining, protecting or enhancing the values that contribute to their significance.

33.2.3 Objective - Land use and development maintains indigenous biodiversity values

Policies

33.2.3.1 Ensure the clearance of indigenous vegetation within the margins of water bodies does not reduce natural character and indigenous biodiversity values, or create erosion.

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33.2.3.2 Encourage opportunities to address adverse effects through the retention, rehabilitation or protection of the same indigenous vegetation community elsewhere on the site, subject to Policy 33.2.1.6(d) and (e).

33.2.3.3 Encourage the retention and enhancement of indigenous vegetation including in locations that have potential for regeneration, or provide stability, or connectivity and particularly where productive values are low, or in riparian areas or gullies.

33.2.4 **Objective – Indigenous biodiversity and landscape values of alpine environments are protected from the effects of vegetation clearance and exotic tree and shrub planting.**

Policies

33.2.4.1 Protect the alpine environments from vegetation clearance as those environments contribute to the distinct indigenous biodiversity and landscape qualities of the District and are vulnerable to change.

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.

| | | |
|---|----------------------|----------------------------------|
| 1 Introduction | 2 Definitions | 3 Strategic Direction |
| 4 urban Development | 5 Tangata Whenua | 6 Landscapes and Rural Character |
| 25 Earthworks | 26 Historic Heritage | 27 Subdivision |
| 28 Natural Hazards | 29 Transport | 30 Energy and utilities |
| 31 Signs | 32 Protected Trees | 34 Wilding Exotic Trees |
| 35 Temporary Activities and Relocated Buildings | 36 Noise | 37 Designations |
| District Plan web mapping application | | |

33.3.2 Interpreting and Applying the Rules

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 applies.

33.3.2.3 Unless otherwise stated in the District Plan, the rules in Chapter 33 apply to all parts of the District, including formed and unformed roads, whether zoned or not.

33.3.2.4 The following abbreviations are used in the tables. Any activity that is not permitted (P) or prohibited (PR) requires resource consent.

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| | | | |
|----|--------------------------|----|---------------|
| P | Permitted | C | Controlled |
| RD | Restricted Discretionary | D | Discretionary |
| NC | Non Complying | PR | Prohibited |

33.3.2.5 The permitted activities in Table 1 are subject to Tables 2 to 4, unless otherwise specified.

33.3.3 Rules: Application of the indigenous vegetation rules

33.3.3.1 The clearance thresholds (in m²) contained in Tables 1 - 4 apply cumulatively over any period of 5 consecutive years. To assess compliance with these rules, the area proposed to be cleared on the site must be added to any area cleared within the past 5 years.

33.3.3.2 In a Significant Natural Area all clearance is subject to Rules 33.5.4 and 33.5.5.

Advice Notes

Refer to the District Plan web mapping application and section 33.9 for the Schedule of Significant Natural Areas.

33.3.4 Rules: Exemptions

33.3.4.1 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.

33.3.4.2 Clearance of indigenous trees that have been wind thrown and/or are dead standing as a result of natural causes and have become dangerous to life or property.

33.3.4.3 Tables 1 and 2 do not apply to the clearance of any tree within any urban environment allotment.

33.3.4.4 The rules in Tables 1 and 2 do not apply to the clearance necessary for the removal of any species listed in rule 34.4.2 or the removal of pest plants identified in the regional pest management plan or the Biosecurity Act 1993.

33.4 Rules – Clearance of Indigenous Vegetation

| Table 1 | Any activity involving: the clearance of indigenous vegetation within the District; earthworks and exotic vegetation clearance within SNAs identified in schedule 33.9: and the planting of exotic plant species in SNAs identified in schedule 33.9 and Alpine Environments, shall be subject to the following rules: | Activity Status |
|----------------|---|------------------------|
| 33.4.1 | Any activity other than those listed below that does not breach any of the Standards in Tables 2 to 4. | P |
| 33.4.2 | 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 trees greater than a height of 4 metres. Except for rules 33.5.3(a), 33.5.3(d), 33.5.3(e) and 33.5.3(i), Table 2 does not apply to this activity. | P |
| 33.4.3 | Indigenous vegetation clearance for the construction of walkways or trails up to 1.5 metres in width, outside any SNA scheduled in 33.9 and outside any Alpine Environment in Table 4, which does not involve the clearance of trees greater than 4 metres in height and which does not comply with Rules 33.5.3(d) 33.5.3(e) and 33.5.3(i) of Table 2. | C |

| Table 1 | Any activity involving: the clearance of indigenous vegetation within the District; earthworks and exotic vegetation clearance within SNAs identified in schedule 33.9: and the planting of exotic plant species in SNAs identified in schedule 33.9 and Alpine Environments, shall be subject to the following rules: | Activity Status |
|----------------|---|------------------------|
| | | |
| 33.4.5 | Clearance of areas of regenerating indigenous vegetation less than 15 years old, where the land was previously lawfully cleared of indigenous vegetation. Table 2 does not apply to this activity. | P |
| 33.4.6 | Clearance of areas of voluntarily planted indigenous vegetation less than 15 years old, where the land was previously lawfully cleared of indigenous vegetation. Table 2 does not apply to this activity. | P |
| 33.4.6A | Clearance of indigenous vegetation associated Ski Area Activities within a Ski Area Sub-Zone, located within the Alpine Environment above 1070 masl. | RD |
| 33.4.7 | Any clearance of vegetation with in 20m of the bed of a water body, riverbed or wetland (including ephemeral or seepage wetland). ¹ | D |

¹ The regional council has function of controlling the use of land for the purpose of maintenance of indigenous biodiversity within the beds of lakes, rivers and wetlands.

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33.5 Rules - Standards for Permitted Activities

| Table 2 | Clearance of indigenous vegetation not located within a Significant Natural Area identified within Schedule 33.9 or within Alpine Environments: | Non-Compliance |
|---------|--|----------------|
| 33.5.1 | For indigenous vegetation clearance that is not addressed by Rules 33.5.2 - 33.5.4, the clearance of indigenous vegetation older than 15 years must not exceed 20,000m ² in any continuous period of 5 years. | RD |
| 33.5.2 | The clearance of indigenous vegetation must not exceed 500m ² in any continuous period of five years in Land environments with less than 20% remaining indigenous vegetation cover as defined by Threatened Environment Classification (TEC) version 2012 (refer to section 33.11). | RD |

| Table 2 | Clearance of indigenous vegetation not located within a Significant Natural Area identified within Schedule 33.9 or within Alpine Environments: | Non-Compliance |
|---------|---|----------------|
| 33.5.3 | <p>The clearance of indigenous vegetation (including cultivation or irrigation) in the following locations must not exceed a total of 50m² in any continuous period of 5 years in the following locations:</p> <ul style="list-style-type: none"> a. On land that has not been cultivated or irrigated in the previous 20 years on plains, terraces and valley floors, including short tussock grassland, cushionfields or shrublands; or b. Indigenous forest or regenerating forest greater than 3 metres high; or c. Shrubland containing emergent indigenous trees greater than 3 metres high; or d. Matagouri (<i>Discaria toumatou</i>) shrubland that has a canopy of at least 1.5 metres high; or e. Diverse indigenous shrubland, where 'diverse' means three or more species of indigenous shrub or vine; or f. Indigenous vegetation containing any one of: matai (<i>Prumnopitys taxifolia</i>), kahikatea (<i>Dacrycarpus dacrydioides</i>), weeping mapou (<i>Myrsine divaricata</i>), <i>Melicope simplex</i>, <i>Hebe rakaiensis</i>, <i>Corokia cotoneaster</i>, mountain ribbonwood (<i>Hoheria glabrata</i>), bog pine (<i>Halocarpus bidwillii</i>), celery pine (<i>Phyllocladus alpinus</i>), Hall's tōtara (<i>Podocarpus laetus</i>), kōwhai (<i>Sophora microphylla</i>), kānuka (<i>Kunzea spp.</i>), <i>Hebe cupressoides</i>, native brooms (<i>Carmichaelia spp.</i>), fierce lancewood (<i>Pseudopanax ferox</i>), <i>Coprosma virescens</i>, <i>Coprosma crassifolia</i>, <i>Pimelea aridula</i>, snow totara (<i>Podocarpus nivalis</i>), southern rata (<i>Metrosideros umbellata</i>), <i>Coprosma intertexta</i>, or any species of <i>Olearia</i>; or g. Copper tussock (<i>Chionochloa rubra subsp. cuprea</i>) grasslands; or h. Subalpine shrubland or mixed shrub and tussock above 750m metres asl; or i. Rocky habitats including rock outcrops and associated talus and boulderfield habitats. | RD |
| 33.5.4 | <p>The clearance of indigenous vegetation must not exceed 10,000m² in any continuous period of 5 years, in areas dominated by narrow leaved snow tussock (<i>Chionochloa rigida</i>).</p> | RD |

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| Table 3 | Activities within Significant Natural Areas identified in Schedule 33.9 and on the District Plan web mapping application: | Non-Compliance |
|---------------|---|----------------|
| 33.5.5 | <p>Earthworks must:</p> <p>33.5.5.1 be to enable the maintenance of existing fences and tracks; and</p> <p>33.5.5.2 be less than 50m² in any one hectare in any continuous period of 5 years; and</p> <p>33.5.5.3 not be undertaken on slopes with an angle greater than 20°.</p> | NC |
| 33.5.6 | The clearance of indigenous vegetation must not exceed 25m ² in area in any continuous period of 5 years. | NC |
| 33.5.7 | The clearance of exotic vegetation that is specified indigenous fauna habitat must not exceed 50m ² in area in any continuous period of 5 years. | NC |
| 33.5.8 | There must be no planting of any exotic species. | NC |

| Table 4 | Activities within Alpine Environments – land above 1070 metres above sea level: | Non-Compliance |
|---------------|---|----------------|
| 33.5.9 | <p>The following rules apply to any land that is higher than 1070 meters above sea level:</p> <p>33.5.9.1 indigenous vegetation must not be cleared;</p> <p>33.5.9.2 exotic species must not be planted.</p> <p>Except where indigenous vegetation clearance authorised by consent obtained under Rule 33.4.6A.</p> | D |
| | <p>Clarification: For the purpose of the clearance of indigenous vegetation by way of burning, the altitude limit of 1070 metres means the average maximum altitude of any land to be burnt, averaged over north and south facing slopes.</p> | |

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 Matters of control

For controlled activity 33.4.3, control is reserved to the following matters:

1. Location and scale of walkways or trails.

2. Construction methodology.
3. Measures to avoid remedy or mitigate adverse effects on biodiversity values and natural character.

33.8 Matters of discretion

For all restricted discretionary activities discretion shall be restricted to the following matters. These matters may also be applicable to any discretionary or non-complying activity:

1. The effects that the vegetation clearance will have on:
 - a. indigenous biodiversity values:
 - b. soil conservation, water quality and the hydrological function of the catchment:
 - c. landscape, natural features and natural character:
 - d. the amenity values of any adjacent open space including trails and walkways:
 - e. ecological corridors and linkages: and
 - f. cultural values associated with indigenous biodiversity.
2. The extent to which the vegetation removal is necessary taking into account the need for, or purpose of, the proposed activity;
3. The minimisation of effects through the adoption of alternative locations for the activity on the site for the proposed activity;
4. Proposals for remediation and mitigation of adverse effects, including through revegetation, restoration of other areas of vegetation and ongoing maintenance;
5. Proposals for biodiversity offsets for residual adverse effects as provided for by Policy 33.2.1.6;
6. The risk of the increase in weed and pest species, and proposed management of pests;
7. Benefits resulting from the proposed activity including the extent to which the activity may protect, maintain or enhance indigenous biodiversity values; and
8. Effects on kaitiakitanga and the values of indigenous vegetation, taonga species and habitats, and biodiversity to tangata whenua.

In addition to the above matters of discretion, for all restricted discretionary activities for clearance of indigenous vegetation associated with Ski Area Activities within a Ski Area Sub Zone, discretion shall also be restricted to the following matter:

9. The content of any Ecological Management Plan submitted with the application.

33.8A Information Requirements for Ecological Management Plans

An Ecological Management Plan (EMP) (noting this may not relate to the whole of the Ski Area Sub-Zone), shall include the following information:

- a. A description of the nature and scale of the indigenous vegetation clearance proposed;
- b. A description of the ecological values of any areas proposed to be disturbed (and the location of any sensitive areas), including any associated with trail development, terrain modification, buildings and passenger lift systems;

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- c. The expected timeframes and the duration of any works within the Ski Area Sub-Zone resulting in disturbance of indigenous vegetation and ecologically sensitive areas;
- d. A Construction Methodology Statement outlining
 - i. erosion and sediment controls.
 - ii. details of how ecologically sensitive areas will be avoided and kept free from disturbance during and after construction activities.
 - iii. details of how hydrological regimes of any wetlands including seepages and rushland bog environments will be maintained.
 - iv. details of mitigation and restoration including pest and weed management methods to manage planting or any relocation and temporary storage of relocated plants to encourage a high level of survival.
- e. Any other management plan or strategy requirements relevant to indigenous vegetation and habitats prepared under any other legislation that applies to the land, and the extent to which the EMP is consistent with those management plans;
- f. An on-going monitoring regime to report on the ecological effects of construction works and the performance of restoration works;
- g. A process for reviewing and updating the EMP on the basis of further information, greater knowledge of the environment and outcomes from monitoring.

33.9 Schedule of Significant Natural Areas

| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|--------------------------------------|--------------------------------|--|
| A10C | SNA C Mount Alfred Faces | Mt Earnslaw Station, glenorchy | Mixed beech forest, montane and sub-alpine shrubland and sub-alpine short tussock land. |
| A8A | SNA A Fan Creek Shrublands | Mt Creighton Station | Grey shrubland. Old matagouri with <i>Olearia odorata</i> , <i>Coprosma propinqua</i> , <i>Aristolelia fruticosa</i> , <i>Carmichaelia petriei</i> and briar. |
| A8B | 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 | SNA C Sites 1 to 9 Manuka Shrublands | Mt Creighton Station | Extensive shrublands of manuka. |
| A8D | SNA D Moke Creek Wetland | Mt Creighton Station | Wetland marsh. |
| A23A | SNA A | Closeburn | Shrubland dominated by manuka and <i>Coprosma propinqua</i> . |

| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|---|--------------------------------|--|
| B3A | 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 | 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 | SNA C | Mt Burke Station | Woodland dominated by halls totara (<i>Podocarpus cunninghamii</i>) and mountain toatoa (<i>Phyllocladus alpinus</i>). |
| B11A | SNA A Sites 1 to 2 Estuary Burn | Minaret Station | Kanuka woodland with a minor component of matagouri and mingimingi. |
| B11C | 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 | SNA D Minaret Burn | Minaret Station | Shrubland mosaic consisting of manuka/kanuka woodland and broadleaved indigenous hardwoods and beech forest. |
| B11F | SNA F Minaret Bay Riparian | Minaret Station | Indigenous broadleaved hardwoods. |
| B15A | 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 | 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. |
| B16A | SNA A Long Valley Creek | Glen Dene Station | Shrubland mosaic consisting of manuka woodland, broadleaved |

| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|---|--------------------------------|---|
| | | | indigenous hardwoods and beech forest. |
| B16B | SNA B Sites 1 to 3 Lake Wānaka Shrublands | Glen Dene Station | Shrubland mosaic consisting of manuka woodland, broadleaved indigenous hardwoods and beech forest. |
| C14A | 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 | 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 | 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 | 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 | 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. |

| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|--|---|--|
| D1D | SNA D | Loche Linnhe Station | Grey shrubland and pasture grassland. Species recorded include tree daisys (<i>Olearia odorata</i> , <i>Olearia fimbriata</i>), matagouri, <i>Coprosma propinqua</i> , briar and <i>Melicytus alpinus</i> . |
| D1E | 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 | 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 | SNA A Sites 1 to 7 Lakeshore gullies | Cecil Peak Station | Beech forest, shrubland, bracken fernland and pasture grasses. |
| D6A | 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 | SNA B Von – White Burn | Walter Peak Station | A series of extensive ponds and bogs with red tussock merging into dryland hard tussockland. |
| D7A | SNA A Sites 1 to 2 North Von, Lower Wetlands | Mt Nicholas Station/Walter Peak Station | Lacustrine wetland, swamp, marshland and bog. |
| D7B | SNA B North Von, Central Wetlands | Mt Nicholas Station | Palustrine wetlands and sub alpine bogs. |
| D7C | 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 | SNA D North Von Lower Wetlands | Mt Nicholas Station | A kettle lake, kettle holes and adjacent wetlands and ephemeral wetlands. |

| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|----------------------------------|--|---|
| E18B | SNA B | Watkins Rd, Hāwea Flat | Mosaic of short tussock grassland, cushionfields and herbfields. |
| E18C | SNA C | Mt Iron | Kanuka woodland. |
| E18D | SNA D Sites 1 to 2 | Mt Iron | Kanuka woodland. |
| E18G | SNA g | Wānaka-Luggate Hwy, upper Clutha River | Kanuka woodland with some small areas of short tussock grassland dominated by introduced grasses. |
| E18H | SNA H | Mt Iron | Kanuka woodland. |
| E19A | SNA A | Glenfoyle Station | Kanuka woodland. |
| E19B | 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 | SNA C | Glenfoyle Station | Kanuka woodland. |
| E30A | 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 | 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 | SNA C Alice Burn Tributary | Lake McKay Station | Grey shrubland, which includes significant populations of Olearia lineata. |
| E30D | 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. |

| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|-------------------------------|---|---|
| E30E | 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 | 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 | 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. |
| E37A | SNA A | Kane Road – Hāwea Back Road, Hāwea Flat | Grey shrubland on rocky outcrop, including Coprosma intertexta, Coprosma propinqua, Coprosma tayloriae, Coprosma rigida, Coprosma crassifolius, Carmichaelia petriei, Melicytus alpinus, Discaria toumatou, Pteridium esculentum, Muehlenbeckia complexa and Cordyline australis. |
| E38A | SNA A Sites 1 to 5 | Stevensons Road, Clutha River | Cushion fields (including Pimelea sericeovillosa subsp. pulvinaris) and kanuka stands. |
| E39A | SNA A | Dublin Bay Road, Albert Town, Wānaka. | Short tussock grassland and cushion field. |
| E44A | SNA A Sites 1 to 2 | Te Awa Road Hāwea River | Hard tussock grassland with shrubland species, including kanuka, Ozothamnus leptophyllus and matagouri. |
| E45A | SNA A Sites 1 to 2 | Te Awa Road Hāwea River | Kanuka stands with other native species interspersed including Coprosma propinqua, Ozothamnus leptophyllus, matagouri and stands of bracken fern. |

| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|-------------------------------|--------------------------------|---|
| F2A | 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 | 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 | 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 | 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 | SNA A | Hillend Station, Wānaka | <i>Coprosma</i> -matagouri- <i>Olearia</i> shrubland with some elder and briar and a small pocket of silver beech forest. |
| F21B | SNA B Sites 1 to 3 | Hillend Station, Wānaka | Shrubland including matagouri, <i>Coprosma propinqua</i> , kanuka – manuka, <i>Olearia odorata</i> , briar and elder. |
| F21C | SNA C Sites 1 to 2 | Hillend Station, Wānaka | Beech forest fragments with extensive areas of regenerating shrubland. |
| F22A | 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. |

| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|-------------------------------|---------------------------------|--|
| F26A | SNA A | Avalon Station, Cardrona Valley | Grey shrubland including Coprosma propinqua, matagouri, Olearia odorata and briar. |
| F26B | SNA B | Avalon Station, Cardrona Valley | Grey shrubland including Olearia spp., Coprosma propinqua, matagouri and Corokia cotoneaster. |
| F26C | SNA C Sites 1 to 3 | Avalon Station, Cardrona Valley | Grey shrubland including Olearia lineata, Coprosma propinqua, matagouri, Hebe salicifolia and Carmichaelia kirkii. |
| F31A | SNA A Kawarau Faces | Waitiri Station, Kawarau gorge. | Shrubland heavily dominated by matagouri and sweet briar but also includes Coprosma propinqua and to a lesser degree Olearia odorata. |
| F32A | SNA A Sites 1 to 3 Owen Creek | Remarkables Range. | Grey shrubland dominated by Olearia species, Coprosma propinqua, Discaria toumatou, Carmichaelia petriei, Melicytus alpinus, Rubus schmidelioides and Meuhlenbeckia species. |
| F32B | SNA B Rastus Burn | Remarkables Range. | Grey shrubland dominated by Olearia species, Coprosma propinqua, Discaria toumatou, Carmichaelia petriei, Melicytus alpinus, Rubus schmidelioides, and Meuhlenbeckia species. |
| F40A | SNA A | Gibbston Valley | Grey shrubland largely dominated by matagouri and Coprosma propinqua, but also includes populations of Olearia spp. and Muehlenbeckia complexa. |
| F40B | SNA B | Gibbston Valley | Grey shrubland including Olearia odorata, Olearia lineata, Discaria toumatou, Coprosma propinqua, Melicytus alpinus, Muehlenbeckia complexa, Rubus schmidelioides, Carmichaelia petriei, Clematis quadibracteolata and Hebe salicifolia. |
| F40C | SNA C | Gibbston Valley | Grey shrubland. |

| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|--------------------|--|---|
| F40D | SNA D | Gibbston Valley | Grey shrubland dominated by matagouri and kowhai, but also includes Coprosma propinqua, Melycitus alpinus, Coprosma crassifolia and Muehlenbeckia complexa. |
| G28A | SNA A Site 6 | Coronet Peak (Bush Creek) | Olearia odorata–matagouri shrubland. |
| G28A | SNA A Site 7 | Coronet Peak (Bush Creek) | Mountain beech forest. |
| G33A | SNA A | Ben Lomond Station, upper Shotover River | Mixed mingimingi–matagouri–Olearia spp. shrubland. |
| G33B | SNA B | Ben Lomond Station, upper Shotover River | Mixed mingimingi–matagouri–Olearia spp. shrubland. |
| G33C | SNA C | Ben Lomond Station, upper Shotover River | Extensive manuka scrub & shrubland community and mountain beech forest. |
| G34A | SNA A | Alpha Burn Station, West Wānaka | Kanuka, mingimingi-matagouri-kohuhu-broadleaf-manuka/bracken shrubland. |
| G34B | SNA B | Alpha Burn Station, West Wānaka | Kohuhu-broadleaf shrubland merging with mingimingi-matagouri/bracken shrubland. |
| G34C | SNA C | Alpha Burn Station, West Wānaka | Mixed broadleaf–kohuhu–mingimingi–matagouri–bracken shrubland. |
| G34D | SNA D | Alpha Burn Station, West Wānaka | Mixed beech forest, manuka forest, montane shrubland. |
| 2A | Hunter River Delta | g38 270 557 | WERI: A braided river used for fishing and recreational boating activities. An important site for bird breeding. |
| 16A | 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). |

| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|-------------------------------|--------------------------------|---|
| 17A | Left Branch bush | E40 665 925 | SSWI: An area of mountain beech, mountain toatoa, small leaf Coprosmas 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, silvereve and grey warbler. Some large slips. |
| 18A | 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 | 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 | Moke Lake | S132 470 738 | WERI, SSWI: A steep montane lake surrounded by tussock farmland. Brown trout fishery. |
| 40A | Lake Isobel | S132 406 807 | WERI: A lake with restiad bog and tussock land (Chionochloa species). |
| 41A | 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 | 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 | 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, |

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| Identifier | SNA Site Name | Property or location Reference | Description/Dominant Indigenous Vegetation |
|------------|--------------------------------------|--------------------------------|--|
| | | | grey warbler and yellow breasted tit. Very good lakeshore diversity. |
| 57A | Lake Johnson | F41 735 695 | WERI, SSWI: An eutrophied lowland lake, rush and sedge swamp (Carex species - Cyperaceae). |
| 69A | Shadow Basin Tarn | F41 798 639 | Montane lake and montane flush surrounded by steep slopes of snow tussock, cushion vegetation and herb fields. |
| 71A | Lake Alta (adjoins 70) | F41 801 632 | WERI: A montane lake surrounded by steep snow tussock slopes with extensive cushion vegetation and herb fields. |
| 72A | upper Wye Lakes | F41 812 612 | WERI: Four montane lakes surrounded by scree and snow tussock. Cushion vegetation and herb fields. |
| 91A | 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 | 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 | gorge Road Wetland | S132 555 720 | Significant site of insects and plants (Carox socta). |

33.10 Framework for the use of biodiversity offsets

The following sets out a framework for the use of biodiversity offsets. It should be read in conjunction with the NZ government guidance on good Practice Biodiversity Offsetting in New Zealand, August 2014:

- a. restoration, enhancement and protection actions will only be considered a biodiversity offset where they are used to offset the anticipated residual effects of activities after appropriate

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avoidance, minimisation, remediation and mitigation actions have occurred as per Policy 33.2.1.6, i.e. not in situations where they are used to mitigate the adverse effects of activities;

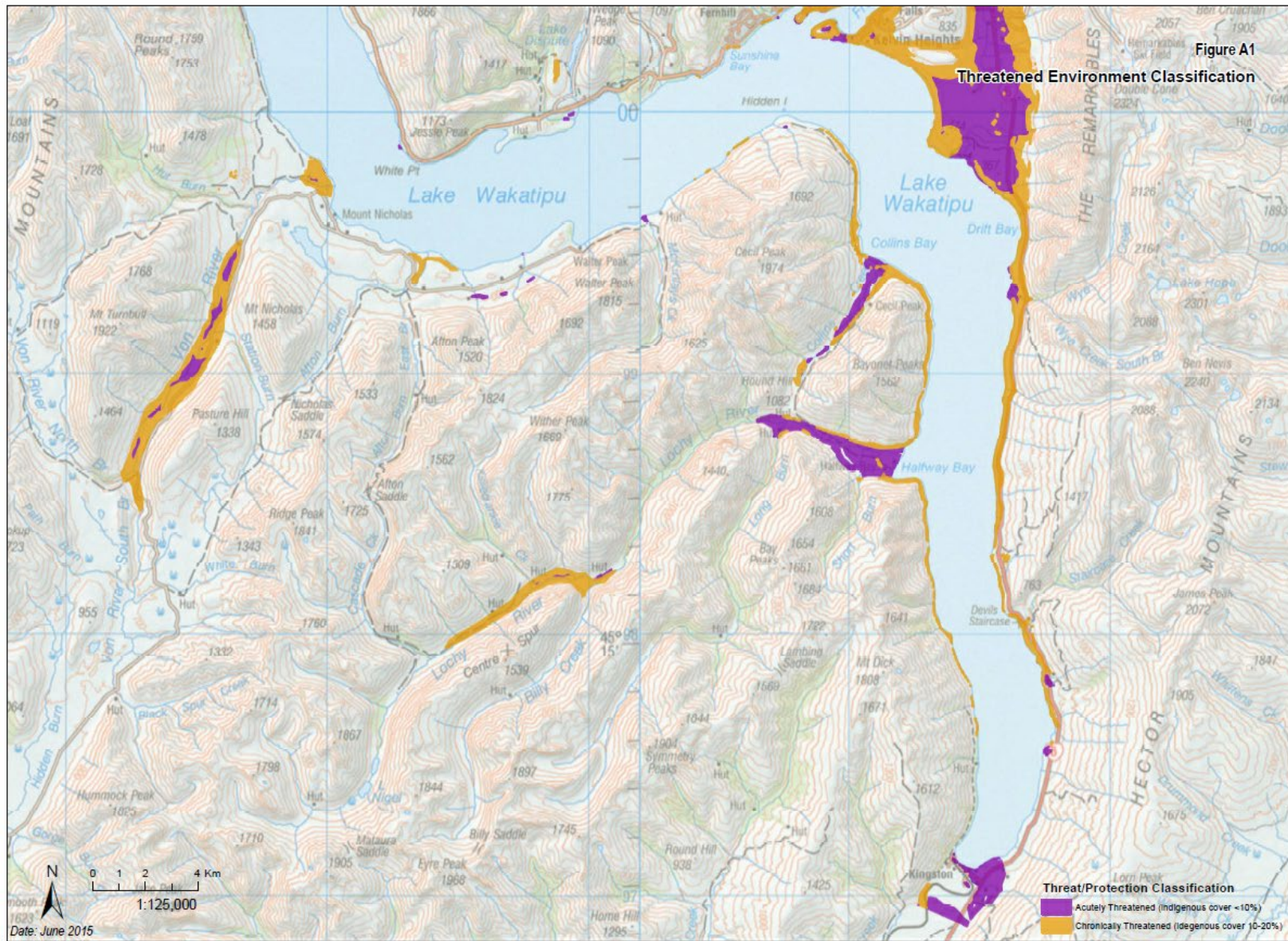
- b. a proposed biodiversity offset should contain an explicit loss and gain calculation and should demonstrate the manner in which no net loss or preferably a net gain in biodiversity can be achieved on the ground;
- c. a biodiversity offset should recognise the limits to offsets due to irreplaceable and vulnerable biodiversity and its design and implementation should include provisions for addressing sources of uncertainty and risk of failure of the delivery of no net loss;
- d. restoration, enhancement and protection actions undertaken as a biodiversity offset are demonstrably additional to what otherwise would occur, including that they are additional to any remediation or mitigation undertaken in relation to the adverse effects of the activity;
- e. offset actions should be undertaken close to the location of development, where this will result in the best ecological outcome;
- f. the values to be lost through the activity to which the offset applies are counterbalanced by the proposed offsetting activity which is at least commensurate with the adverse effects on indigenous biodiversity, so that the overall result is no net loss, and preferably a net gain in ecological values;
- g. the offset is applied so that the ecological values being achieved through the offset are the same or similar to those being lost;
- h. as far as practicable, the positive ecological outcomes of the offset last at least as long as the impact of the activity, and preferably in perpetuity. Adaptive management responses should be incorporated into the design of the offset, as required to ensure that the positive ecological outcomes are maintained over time;
- i. the biodiversity offset should be designed and implemented in a landscape context – i.e. with an understanding of both the donor and recipient sites role, or potential role in the ecological context of the area;
- j. the development application identifies the intention to utilise an offset, and includes a biodiversity offset management plan that:
 - i. sets out baseline information on indigenous biodiversity that is potentially impacted by the proposal at both the donor and recipient sites;
 - ii. demonstrates how the requirements set out in this appendix will be addressed;
 - iii. identifies the monitoring approach that will be used to demonstrate how the matters set out in this appendix have been addressed, over an appropriate timeframe.

(While this appendix sets out a framework for the use of biodiversity offsets in the Queenstown Lakes District Council District Plan, many of the concepts are also applicable to other forms of effects management where an overall outcome of no net loss and preferably a net gain in biodiversity values are not intended, but restoration and protection actions will be undertaken).

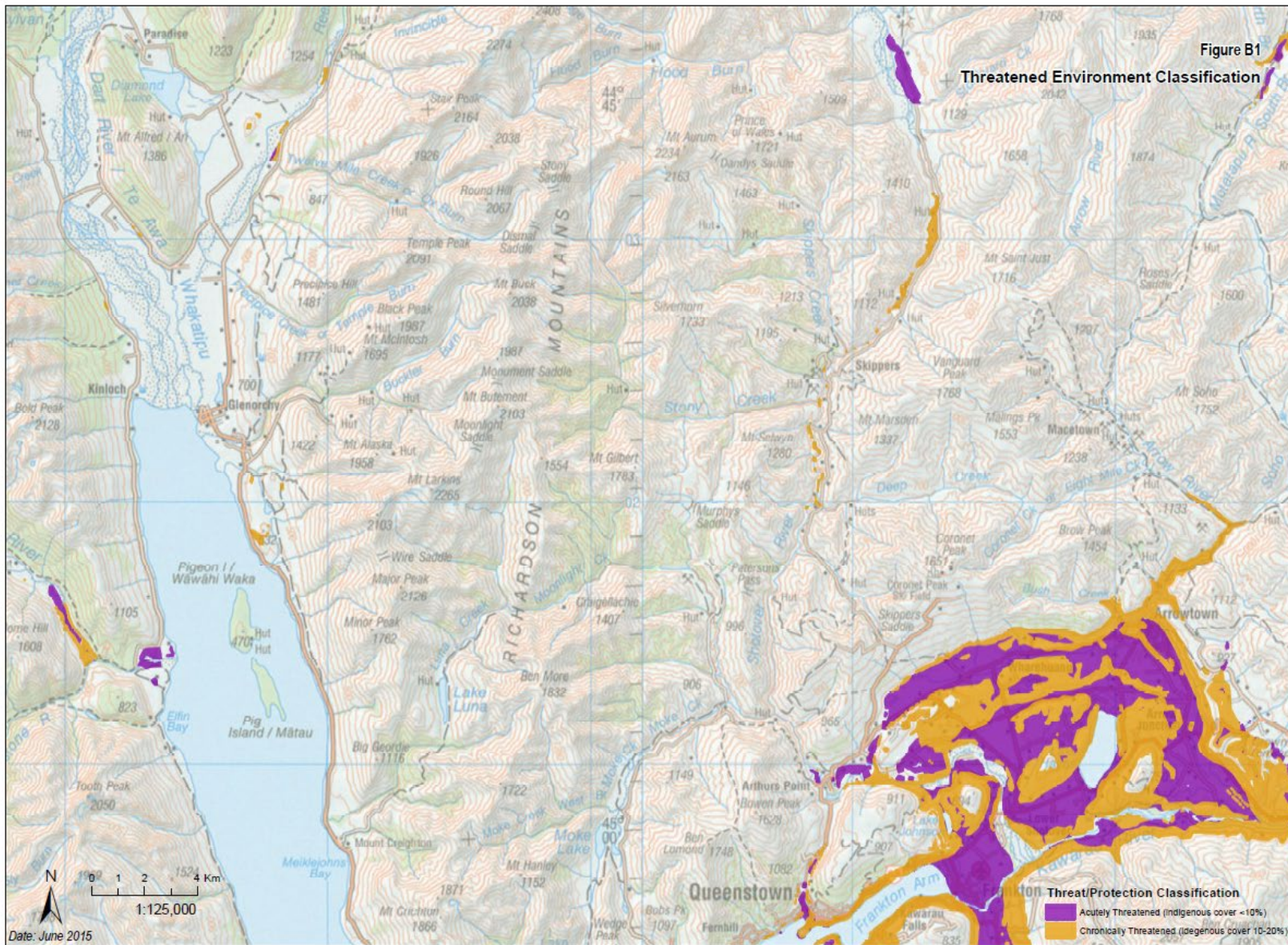
33.11 Threatened Environment Classification Maps

Threatened Environment Classification maps, identifying the acutely and chronically threatened environments with less than 20% indigenous cover remaining.

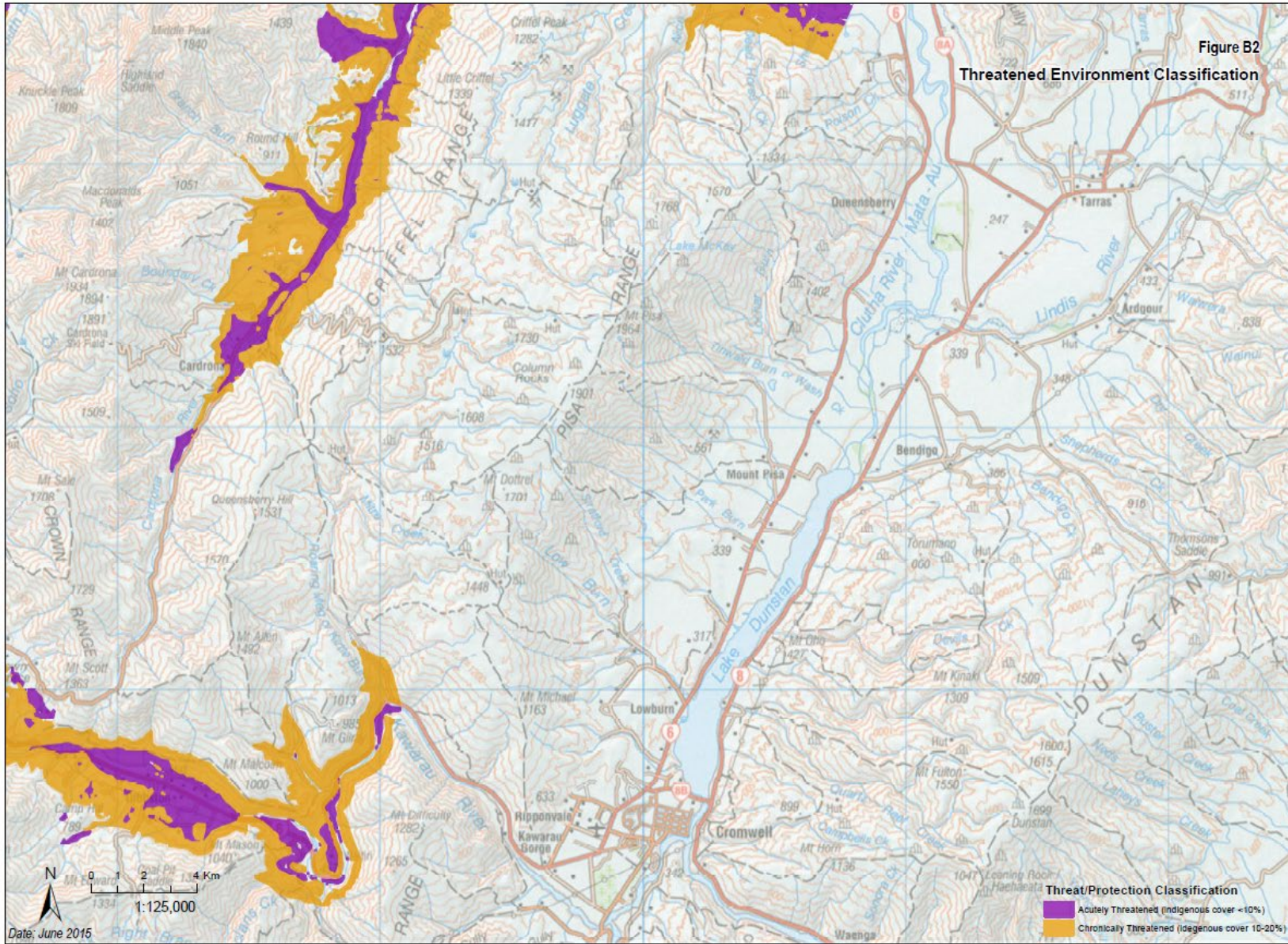
Note: The District Plan web mapping application illustrates this information at a greater scale.



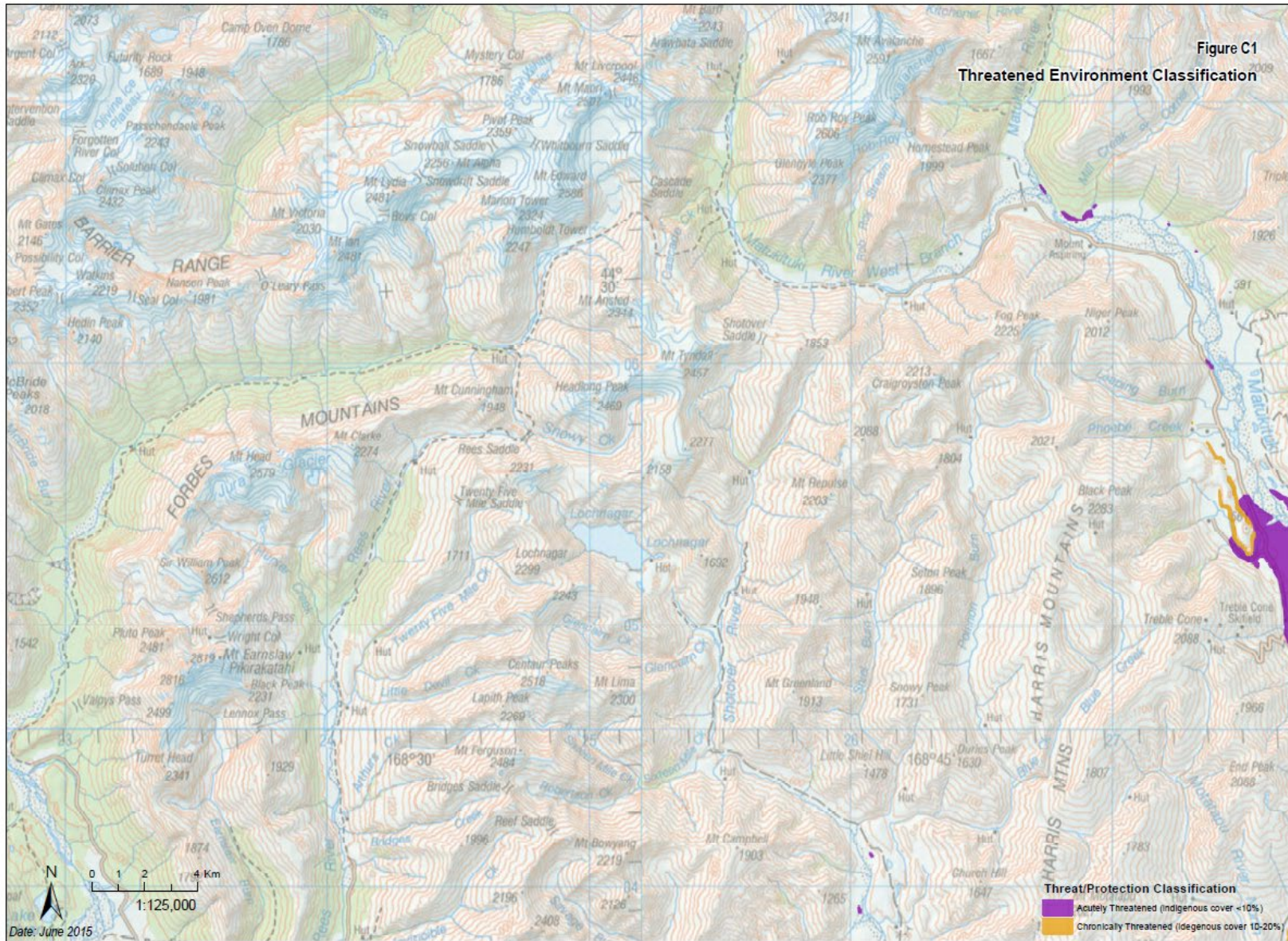
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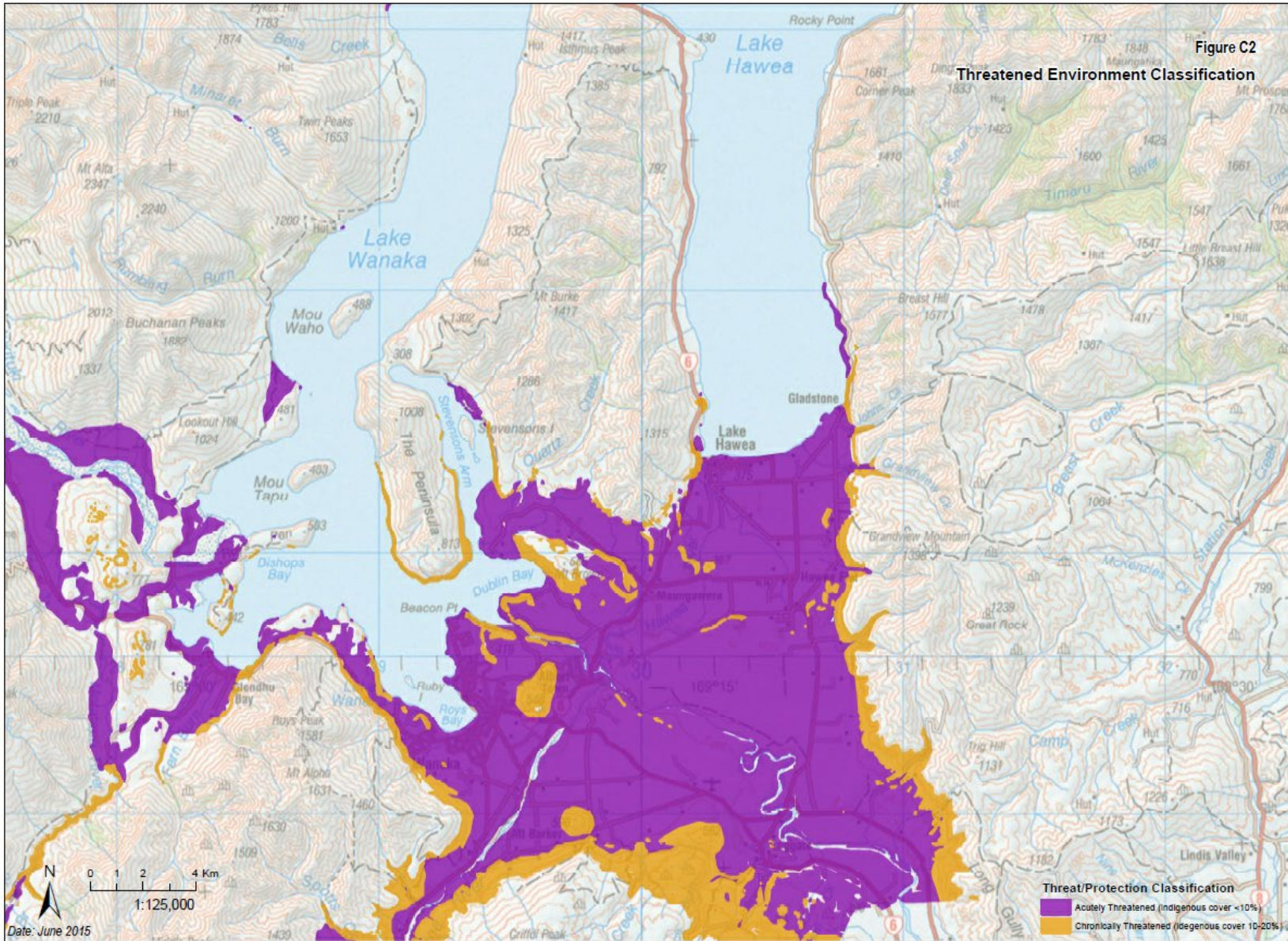


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