THIS SECTION HAS RULES THAT HAVE LEGAL EFFECT. PLEASE CHECK THE EPLAN TO SEE WHAT THE LEGAL EFFECT IS OR SUBJECT TO APPEAL.

## ECO - Pūnaha hauropi me te rerenga rauropi taketake - Ecosystems and indigenous biodiversity

#### Introduction

Indigenous biodiversity includes all plants and animals that occur naturally in New Zealand and have evolved or arrived without human assistance. It provides important ecosystem services, including resilience to climate change and natural hazards, shaping our local and cultural identity and has considerable intrinsic value to mana whenua and people of the District.

The diverse ecosystems of the District contain remnants of indigenous vegetation and habitats of indigenous fauna which were once widespread, but over time have been destroyed, fragmented and degraded by land use and pests. These remnants (SNAs)<sup>2</sup> have significant<sup>3</sup> biodiversity value, and areas that meet SNA criteria are determined to be ecologically significant<sup>4</sup> and are critical for preventing the extinction of rare species and loss of ecosystems.

The purpose of this chapter is to protect SNAs, and maintain indigenous biodiversity, as required under the RMA.

SNAs are areas of significant indigenous vegetation and/or significant habitat of indigenous fauna. They comprise two types:

Mapped SNAs Significant Natural Areas<sup>5</sup> – are areas of significant indigenous vegetation and/or significant habitat of indigenous fauna shown on the planning map and listed in ECO-SCHED1, or any other area of significant indigenous vegetation and or significant habitat of indigenous fauna<sup>6</sup> that meet one or more of the ecological significance criteria listed in ECO-APP1.

 Unmapped SNAs – are areas containing significant indigenous vegetation and/or significant habitat of indigenous fauna types listed in ECO-SCHED2 that occupy at least the specified minimum contiguous area, and are not mapped SNAs.<sup>7</sup>

This approach provides a resource consent pathway for both identified and unidentified areas of significant indigenous vegetation and/or significant habitat of indigenous fauna.

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<sup>&</sup>lt;sup>1</sup> Forest and Bird [192.40]. ECO s42A Report.

<sup>&</sup>lt;sup>2</sup> Judith Roper-Lindsay [120.3]. ECO s42A Report.

<sup>&</sup>lt;sup>3</sup> Judith Roper-Lindsay [120.3]. ECO s42A Report.

<sup>&</sup>lt;sup>4</sup> Judith Roper-Lindsay [120.3]. ECO s42A Report.

<sup>&</sup>lt;sup>5</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>6</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>7</sup> Federated Farmers [414.20], MainPower [249.41] Federated Farmers [414.123], DoC [419.92], CCC [360.18], Judith Roper-Lindsay [120.2 & 120.14], and ECan [316.108]. ECO s42A Report.

The provisions of this chapter also provide landowners the opportunity to gain bonus allotment or bonus residential unit development rights for the legal protection, physical protection and restoration of SNAs.<sup>8</sup>

The NES-CF regulates commercial forestry. Indigenous vegetation clearance associated with commercial forestry activities are managed under the NES-CF and are not subject to provisions in this chapter as there are no provisions more stringent than the NES-CF. The NES-CF allows District Plan's to be more stringent than the NES-CF for afforestation within SNAs and this is provided for in ECO-R7.9

This chapter gives effect to requirements of the NZCPS and NPS-FM that relate to terrestrial biodiversity.<sup>10</sup>

The provisions in this chapter are consistent with the matters in Part 2 - District Wide Matters - Strategic Directions and give effect to matters in Part 2 - District Wide Matters - Urban Form and Development<sup>11</sup>.

#### Other potentially relevant District Plan provisions

As well as the provisions in this chapter, other District Plan chapters that contain provisions that may also be relevant to ecosystems and indigenous biodiversity include:

- Appendix APP2: contains standards for creation of a bonus allotment and establishment of a bonus residential unit.
- General Rural Zone and Rural Lifestyle Zone: the underlying zones for SNAs, contains correlating provisions relating to bonus allotments and bonus residential units, along with setback requirements for certain activities from SNAs.
- Subdivision: contains provisions for creation of a bonus allotment, and subdivision of an area containing a mapped 12 SNA;
- Earthworks: contains provisions for earthworks within a SNA.
- Natural Character of Freshwater Bodies: contains provisions regarding activities within natural character of scheduled freshwater bodies setbacks.
- Coastal Environment: contains provisions for activities within the coastal environment including natural character areas (ONC, VHNC, HNC), many of which overlay SNAs.
- Natural Features and Landscapes: contains provisions for natural features and landscapes, many of which overlay SNAs.
- Hazardous Substances HS-R2: contains a rule precluding the establishment of a major hazard facility within a SNA.
- Energy and Infrastructure: contains provisions managing activities within a SNA. includes provisions to manage energy and infrastructure activities in relation to ecosystems and indigenous biodiversity; as such the rules within the ECO Chapter do not apply to energy and infrastructure. The objectives, policies, matters of discretion, appendices, and planning map overlays relating to the ECO chapter do apply to energy and infrastructure activities in relation to ecosystems and indigenous biodiversity.<sup>13</sup>

<sup>&</sup>lt;sup>8</sup> Judith Roper-Lindsay [120.3]. ECO s42A Report.

<sup>&</sup>lt;sup>9</sup> Rayonier Matariki Forests [171.2 & 171.8]. ECO s42A Report.

<sup>&</sup>lt;sup>10</sup> Forest and Bird [192.40. ECO s42A Report.

<sup>&</sup>lt;sup>11</sup> Forest and Bird [192.40]. ECO s42A Report.

<sup>&</sup>lt;sup>12</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>13</sup> Transpower [195.69]. ECO s42A Report.

- Temporary Activities TEMP-R5: contains provisions managing temporary military training activities within a SNA.
- Special Purpose Zone (Kāinga Nohoanga): how the Ecosystems and Indigenous Biodiversity provisions apply in the Special Purpose Zone (Kāinga Nohoanga) is set out in SPZ(KN)-APP1 to SPZ(KN)-APP5 of that chapter.
- Sites and Areas of Significance to Māori: this chapter recognises the cultural values
  of certain including wetlands/repo. It also aims to protect the ecological values of
  wāhi tapu and wāhi taonga sites.
- Natural Open Space Zone and Open Space Zone: the underlying zone for many SNAs.
- Any other District wide matter that may affect or relate to the site.
- Zones: the zone chapters contain provisions about what activities are anticipated to occur in the zones.

Objectiv	es
ECO-O1	Ecosystems and indigenous biodiversity  Overall <sup>14</sup> , there is an increase in <sup>15</sup> lindigenous biodiversity is maintained so there is at least no overall loss <sup>16</sup> throughout the District, comprising:  1 protected and restored Significant Natural Areas SNAs <sup>17</sup> ; and 2 other areas of indigenous vegetation and habitat of indigenous fauna that are maintained, and where practicable-or <sup>18</sup> enhanced.
Policies	
ECO-P1	Identification of mapped Significant Natural AreaSNA <sup>19</sup> s Recognise the additional clarity and certainty provided by identifying mapped SNA-Significant Natural Areas and mapping them and by <sup>20</sup> listing them in ECO-SCHED1, and continuing to identify new mapped SNAs Significant Natural Areas <sup>21</sup> through applying the significance criteria in ECO-APP1.
ECO-P2	Protection and restoration of SNAs  Protect and restore SNAs by:  1. limiting indigenous vegetation clearance within SNAs;  2. limiting planting within mapped <sup>22</sup> Significant Natural Area SNAs <sup>23</sup> ;  3. limiting irrigation near mapped <sup>24</sup> Significant Natural Area SNAs <sup>25</sup> in order to provide a buffer from edge effects;

<sup>&</sup>lt;sup>14</sup> Consequential amendment via Federated Farmers [414.51]. submission on SD-O1 - ECO s42A Report.

<sup>&</sup>lt;sup>15</sup> Federated Farmers [414.51]. ECO s42A Report.

<sup>&</sup>lt;sup>16</sup> Consequential amendment via Federated Farmers [414.51]. submission on SD-O1 ECO s42A Report.

<sup>&</sup>lt;sup>17</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>18</sup> Forest and Bird [192.41]. ECO s42A Report.

<sup>&</sup>lt;sup>19</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>20</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>21</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>22</sup> Federated Farmers [414.19], DoC [419.92, 419.74], Judith Roper-Lindsay [120.6]. ECO s42A Report.

<sup>&</sup>lt;sup>23</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>24</sup> Federated Farmers [414.19], DoC [419.92, 419.74], ECan [316.95], Forest and Bird [192.43]. ECO s42A Report.

<sup>&</sup>lt;sup>25</sup> DoC [419.19]. ECO s42A Report

- 4. providing for an on-site bonus allotment or bonus residential unit <a href="mailto:incentive">incentive</a><sup>26</sup> within sites containing a <a href="mailto:mapped">mapped</a><sup>27</sup> <a href="mailto:Significant Natural AreaSNA</a><sup>28</sup> which has been protected in perpetuity</a><sup>29</sup>;
- 5. supporting and promoting the use of covenants, reserves, management plans and community initiatives;
- 6. encouraging actively supporting and advising on<sup>30</sup> pest and weed management, and stock management control;<sup>31</sup> and
- working with and supporting landowners, the Regional Council, the Crown, Queen Elizabeth the Second National Trust, NZ Landcare Trust, and advocacy groups, including by providing information, advice and advocacy.

#### ECO-P3 Bonus allotments and bonus residential units

- 1. Enable an on-site bonus allotment or bonus residential unit within a site containing a mapped <sup>32</sup>Significant Natural AreaSNA<sup>33</sup>, where:
  - a. an eligible SNA is legally protected in perpetuity; and
  - b. the SNA is physically protected and restored, as set out in Appendix APP2; and
  - c. substantial and significant<sup>34</sup> long-term net benefits to indigenous biodiversity are likely to be achieved.
- 2. One additional on-site bonus allotment or bonus residential unit may be considered where:
  - a. the mapped<sup>35</sup>Significant Natural AreaSNA<sup>36</sup> area to be protected and restored is at least twice the minimum area required by Appendix APP2; and
  - b. the protection and restoration would:
    - i. provide significant additional long-term <u>net</u><sup>37</sup> benefits to the <del>mapped</del><sup>38</sup> <u>Significant Natural AreaSNA</u><sup>39</sup>; or
    - ii. support further ongoing indigenous biodiversity restoration and enhancement activities elsewhere on the site.

#### ECO-P4

Maintenance and enhancement restoration of other indigenous vegetation and habitats outside SNAs 22

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<sup>&</sup>lt;sup>26</sup> DoC [419.74]. ECO s42A Report.

<sup>&</sup>lt;sup>27</sup> Federated Farmers [414.19] and DoC [419.92, 419.74]. ECO s42A Report.

<sup>&</sup>lt;sup>28</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>29</sup> DoC [419.74]. ECO s42A Report.

<sup>&</sup>lt;sup>30</sup> Forest and Bird [192.43]. ECO s42A Report.

<sup>&</sup>lt;sup>31</sup> Forest and Bird [192.43]. ECO s42A Report.

<sup>&</sup>lt;sup>32</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>33</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>34</sup> Forest and Bird [192.44]. ECO s42A Report.

<sup>&</sup>lt;sup>35</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>36</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>37</sup> Forest and Bird [192.44]. ECO s42A Report.

<sup>&</sup>lt;sup>38</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>39</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>40</sup> Federated Farmers [414.109]. ECO s42A Report.

<sup>&</sup>lt;sup>41</sup> ECan [316.97]. ECO s42A Report.

<sup>&</sup>lt;sup>42</sup> ECan [316.97]. ECO s42A Report.

Maintain and enhance restore<sup>43</sup> indigenous vegetation and habitats of indigenous fauna outside SNAs that do not meet the significance criteria in ECO-APP1<sup>44</sup> by:

- continuing to assess the current state <u>and extent<sup>45</sup></u> of indigenous biodiversity across the District;
- 2. restricting minimising<sup>46</sup> indigenous vegetation clearance or modification of habitat of indigenous fauna, by recognising that indigenous vegetation within:
  - a. the Lower Plains Ecological District and High Plains Ecological District has been widely destroyed, fragmented and degraded by land use and pests and therefore clearance of any remaining indigenous vegetation needs to be restricted in order to protect what remains; and
  - the Oxford Ecological District, Torlesse Ecological District and Ashley Ecological District, has a larger proportion of indigenous vegetation remaining and therefore some clearance of indigenous vegetation may be acceptable;<sup>47</sup>
- 3. recognising that the District contains species that are threatened, at risk, or reach their national or regional distribution limits in the District, and naturally uncommon ecosystems, and limiting their clearance;
- 4. providing information, advice and advocacy to the landowner and occupier;
- 5. supporting and promoting the use of covenants, reserves, management plans and community initiatives that maintain indigenous biodiversity and support connectivity with SNAs<sup>48</sup>; and
- 6. working with and supporting landowners the Regional Council, the Crown, the QEII National Trust, NZ Landcare Trust and advocacy groups.

#### **ECO-P5** Offsetting residual effects

A biodiversity offset will only be considered where there are residual adverse effects which cannot practicably be avoided, remedied or mitigated (in that order of hierarchy); and:

- 1. the biodiversity offset is consistent with ECO-APP2;
- 2. the biodiversity offset will recognise the limits to offsets due to irreplaceable and vulnerable biodiversity (including effects that must be avoided in accordance with ECO-P7 (1));
- 3. there is a strong likelihood that the offsets will be achieved in perpetuity; and 49
- 4. the biodiversity offset will achieve a net gain of indigenous biodiversity if the area contains any of the following:
  - a. indigenous vegetation in land environments where less than 20% of the original indigenous vegetation cover remains;
  - b. areas of indigenous vegetation associated with sand dunes and wetlands;

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<sup>&</sup>lt;sup>43</sup> Federated Farmers [414.109]. ECO s42A Report.

<sup>&</sup>lt;sup>44</sup> ECan [316.97]. ECO s42A Report.

<sup>&</sup>lt;sup>45</sup> Forest and Bird [192.45]. ECO s42A Report.

<sup>&</sup>lt;sup>46</sup> Fulton Hogan [41.23]. ECO s42A Report.

<sup>&</sup>lt;sup>47</sup> QEII Trust [279.4], North Canterbury Fish and Game Council [362.4], Canterbury Botanical Society [122.8]. ECO s42A Report.

<sup>&</sup>lt;sup>48</sup> Forest and Bird [192.45]. ECO s42A Report.

<sup>&</sup>lt;sup>49</sup> Fulton Hogan [41.24]. ECO s42A Report.

- c. areas of indigenous vegetation located in 'originally rare' terrestrial ecosystem types not covered under (a) and (b) above; or
- d. habitats of threatened, and at risk, indigenous species.<sup>50</sup>

## <u>Managing adverse effects on indigenous biodiversity outside the coastal environment</u>

#### Outside the coastal environment:

- 1. Avoid significant adverse effects on indigenous biodiversity within SNAs; and<sup>51</sup>
- 2. <u>Avoid significant adverse effects on indigenous biodiversity within SNAs and the coastal environment; and</u>
- 3. Apply the following effects management hierarchy for non-significant adverse effects on indigenous biodiversity of SNAs, and significant adverse effects on indigenous biodiversity outside of SNAs:
  - (a) adverse effects are avoided where practicable; then
  - (b) where adverse effects cannot be avoided, they are minimised where practicable; then
  - (c) where adverse effects cannot be minimised, they are remedied where practicable; then
  - (d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, biodiversity offsetting is provided where possible, as set out in ECO-APP2; then
  - (e) where biodiversity offsetting of more than minor residual adverse effects is not possible, biodiversity compensation is provided, as set out in ECO-APP3; then
  - (f) if biodiversity compensation is not appropriate, the activity itself is avoided. 52

#### **ECO-P6** Cultural heritage and customary rights

Ngāi Tūāhuriri cultural heritage values associated with indigenous biodiversity will be maintained and enhanced through:

- providing for the customary harvesting of taonga species by Ngāi Tūāhuriri, while ensuring such harvesting will maintain the indigenous biodiversity of the site;
- 2. providing for the planting of indigenous vegetation for the purpose of customary harvesting; and
- 3. encouraging the protection of the values of indigenous species that are taonga to Ngāi Tūāhuriri.

#### **ECO-P7** Indigenous biodiversity in the coastal environment

- 1. Except where the effects of regionally significant infrastructure are managed by EI-P5. 53 avoid adverse effects of activities on:
  - a. indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;

<sup>&</sup>lt;sup>50</sup> Forest and Bird [192.46]; Canterbury Botanical Society [122.9]. ECO s42A Report.

<sup>&</sup>lt;sup>51</sup> Forest and Bird [192.46]. ECO s42A Report and further amendments via ECO Reply Report.

<sup>&</sup>lt;sup>52</sup> Forest and Bird [192.46]; Canterbury Botanical Society [122.9]. ECO s42A Report.

<sup>&</sup>lt;sup>53</sup> MainPower [249.40] and Transpower [195.72]. ECO s42A Report.

	<ul> <li>b. taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened;</li> <li>c. indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare;</li> <li>d. habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare;</li> <li>e. areas containing nationally significant examples of indigenous community types; and</li> <li>f. areas set aside for full or partial protection of indigenous biological diversity under other legislation; and</li> <li>2. Except where the effects of regionally significant infrastructure are managed by EI-P5.<sup>54</sup> avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on: <ul> <li>a. areas of predominantly indigenous vegetation in the coastal environment;</li> <li>b. habitats in the coastal environment that are important during the vulnerable life stages of indigenous species;</li> <li>c. indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, eelgrass and saltmarsh;</li> <li>d. habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes;</li> <li>e. habitats, including areas and routes, important to migratory species; and</li> <li>f. ecological corridors, and areas important for linking or maintaining biological values identified under this policy.</li> </ul> </li> </ul>
ECO-P8	Waterbodies Recognising Te Mana o te Wai, maintain the ecological integrity of waterbodies by avoiding indigenous vegetation clearance near them. <sup>55</sup>
ECO-P8	Climate change resilience Encourage nature-based indigenous biodiversity solutions to promote resilience to the effects of climate change. <sup>56</sup>

#### **Activity Rules**

#### How to interpret and apply the rules

1. The rules within this chapter, shall not apply to the activities provided for in NH-R8 (the maintenance of existing community scale natural hazard mitigation works), NH-R9 (upgrading existing community scale natural hazard mitigation works) and NH-R10

<sup>&</sup>lt;sup>54</sup> MainPower [249.40] and Transpower [195.72].

<sup>&</sup>lt;sup>55</sup> Federated Farmers [414.112]. ECO Reply Report.

<sup>&</sup>lt;sup>56</sup> Forest and Bird [192.40]. ECO s42A Report, ECO Response to Preliminary Questions and ECO Reply Report.

(construction of new community scale natural hazard mitigation works), except for ECO-R1 and ECO-R2 which shall apply to NH-R10.57

ECO-R1	Indigenous vegetation clearance within any mapped 58 Significant Natural Area SNA or unmapped SNA 60			
All Zones	Mhere:  1. within any mapped Significant Natural AreaSNA <sup>61</sup> or unmapped SNA <sup>62</sup> , the indigenous vegetation clearance is: a. required for maintenance, repair or replacement purposes and is: i. within an existing access track; or ii. within 3m of an existing building; or iii. within 2m of an existing fence, 63 existing gate, existing fire pond, existing stock yard, existing trough, existing buried pipeline 4 or existing water tank; iv. within 2m of existing critical infrastructure, regionally significant infrastructure, strategic	Activity status when compliance not achieved and activity is for the purpose of constructing new community scale natural hazard mitigation works under NH-R10: RDIS <sup>69</sup> Activity status when compliance not achieved for all other activities <sup>70</sup> : NC		

<sup>&</sup>lt;sup>57</sup> ECan [316.81] (Consequential amendment from Natural Hazards Reply Report). ECO s42A Report

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<sup>&</sup>lt;sup>58</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>59</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>60</sup> Federated Farmers [414.20] and MainPower [249.41]. ECO s42A Report.

<sup>&</sup>lt;sup>61</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>62</sup> Federated Farmers [414.20] and MainPower [249.41]. ECO s42A Report.

 <sup>&</sup>lt;sup>63</sup> Canterbury Botanical Society [122.13]. ECO s42A Report.
 <sup>64</sup> Federated Farmers [414.113]. ECO s42A Report.

<sup>&</sup>lt;sup>69</sup> ECan [316.81] (Consequential amendment from Natural Hazards Reply Report). ECO s42A Report.

<sup>&</sup>lt;sup>70</sup> ECan [316.81] (Consequential amendment from Natural Hazards Reply Report). ECO s42A Report.

## infrastructure or lifeline utility; 65

- b. for the purpose of protecting, maintaining, restoring or accessing the SNA's ecological values where it involves:
  - i. carrying out activities in accordance with a registered protective covenant under the Reserves Act 1977, Conservation Act 1987 or Queen Elizabeth the National Second Trust Act 1977;
  - ii. carrying out activities in accordance with a Reserve Management Plan approved under the Reserves Act 1977;
  - iii. carrying out
    activities by or on
    behalf of the
    Crown in
    accordance with a
    Conservation
    Management Plan
    prepared under
    the Conservation
    Act 1987; or
  - iv. erecting a fence
    provided there is
    no more than 1.0m
    width of clearance
    along each side of
    the fence and the
    fence is required
    to either delineate
    a property
    boundary or must

<sup>65</sup> Transpower [195.73].

be located within, not adjacent to, the SNA due to difficult terrain;<sup>66</sup>

- c. for biosecurity purposes and is undertaken by, or on behalf of, the District Council, the Regional Council or Crown, or their nominated agent;
- d. for the purpose of harvesting indigenous vegetation that was planted for the purpose of plantation commercial<sup>67</sup> forestry;
- e. for the purpose o customary harvesting;
- f. expressly authorised under the NESFit involves wetland maintenance or restoration of a natural inland wetland that is a permitted activity under the Freshwater NES<sup>68</sup>; or
- g. for the purpose of forming a walking or cycling access track where:
  - i. the track has a maximum width of 2m; and
  - ii. the area of indigenous vegetation clearance is a maximum of 1% of the total area of the SNA on that site, or a maximum of 50m² from the SNA on that site, whichever is lesser; and

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<sup>&</sup>lt;sup>66</sup> Forest and Bird [192.49]. ECO Reply Report.

<sup>&</sup>lt;sup>67</sup> Updated to reflect changed term due to NES-CF, via scope of Rayonier Matariki Forests [171.2 & 171.8]. ECO Reply Report

<sup>&</sup>lt;sup>68</sup> Forest and Bird. [192.49]. Reference to 'NESF' updated to 'Freshwater NES' to reflect amended standards via Clause 16(2) of Schedule 1 of RMA.

iii. does not involve the clearance of any tree with a trunk greater than 15cm in diameter when measured 1.4m above ground.

Advisory Note Upon request, the Council Ecologist may be able to formally confirm whether an area comprises, or does not comprise, an unmapped Significant Natural AreaSNA<sup>72</sup> as described in ECO-SCHED2 within the area of proposed indigenous vegetation clearance. An applicant person looking to carry out indigenous vegetation clearance an also seek alternative professional advice. If the area does not comprise an unmapped Significant Natural AreaSNA<sup>74</sup> as described in ECO-SCHED2, then this rule will not apply 75.

#### ECO-R2<sup>76</sup>

Indigenous vegetation clearance outside any mapped Significant Natural Area SNA or unmapped SN

## Lower<sup>80</sup> Plains Ecological District High Plains Ecological District

### Activity status: PER Where:

- 1. the indigenous vegetation is not within any mapped SNA or unmapped SNA: and<sup>81</sup>
- 2. the indigenous vegetation clearance is not within 75m of a lake, 20m of the bank of a river, or 50m of any wetland, unless the clearance is expressly authorised under the NESF; and 82
- 3. the indigenous vegetation clearance is:
  - a. required for maintenance, repair or replacement purposes and is:
    - i. within an existing access track; or
    - ii. within 3m of an existing building; or
    - iii. within 2m of an existing fence, 83 existing gate, existing fire pond, existing stock yard, existing trough,

Activity status when compliance not achieved: RDIS Matters of discretion are restricted to: ECO-MD1 -

Indigenous vegetation clearance

<sup>&</sup>lt;sup>71</sup> Federated Farmers [414.20], MainPower [249.41] Federated Farmers [414.123], DoC [419.92], CCC [360.18], Judith Roper-Lindsay [120.2 & 120.14], and ECan [316.108]. ECO s42A Report.

<sup>&</sup>lt;sup>72</sup> DoC [419.28]. ECO s42A Report.

<sup>&</sup>lt;sup>73</sup> Forest and Bird [192.49]. ECO s42A Report.

<sup>&</sup>lt;sup>74</sup> DoC [419.28]. ECO s42A Report.

<sup>&</sup>lt;sup>75</sup> Federated Farmers [414.20], MainPower [249.41], Federated Farmers [414.123], DoC [419.92], CCC [360.18], Judith Roper-Lindsay [120.2 & 120.14], and ECan [316.108]. ECO s42A Report.

<sup>&</sup>lt;sup>76</sup> Note that the two rows within this rule could be merged into one as per my recommendation in section 3.15.2.3 of ECO s42A Report.

<sup>&</sup>lt;sup>77</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>78</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>79</sup> Federated Farmers [414.20, 414.115, 414.116] and MainPower [249.41 and 249.42]. ECO s42A Report.

<sup>&</sup>lt;sup>80</sup> Judith Roper-Lindsay [120.10]. ECO s42A Report.

<sup>81</sup> MainPower [249.42]. ECO Reply Report.

<sup>82</sup> Consequential amendment via Federated Farmers [414.112]. ECO Reply Report.

<sup>83</sup> Canterbury Botanical Society [122.14]. ECO s42A Report.

existing buried pipeline<sup>84</sup> or existing water tank;

- b. for the purpose of protecting, maintaining, restoring, and accessing ecological values and involves:
  - i. carrying out activities in accordance with a registered protective covenant under the Reserves Act 1977, Conservation Act 1987 or Queen Elizabeth the Second National Trust Act 1977;
  - ii. carrying out activities in accordance with a Reserve Management Plan approved under the Reserves Act 1977;
  - iii. carrying out activities by or on behalf of the Crown in accordance with a Conservation Management Plan prepared under the Conservation Act 1987; or
  - iv. erecting a fence provided there is no more than 1m width of clearance along each side of the fence<sup>85</sup>;
- c. is for the purpose of customary harvesting;
- d. for biosecurity purposes and is undertaken by, or on behalf of, the District Council, Regional Council or Crown, or their nominated agent;
- e. of indigenous vegetation which has been planted and/or is managed as part of a domestic garden or has been planted for amenity purposes or as a shelterbelt; or
- f. for the maintenance, repair, or replacement of existing flood protection works administered by the Regional Council or District Council; 86
- g. for the purpose of harvesting indigenous vegetation that was planted for the purpose of plantation forestry; 87
- h. of the indigenous understorey to plantation forest, and is incidental to permitted or otherwise authorised plantation forest clearance; or<sup>88</sup>
- i. required for the purpose of maintaining improved pasture.

<sup>&</sup>lt;sup>84</sup> Federated Farmers [414.115]. ECO s42A Report.

<sup>&</sup>lt;sup>85</sup> Judith Roper-Lindsay [120.10], Forest and Bird [192.50]. ECO s42A Report.

<sup>86</sup> ECan [316.81] (Consequential amendment from Natural Hazards Reply Report). ECO s42A Report.

<sup>&</sup>lt;sup>87</sup> Rayonier Matariki Forests [171.2]. ECO s42A Report.

<sup>88</sup> Rayonier Matariki Forests [171.2]. ECO s42A Report.

# Oxford Activity Ecological District 4. Torlesse Ecological District Ashley Ecological District District

#### Activity status: PER

- 4. the indigenous vegetation is not within any mapped SNA or unmapped SNA: and 89
- 5. the indigenous vegetation clearance is not within 75m of a lake, 20m of the bank of a river, or 50m of any wetland, unless the clearance is expressly authorised under the NESF; and 90
- 6. the indigenous vegetation clearance is not on land above 900m in altitude; and
- 7. the indigenous vegetation clearance of indigenous vegetation shall be a maximum of  $100\text{m}^2$  or 10% of the total area of the site, whichever is lesser, on any site in any continuous five year period and the indigenous vegetation does not comprise any species or habitats listed in ECO-SCHED3 that are naturally occurring;91
- 8. the indigenous vegetation clearance is:
  - a. required for maintenance, repair or replacement purposes which is:
    - i. within an existing access track;or
    - ii. within 3m of an existing building; or
    - iii. within 2m of an existing fence,<sup>92</sup> existing gate, existing fire pond, existing stock yard, existing trough, existing buried pipeline<sup>93</sup> or existing water tank;
  - b. required for the purpose of maintaining improved pasture; or
  - c. for the maintenance, repair, or replacement of existing flood protection works administered by the Regional Council or District Council;<sup>94</sup>
  - d. for the purpose of protecting, maintaining, restoring, or accessing ecological values and involves:
    - i. carrying out activities in accordance with a registered protective covenant under the

Activity status when compliance not achieved: RDIS Matters of discretion are restricted to:

ECO-MD1 - Indigenous vegetation clearance

<sup>89</sup> MainPower [249.42]. ECO Reply Report.

<sup>&</sup>lt;sup>90</sup> Consequential amendment via Federated Farmers [414.112]. ECO Reply Report.

<sup>91</sup> QEII Trust [279.6]. ECO s42A Report.

<sup>92</sup> Canterbury Botanical Society [122.14]. ECO s42A Report.

<sup>93</sup> Federated Farmers [414.116]. ECO s42A Report.

<sup>&</sup>lt;sup>94</sup> ECan [316.81] (Consequential amendment from Natural Hazards Reply Report). ECO s42A Report.

	Reserves Act 1977, Conservation Act 1987 or Queen Elizabeth the Second National Trust Act 1977; ii. carrying out activities in accordance with a Reserve Management Plan approved under the Reserves Act 197 iii. carrying out activities by or on behalf of the Crown accordance with a Conservation Management Plan prepared under the Conservation Act 1987; or iv. erecting a fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m vidth of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance along each side of the fence provided there is no more th 1m width of clearance provided there is no more th 1m width of clearance provided there is no more the conservation iii. carrying out activities denoted the conservation iii. carrying out activities denoted the conservation iii. carrying out activities denoted there is no more iiii. carrying out activities denoted there is no more iii. carrying out activities denoted there iii. carry	7; in  an  cil  en a
! !	clearance.;96	
ECO-R3	Planting of indigenous vegetation	
Significant Natural Areas (SNA) Overlay	Activity status: PER Where:  1. planting shall be of an indigenous species naturally occurring (either now or historically) within the relevant ecological district in which the planting is to take place.	Activity status when compliance not achieved: RDIS Matters of discretion are restricted to:

district in which the planting is to take place.

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<u>All</u>

Zones<sup>97</sup>

Judith Roper-Lindsay [120.10], Forest and Bird [192.50]. ECO s42A Report.
 Rayonier Matariki Forests [171.2]. ECO s42A Report.
 Judith Roper-Lindsay [120.11] and Forest and Bird [192.51]. ECO s42A Report.

		ECO-MD2 -	Species selected for planting
Ashley River/ Rakahuri Saltwater Creek Estuary - ONC Jockey Baker Creek - VHNC Te Kōhanga Wetlands - HNC Tūtaepatu Lagoon - HNC	Activity status: PER Where:  2. planting shall be of an indigenous species naturally occurring (either now or historically) within the relevant ecological district in which the planting is to take place.	Activity status compliance no achieved: RDIS Matters of dis restricted to:  ECO-MD2 -	ot S cretion are
	Advisory note:  Species planted should be from a seed that is relevant ecological district. Please contact the for <a href="free">free</a> <sup>98</sup> advice on selecting species, and a listock such species, or a restoration plan and/	District Council st of local nurse	Ecologist ries that
	On-farm mobile or fixed <sup>100</sup> -lirrigation <u>equipment</u> mapped <sup>102</sup> Significant Natural AreaSNA <sup>103</sup>	infrastructure <sup>10</sup>	<sup>01</sup> near any

<sup>98</sup> Canterbury Botanical Society [122.15]. ECO s42A Report.

<sup>103</sup> DoC [419.19]. ECO s42A Report.

 <sup>&</sup>lt;sup>99</sup> Canterbury Botanical Society [122.15]. ECO s42A Report
 <sup>100</sup> Dairy Holdings Limited [420.10], Transpower [195.23], MainPower [249.1, 249.47, 249.48], and Chorus, Spark and Vodafone [62.6]. ECO Reply Report.

<sup>&</sup>lt;sup>101</sup> Dairy Holdings Limited [420.10], Transpower [195.23], MainPower [249.1, 249.47, 249.48], and Chorus, Spark and Vodafone [62.6]. ECO Reply Report.

<sup>&</sup>lt;sup>102</sup> Federated Farmers [414.19], DoC [419.89 & 419.92], Forest and Bird [192.52], Judith Roper-Lindsay [120.12] ECan [316.103]. ECO s42A Report.

All Zones	Activity status: PER Where:  1. any new104 on-farm mobile or fixed105 irrigation equipment106 infrastructure shall be set back a minimum of 20m50m107 from any mapped108 Significant Natural AreaSNA109 that is not part of a registered protective covenant under the Queen Elizabeth the Second National Trust Act 1977.110	Activity status when compliance not achieved: RDIS Matters of discretion are restricted to:  ECO-MD1 -  Indigenous vegetation clearance	
ECO-R5	Bonus allotment		
Rural Zones	Activity status: RDIS As set out in SUB-R8.	As set out in SUB-R8	
ECO-R6	Bonus residential unit		
Rural Zones	Activity status: RDIS Where:  1. all applicable standards in Appendix APP2 are met.  Matters of discretion are restricted to: ECO-MD3 - Bonus allotment or bonus residential unit	Activity status when compliance not achieved: NC	
	Advisory Note     Applicants are strongly advised to undertake a pre-application meeting with the District Council before lodging any application for a bonus residential unit.		
ECO-R7	Woodlot, shelterbelt or planting of any non-indigenous vegetation within any mapped Significant Natural Area SNA 112		
Significant Natural Areas	Activity status: NC	Activity status when compliance not achieved: N/A	

<sup>&</sup>lt;sup>104</sup> Dairy Holdings Limited [420.10]. ECO s42A Report.

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<sup>&</sup>lt;sup>105</sup> Dairy Holdings Limited [420.10], Transpower [195.23], MainPower [249.1, 249.47, 249.48], and Chorus, Spark and Vodafone [62.6]. ECO Reply Report.

<sup>&</sup>lt;sup>106</sup> Dairy Holdings Limited [420.10], Transpower [195.23], MainPower [249.1, 249.47, 249.48], and Chorus, Spark and Vodafone [62.6]. ECO Reply Report.

<sup>&</sup>lt;sup>107</sup> DoC [419.89]. ECO s42A Report.

<sup>&</sup>lt;sup>108</sup> Federated Farmers [414.19], DoC [419.89 & 419.92], Forest and Bird [192.52], Judith Roper-Lindsay [120.12] ECan [316.103]. ECO s42A Report.

<sup>&</sup>lt;sup>109</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>110</sup> QEII Trust [279.8] and DoC [419.89]. ECO s42A Report.

<sup>&</sup>lt;sup>111</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>112</sup> DoC [419.19]. ECO s42A Report.

(SNA)	
l <del>Overlay</del>	I
All	<u>!</u>
Zones <sup>113</sup>	
!	L

**ECO-R2 merged version** – instead of being separated into two different groups of ecological districts, these have been merged and duplicated clauses removed

ECO-R2	Indigenous vegetation clearance outside any mapped Significant Natural AreaSNA 115 or unmapped SNA 116			
Lower Plains Ecological District High Plains Ecological District Oxford Ecological District Torlesse Ecological District Ashley Ecological District Ashley Ecological District Ashley Ecological District Ashley Ecological	Activity status: PER Where:  1. the indigenous vegetation is not within any mapped SNA or unmapped SNA: and 117 2. the indigenous vegetation clearance is not within 75m of a lake, 20m of the bank of a river, or 50m of any wetland, unless the clearance is expressly authorised under the NESF; and 118 3. the indigenous vegetation clearance is not on land above 900m in altitude; and 4. the indigenous vegetation clearance is:  a. required for maintenance, repair or replacement purposes and is: i. within an existing access track; or ii. within 3m of an existing building; or iii. within 2m of an existing fence, 119 existing gate, existing	Activity status when compliance not achieved: RDIS  Matters of discretion are restricted to:  ECO-MD1 - Indigenous vegetation clearance		
	fire pond, existing stock yard, existing trough, existing			

<sup>&</sup>lt;sup>113</sup> Forest and Bird [192.55] and DoC [419.90]. ECO s42A Report.

<sup>&</sup>lt;sup>114</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>115</sup> DoC [419.19]. ECO s42A Report.

<sup>&</sup>lt;sup>116</sup> Federated Farmers [414.20, 414.115, 414.116] and MainPower [249.41 and 249.42]. ECO s42A Report.

<sup>&</sup>lt;sup>117</sup> MainPower [249.42]. ECO Reply Report.

<sup>&</sup>lt;sup>118</sup> Consequential amendment via Federated Farmers [414.112]. ECO Reply Report.

<sup>&</sup>lt;sup>119</sup> Canterbury Botanical Society [122.14]. ECO s42A Report.

## buried pipeline<sup>120</sup> or existing water tank;

- for the purpose of protecting, maintaining, restoring, and accessing ecological values and involves:
  - i. carrying out activities in accordance with a registered protective covenant under the Reserves Act 1977, Conservation Act 1987 or Queen Elizabeth the Second National Trust Act 1977;
  - ii. carrying out activities in accordance with a Reserve Management Plan approved under the Reserves Act 1977;
  - iii. carrying out activities by or on behalf of the Crown in accordance with a Conservation Management Plan prepared under the Conservation Act 1987; or
  - iv. erecting a fence provided there is no more than 1m width of clearance along each side of the fence 121;
- c. is for the purpose of customary harvesting;
- d. for biosecurity purposes and is undertaken by, or on behalf of, the District Council, Regional Council or Crown, or their nominated agent;
- e. of indigenous vegetation which has been planted and/or is managed as part of a domestic garden or has

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<sup>&</sup>lt;sup>120</sup> Federated Farmers [414.115]. ECO s42A Report.

<sup>&</sup>lt;sup>121</sup> Judith Roper-Lindsay [120.10], Forest and Bird [192.50]. ECO s42A Report.

been planted for amenity purposes or as a shelterbelt; or

- f. for the maintenance, repair, or replacement of existing flood protection works administered by the Regional Council or District Council: 122
- g. for the purpose of harvesting indigenous vegetation that was planted for the purpose of plantation forestry: 123
- h. of the indigenous
  understorey to plantation
  forest, and is incidental to
  permitted or otherwise
  authorised plantation forest
  clearance: or 124
- required for the purpose of maintaining improved pasture.
- 5. the indigenous vegetation clearance of indigenous vegetation shall be a maximum of 100m<sup>2</sup> or 10% of the total area of the site, whichever is lesser, on any site in any continuous five year period and the indigenous vegetation does not comprise any species or habitats listed in ECO-SCHED3 that are naturally occurring; 125

#### **Advice Note**

#### ECO-AN1

There may be additional requirements under:

- the Regional Council's regional plans regarding vegetation clearance including within or near wetlands, <u>the coastal marine area</u>, <u>within<sup>126</sup></u> erosion-prone areas, <u>beds of rivers and lakes</u>, <sup>127</sup> and riparian areas, and the planting of pest species;
- 2. the NESCPF which regulates plantation commercial<sup>128</sup> forest and includes restrictions on afforestation within and 10m of any SNA; and

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<sup>&</sup>lt;sup>122</sup> ECan [316.81] (Consequential amendment from Natural Hazards Reply Report). ECO s42A Report.

<sup>&</sup>lt;sup>123</sup> Rayonier Matariki Forests [171.2]. ECO s42A Report.

<sup>&</sup>lt;sup>124</sup> Rayonier Matariki Forests [171.2]. ECO s42A Report.

<sup>&</sup>lt;sup>125</sup> QEII Trust [279.6] – note this clause only applied to the Oxford Ecological District, Torlesse Ecological District, and Ashley Ecological District - ECO s42A Report and ECO Reply Report

<sup>&</sup>lt;sup>126</sup> ECan [316.104]. ECO s42A Report.

<sup>&</sup>lt;sup>127</sup> ECan [316.104]. ECO s42A Report.

<sup>&</sup>lt;sup>128</sup> s44A RMA. Wrap Up Reply Report.

3. the NESF Freshwater NES<sup>129</sup> which regulates activities that pose risks to the health of freshwater and freshwater ecosystems.

#### **Matters of Discretion**

#### **ECO-MD1** Indigenous vegetation clearance

- 1. The extent to which the proposal adequately identifies indigenous biodiversity values including:
  - a. any values that meet the criteria for significance under ECO-APP1: and 130
  - b. whether any naturally occurring species that are threatened, at risk, or reach their national or regional distribution limits in the District, or any naturally uncommon ecosystems listed in ECO-SCHED32131 are present and if so, how they will be protected or managed.
- 2. The extent to which the proposal will <u>protect achieve no net loss of 132</u> indigenous biodiversity values identified as significant.
- 3. The actual or potential effects on indigenous biodiversity or ecological values, including intrinsic values, expected to occur as a result of the proposal, including those on ecosystem connectivity, function, and integrity and species diversity.
- 4. Any potential for avoiding, minimising 133, remedying, mitigating 134 or otherwise offsetting or compensating for adverse effects on indigenous vegetation and habitats of indigenous fauna in accordance with ECO-P5 135.
- 5. Any conditions to ensure obligations measures for protection, maintenance, restoration or enhancement in respect of indigenous biodiversity endure, including beyond any changes of ownership (wholly or partially) of the landholding and review of conditions.
- 6. Where the clearance is within an ONL, ONF, SAL, ONC, VHNC, HNC, or any natural character of scheduled freshwater body setback (NATC Figure 1)<sup>137</sup>, whether the indigenous vegetation proposed to be cleared contributes to the values of these areas and the extent that the degree to which the proposed clearance would adversely affect these values. 139
- 7. The relevance and quality of a Biodiversity Management Plan, (as set out in ECO-APP3)<sup>140</sup>, if provided.

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<sup>&</sup>lt;sup>129</sup> Updated to Freshwater NES to reflect current name of regulations via Clause 16(2) of Schedule 1 of RMA. As per response to preliminary Panel questions. ECO Response to Preliminary Questions and ECO Reply Report. <sup>130</sup> Forest and Bird [192.56]. ECO s42A Report.

<sup>131</sup> Consequential renumbering as a result of ECO-SCHED2 being deleted - ECO s42A Report

<sup>&</sup>lt;sup>132</sup> Forest and Bird [192.56]. ECO s42A Report.

<sup>&</sup>lt;sup>133</sup> Forest and Bird [192.46]. ECO s42A Report.

<sup>&</sup>lt;sup>134</sup> Forest and Bird [192.46]. ECO s42A Report.

<sup>135</sup> Forest and Bird [192.56]. ECO s42A Report.136 Forest and Bird [192.56]. ECO s42A Report.

<sup>&</sup>lt;sup>137</sup> Forest and Bird [192.56]. ECO \$42A Report.

<sup>&</sup>lt;sup>138</sup> Updated in response to Panel's preliminary written question 27, via scope of Forest and Bird [192.56] ECO Response to Preliminary Questions and ECO Reply Report.

<sup>&</sup>lt;sup>139</sup> Forest and Bird [192.56]. ECO s42A Report.

<sup>&</sup>lt;sup>140</sup> ECan [316.105]. ECO s42A Report.

8. The extent of adverse effects on indigenous biodiversity in the coastal environment. 9. The extent to which, if any, the health of any indigenous vegetation and/or habitat of indigenous fauna is improved. 10. The extent to which, if any, the spatial extent of any indigenous vegetation and/or habitat of indigenous fauna is increased. 11. Adverse effects on Ngāi Tahu cultural values including mahinga kai and other customary uses, and access for these purposes. 12. The extent of the functional need or operational need for the activity, and consideration of any alternatives. 141 13. Within a SNA, the extent, and likely benefits, of any pest control proposed. 142 ECO-MD2 Species selected for planting 1. The extent to which the species proposed to be planted will benefit or otherwise<sup>143</sup> adversely affect the: a. ecosystem function and indigenous biodiversity values of the SNA; b. natural character of the coastal environment. ECO-MD3 Bonus allotment or bonus residential unit 1. The extent to which the SNA will be protected and restored. 2. The adequacy and quality of the information provided with the application as required by Appendix APP2. 3. The extent to which the bonus allotment or bonus residential unit may result in conflict and/or reverse sensitivity effects with other activities occurring on adjacent sites. 4. Where an additional bonus allotment or bonus residential unit is sought where the Significant Natural Area to be protected is at least twice the minimum areas required by APP2, the extent to which the protection and restoration would provide significant additional long-term benefits to the Significant Natural Area, or support further ongoing indigenous biodiversity restoration and enhancement activities elsewhere on the site.144

#### **Schedules**

#### ECO-SCHED1 - Schedule of mapped 145 Significant Natural AreaSNA 146s



Site ID Site name Site description Ecological District

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<sup>&</sup>lt;sup>141</sup> Chorus, Spark and Vodafone [62.46], MainPower [249.45], Transpower [195.76], and Environment Canterbury [316.81] via the Natural Hazards Reply Report. ECO s42A Report

<sup>&</sup>lt;sup>142</sup> Forest and Bird [192.43]. ECO s42A Report.

<sup>&</sup>lt;sup>143</sup> Forest and Bird [192.57]. ECO s42A Report.

<sup>&</sup>lt;sup>144</sup> Forest and Bird [192.58]. ECO s42A Report.

<sup>&</sup>lt;sup>145</sup> Federated Farmers [414.19] and DoC [419.92]. ECO s42A Report.

<sup>&</sup>lt;sup>146</sup> DoC [419.19]. ECO s42A Report.

SNA001	Main Race Road Kānuka Dryland	Main Race Road Kānuka Dryland is a block of dryland kānuka forest, scrub and shrubland growing on drought-prone Lismore soils on the north side of the Waimakariri River.  In total, 36 indigenous plant species were recorded at this site. Main plant species include kānuka ( <i>Kunzea serotina</i> ) (threatened-nationally vulnerable), pātōtara ( <i>Leucopogon fraseri</i> ), Mercury Bay weed ( <i>Dichondra repens</i> ), button daisy ( <i>Leptinella squalida subsp. mediana</i> ) and prickly mikimiki ( <i>Leptecophylla juniperina subsp. juniperina</i> ) which are both naturally uncommon in the Low Plains Ecological District.  This site contains a number of species which have a conservation status of at risk-declining such as <i>Coprosma intertexta</i> , grassland hypericum ( <i>Hypericum involutum</i> ), dryland button daisy ( <i>Leptinella serrulata</i> ), mānuka ( <i>Leptospermum scoparium</i> ), and matagouri/tūmatakuru ( <i>Discaria toumatou</i> ), which is uncommon in the Low Plains Ecological District.  Other uncommon species include native broom ( <i>Carmichaelia australis</i> ), porcupine shrub ( <i>Melicytus alpinus</i> ) and native bedstraw ( <i>Galium propinquum</i> ).  Notable fauna on site include chirping cicada ( <i>Amphipsalta strepitans</i> ), South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa subsp. fuliginosa</i> ) and welcome swallow/warou ( <i>Hirundo neoxena</i> ).	Low Plains
SNA002	Canterbury Regional Council Lease Kānuka Dryland	Canterbury Regional Council Lease Kānuka Dryland is a kānuka forest and treeland with occasional dryland shrub, herb, grass and sedge species.  Notable flora on site includes kānuka (Kunzea serotina) (threatened-nationally vulnerable), and four indigenous plant species that are uncommon in the Low Plains Ecological District including grassland sedge (Carex breviculmis), native weeping grass (Microlaena stipoides), tauhinu (Ozothamnus leptophyllus) and kōpata (Pelargonium inodorum).	Low Plains

SNA003	Native Broom Trig Site	Native Broom Trig Site consists of native broom clumps scattered through exotic grasses, shrubs and planted radiata pines.  In total two indigenous plant species were recorded at this site. Notable flora includes native broom ( <i>Carmichaelia australis</i> ) which is considered to be uncommon in the Low Plains Ecological District.	Low Plains
SNA004	Western Kānuka Dryland	Western Kānuka Dryland is an area of kānuka forest and scrubland.  Notable flora includes kānuka ( <i>Kunzea serotina</i> ) (threatened-nationally vulnerable).	Low Plains
SNA005	Monopoli's Pond	Monopoli's Pond is an artificial pond with open water adjacent to the Waimakariri River.  Notable flora species include raupō ( <i>Typha orientalis</i> ) and small amounts of lowland flax/harakeke ( <i>Phormium tenax</i> ).	Low Plains
SNA006	Coffey Road Kānuka Dryland	Coffey Road Kānuka Dryland is an area of kānuka forest and scrubland along a fenceline.  Notable flora include kānuka ( <i>Kunzea serotina</i> ) (threatened-nationally vulnerable), and Mercury Bay weed ( <i>Dichondra repens</i> ) which is considered to be uncommon in the Low Plains Ecological District.	Low Plains
SNA007	Wrights Road Kānuka Dryland	Wrights Road Kānuka Dryland is a strip of kānuka scrub remnant.  Notable flora include kānuka ( <i>Kunzea serotina</i> ) (threatened-nationally vulnerable), matagouri/tūmatakuru ( <i>Discaria toumatou</i> ) (at risk-declining), and mānuka ( <i>Leptospermum scoparium</i> ) (at risk-declining). Also recorded at the site is prickly mikimiki ( <i>Leptecophylla juniperina subsp. juniperina</i> ), and a range of indigenous plant species are present in the understorey.	Low Plains
SNA008	Kānuka Pond Dryland	Kānuka Pond Dryland is a kānuka scrub remnant.  Notable flora include kānuka ( <i>Kunzea serotina</i> ) (threatened-nationally vulnerable), mikimiki ( <i>Leptecophylla juniperina subsp.</i>	Low Plains

		<i>juniperina</i> ) and a variety of indigenous plant species in the understorey.	
SNA009	Dagnum Dryland	Dagnum Dryland is a remnant of indigenous dry shrubland and herb-mossfield vegetation on outwash plains.	Low Plains
		Notable flora on site includes at risk-declining species such as bidibidi/piripiri (Acaena buchananii), Coprosma brunnea, Coprosma intertexta, matagouri/tūmatakuru (Discaria toumatou), dryland button daisy (Leptinella serrulata), common mat daisy (Raoulia australis), danthonia (Rytidosperma exiguum) and prickly couch (Zoysia minima). This site also contains threatened-nationally vulnerable species such as dwarf broom (Carmichaelia corrugata), kānuka (Kunzea serotina), leafless pōhuehue (Muehlenbeckia ephedroides), and fan-leaved mat daisy (Raoulia monroi).	
		Other species located on site include grassland sedge ( <i>Carex breviculmis</i> ), native broom ( <i>Carmichaelia australis</i> ), mat coprosma ( <i>Coprosma atropurpurea</i> ), turfy coprosma ( <i>Coprosma petriei</i> ), plume grass ( <i>Dichelachne crinita</i> ), dichondra ( <i>Dichondra brevifolia</i> ), willow herb ( <i>Epilobium alsinoides</i> ), silver tussock ( <i>Poa cita</i> ), small-leaved kōwhai ( <i>Sophora microphylla</i> ), prostrate kōwhai ( <i>S. prostrata</i> ), and New Zealand harebell ( <i>Wahlenbergia albomarginata</i> ) which are uncommon in the Low Plains Ecological District.	
		A total of 76 invertebrate species have been identified in field visits between 2015 and 2018. This includes a wide range of indigenous moths as well as indigenous butterflies and grass hoppers.	
SNA010	Saltwater Creek Wetland	Saltwater Creek Wetland contains indigenous saline and freshwater wetland vegetation adjacent to Saltwater Creek.	Low Plains
		In total 22 indigenous plant species were recorded at this site. This includes saltmarsh ribbonwood ( <i>Plagianthus divaricatus</i> ), lowland flax/harakeke ( <i>Phormium tenax</i> ), raupō/bull rush ( <i>Typha orientalis</i> ), toetoe ( <i>Austroderia richardii</i> ), cutty grass/rautahi	

SNA011	Douds Road Wetland	torrentfish/piripiripohatu ( <i>Cheimarrichthys fosteri</i> ), climbing galaxias/kōaro ( <i>Galaxias brevipinnis</i> ), shortfin and longfin eel/tuna ( <i>Anguilla australis, A. dieffenbachii</i> ). Other species include common smelt/paraki ( <i>Retropinna retropinna</i> ), flounder/pātiki ( <i>Rhombosolea</i> sp.), and bullies/kōkopu ( <i>Gobiomorphus spp.</i> ).  Douds Road Wetland is a riparian wetland dominated by rushland.  In total six indigenous plant species were recorded at this site. This includes cabbage tree/tī kōuka ( <i>Cordyline australis</i> ), wīwī ( <i>Juncus distegus</i> ) (at risk-naturally uncommon), <i>Carex sinclairii</i> , and sharp spike sedge ( <i>Eleocharis acuta</i> ).  Fauna identified on site include nursery web	Low Plains
		The Saltwater Creek estuary also provides important habitat for at risk-declining indigenous fish species including common galaxis/īnanga ( <i>Galaxias maculatus</i> ),	
		Fauna identified on site include common bag moth ( <i>Liothula omnivora</i> ), nursery web spider ( <i>Dolomedes minor</i> ), paradise shelduck ( <i>Tadorna variegata</i> ), and pūkeko ( <i>Porphyrio melanotus melanotus</i> ). Australiasian bittern/matuku-hūrepo ( <i>Botaurus poiciloptilus</i> ) (threatened-nationally critical) have also been identified in the Saltwater Creek area.	
		Other species considered uncommon in the Low Plains Ecological District include toetoe (Austroderia richardii), marsh club rush/kukuraho (Bolboschoenus caldwellii), giant rush/wī (Juncus pallidus), leafless rush/wī (Juncus sarophorus), three-ribbed arrowgrass (Triglochin striata) and raupō/bull rush (Typha orientalis).	
		(Carex coriacea), oioi (Apodasmia similis), bachelors button (Cotula coronopifolia), native musk (Thyridia repens) (at risknaturally uncommon), NZ celery (Apium prostratum var. filiforme), slender club rush (Isolepis cernua) and sea rush (Juncus kraussii).	

SNA012	Barkers Road Wetland	Barkers Road Wetland is a wetland basin within Okuku Downloads.	Low Plains
		Notable flora on site include mānuka (Leptospermum scoparium) (at riskdeclining), and raupō (Typha orientalis) which is considered to be uncommon in the Low Plains Ecological District.	
SNA013	Yaxleys Road Wetland	Yaxleys Road Wetland is one of the largest areas of indigenous wetland vegetation remaining in the Low Plains Ecological District.	Low Plains
		In total, 25 indigenous plant species were recorded at this site. Main plant species include lowland flax/harakeke ( <i>Phormium tenax</i> ), cabbage tree/tī kōuka ( <i>Cordyline australis</i> ), leafless rush/wī ( <i>Juncus edgariae</i> ) and cutty grass/rautahi ( <i>Carex geminata</i> ).	
		This site contains a number of indigenous plant species that are considered uncommon in the Low Plains Ecological District including little hard fern ( <i>Blechnum penna-marina</i> ), mikimiki ( <i>Coprosma dumosa</i> ) ( <i>Coprosma propinqua</i> ), karamū ( <i>Coprosma robusta</i> ), native cudweed ( <i>Euchiton involucratus</i> ), giant rush/wī ( <i>Juncus pallidus</i> ), <i>Machaerina tenax</i> and native buttercup ( <i>Ranunculus amphitrichus/glabrifolius</i> ).	
		Fauna identified on site include bellbird/korimako ( <i>Anthornis melanura melanura</i> ), South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa</i> ), spur-winged plover ( <i>Vanellus miles</i> ), flax widow maker moth ( <i>Orthoclydon praefectata</i> ) and nursery web spider ( <i>Dolomedes minor</i> ).	
SNA014	Yaxleys Flax Swamp Wetland	Yaxleys Flax Swamp is a wetland in the Low Plains Ecological District in Loburn.	Low Plains
		Notable flora on site include kānuka ( <i>Kunzea robusta or K. serotina</i> ) (threatened-nationally vulnerable), mānuka ( <i>Leptospermum scoparium</i> ) (at-risk declining), lowland flax/harakeke ( <i>Phormium tenax</i> ) and cabbage tree/tī kōuka ( <i>Cordyline australis</i> ).	

SNA015	Okuku Downlands	Flax remnant within Okuku downloads.	Low Plains
	Flax Wetland	Notable flora on site include flax ( <i>Phorimum tenax</i> ), pūkio ( <i>Carex secta</i> ), coprosma species and mānuka ( <i>Leptospermum scoparium</i> ) (at risk-declining).	
SNA016	Eyredale Road Northern Kānuka	Eyredale Road Northern Kānuka Dryland is a small remnant of kānuka shrubland.	Low Plains
	Dryland	Notable plants include kānuka, makahikatoa ( <i>Kunzea serotina</i> ) (threatened-nationally vulnerable).	
		This site was subject to a desktop review and other plant species may be present. Kānuka remnants are known to support a variety of indigenous plant species such as vascular plants, mosses, lichens, grasses, sedges and shrubs.	
		Kānuka remnants are also known to support a variety of indigenous birds and invertebrates.	
SNA017	Eyredale Road Southern Kānuka	Eyredale Road Southern Kānuka Dryland is a small remnant of kānuka shrubland.	Low Plains
	Dryland	Notable plants include kānuka, makahikatoa ( <i>Kunzea serotina</i> ) (threatened-nationally vulnerable). This site was subject to a desktop review and other plant species may be present. Kānuka remnants are known to support a variety of indigenous species such as vascular plants, mosses, lichens, grasses, sedges and shrubs.	
		Kānuka remnants are also known to support a variety of indigenous birds and invertebrates.	
SNA018	Poyntzs Road Southern Kānuka Dryland	Poyntzs Road Southern Kānuka Dryland contains numerous remnant patches and threads of kānuka shrubland. The patches are separated by open grassland and a shelter belt but are treated as a contiguous area for management purposes.	Low Plains
		Notable plants include kānuka, makahikatoa ( <i>Kunzea serotina</i> ) (threatened-nationally vulnerable). This site was subject to a desktop review and other plant species may	

		be present. Kānuka remnants are known to support a variety of indigenous species such as vascular plants, mosses, lichens, grasses, sedges and shrubs.  Kānuka remnants are also known to support a variety of indigenous birds and invertebrates.	
SNA019	Pesters Road Eastern Kānuka Dryland	Pesters Road Eastern Kānuka Dryland is a remnant of kānuka shrubland on the edge of a centre pivot.  Notable plants include kānuka, makahikatoa ( <i>Kunzea serotina</i> ) (threatened-nationally vulnerable). The stems of kānuka in this site are covered in native grey and orange lichens ( <i>Ramalina</i> , <i>Usnea</i> , <i>Physcia</i> , <i>Lecanora</i> , <i>Teloschistes</i> , <i>Xanthoria</i> ). Indigenous ground cover plants are present on site including Mercury Bay weed ( <i>Dichondra repens</i> ) and moss ( <i>Racomitrium</i> , <i>Triquetrella</i> , <i>Hypnum</i> ). There is a small patch of stonecrop ( <i>Crassula</i> sp.)  This site was subject to a desktop review, with information included from a previous site visit in 2017. Kānuka remnants are also known to support a variety of indigenous birds and invertebrates.	Low Plains
SNA020	Burnt Hill Shrubland	Burnt Hill is a volcanic rocky scarp with shrubland.  38 indigenous plant species were recorded at this site. This site contains flora with a conservation status of at risk-declining such as speargrass (Aciphylla subflabellata), Coprosma intertexta, matagouri/tūmatakuru (Discaria toumatou), and common mat daisy (Raoulia australis). This site also contains grassy mat sedge (Carex inopinata) (threatened-nationally vulnerable), and Chenopodium allanii (at risk-naturally uncommon).  Notable fauna on site include New Zealand praying mantis (Orthodera novaezealandiae), Canterbury copper butterfly (Lycaena new species), Green-veined cicada (Rhodopsalta cruentata), magpie moth (Nyctemera	High Plains

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		annulata) and yellow admiral butterfly (Vanessa itea).	
SNA021	Raineys Road Treeland	Raineys Road Treeland is an area of treeland in the High Plains Ecological District.  In total, six indigenous plant species were recorded at this site. Notable flora on site include kōhūhū ( <i>Pittosporum tenuifolium</i> ), cabbage tree/tī kōuka ( <i>Cordyline australis</i> ) and mikimiki ( <i>Coprosma propinqua</i> ).  Notable fauna on site include	High Plains
		bellbird/korimako ( <i>Anthornis melanura</i> melanura), grey warbler ( <i>Gerygone igata</i> ) and South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa subsp. fuliginosa</i> ).	
SNA022	Springvale Flaxland	Springvale Flaxland comprises one of the largest areas of indigenous wetland vegetation in the High Plains Ecological District.	High Plains
		In total, 36 indigenous plant species were recorded at this site. Main plant species include lowland flax/harakeke ( <i>Phormium tenax</i> ), cabbage tree/tī kōuka ( <i>Cordyline australis</i> ), matagouri/tūmatakuru ( <i>Discaria toumatou</i> ) (at risk-declining), wī ( <i>Juncus edgariae</i> ), pūkio ( <i>Carex secta</i> ), cutty grass/rautahi ( <i>Carex coriacea</i> ), raupō/bull rush ( <i>Typha orientalis</i> ), wīwī ( <i>Juncus distegus</i> ) (at risk-naturally uncommon), and creeping pōhuehue ( <i>Muehlenbeckia axillaris</i> ). Other indigenous plant species recorded at the site that are uncommon in the High Plains Ecological District include <i>Carex sinclairii</i> , leafless rush/wī ( <i>J. sarophorus</i> ), native willowherbs ( <i>Epilobium chionanthum</i> ) ( <i>E. pallidiflorum</i> ), native blinks ( <i>Montia fontana subs. fontana</i> ), and common water milfoil ( <i>Myriophyllum propinquum</i> ). Notable fauna on site include Australasian harrier/kahu ( <i>Circus approximans</i> ), bellbird/korimako ( <i>Anthornis melanura melanura</i> ), flax window maker moth ( <i>Orthoclydon praefectata</i> ), grey warbler ( <i>Gerygone igata</i> ), nurseryweb spider ( <i>Dolomedes minor</i> ), South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa subsp. fuliginosa</i> ) and spur-winged plover ( <i>Vanellus miles</i> ).	

SNA023	Mountain Road Treeland	Mountain Road Treeland is roadside vegetation.  Notable flora includes cabbage tree/tī kōuka (Cordyline australis), kōhūhū (Pittosporum tenuifolium), five-finger/whauwhaupaku (Pseudopanax arboreus), broadleaf/kāpuka (Griselinia littoralis), Puāwananga (Clematis paniculata) and karamū (Coprosma robusta). Broadleaf/kāpuka (Griselinia littoralis), Five-finger/whauwhaupaku (Pseudopanax arboreus) and Puāwananga (Clematis paniculata) are considered to be uncommon in the High Plains Ecological District.	Oxford
SNA024	Hayland Road Wetland	Hayland Road Wetland consists of mostly swamp vegetation dominated by flax.  Notable flora on site includes lowland flax/harakeke ( <i>Phormium tenax</i> ), mānuka ( <i>Leptospermum scoparium</i> ) (at riskdeclining), mikimiki ( <i>Coprosma propinqua</i> ), <i>C. dumosa</i> , cabbage tree/tī kōuka ( <i>Cordyline australis</i> ), swamp kiokio ( <i>Blechnum minus</i> ), rautahi ( <i>Carex sp.</i> ), wīwī ( <i>Juncus edgariae</i> ), mānatu ( <i>Plagianthus regius</i> ), kōhūhū ( <i>Pittosporum tenuifolium</i> ) and beech ( <i>Fuscospora solandri</i> ).  Mānuka ( <i>Leptospermum scoparium</i> ) and mikimiki ( <i>Coprosma dumosa</i> and <i>C. dumosa</i> ) are considered to be uncommon in the High Plains Ecological District.  The site also contains two species of notable fauna on site includes Australiasian harrier/kahu ( <i>Circus approximans</i> ), pūkeko ( <i>Porphyrio melanotus melanotus</i> ) and grey warbler ( <i>Gerygone igata</i> ).	High Plains
SNA025	Maori Reserve Road Wetland	Maori Reserve Road Wetland is a wetland with a small stream.  In total, 20 indigenous plant species were recorded at this site. Main plant species include cabbage tree/tī kōuka ( <i>Cordyline australis</i> ), lowland flax/harakeke ( <i>Phormium tenax</i> ), kōhūhū ( <i>Pittosporum tenuifolium</i> ), wīwī ( <i>Juncus distegus</i> ) (at risk-naturally uncommon), and kānuka ( <i>Kunzea robusta</i> ) (threatened-nationally vulnerable). Twelve	High Plains

		species of indigenous mosses and lichens have also been identified on this site.  This site contains a number of indigenous plant species considered to be uncommon in the High Plains Ecological District such as little hard fern ( <i>Blechnum penna-marina</i> ), mikimiki ( <i>Coprosma rhamnoides</i> ), leafless rush/wī ( <i>Juncus sarophorus</i> ), native blinks ( <i>Montia fontana fontana</i> ), native jasmine/akakaikiore ( <i>Parsonsia heterophylla</i> ), silver tussock ( <i>Poa cita</i> ) and prickly shield fern ( <i>Polystichum vestitum</i> ).  Notable fauna on site include bellbird/korimako ( <i>Anthornis melanura melanura</i> ), grey warbler ( <i>Gerygone igata</i> ), South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa subsp. fuliginosa</i> ), spur-winged plover ( <i>Vanellus miles</i> ) and flax window maker moth ( <i>Orthoclydon praefectata</i> ).	
SNA026	Bald Hills Road Wetland	Bald Hills Road Wetland is a toeslope wetland in the lower part of a small gully.  20 indigenous plant species have been recorded at this site. The site contains a number of plant species that are considered to be uncommon in the High Plains Ecological District such as necklace fern (Asplenium flabellifolium), creek fern/kiwikiwi (Blechnum fluviatile), swamp kiokio (B. minus) and little hard fern (B. penna-marina), swamp sedge (Carex virgata), marbleleaf/putaputawētā (Carpodetus serratus), mikimiki (Coprosma propinqua), sharp spike sedge (Eleocharis acuta) and prickly shield fern/pūniu (Polystichum vestitum).  Notable fauna on site include bellbird/korimako (Anthornis melanura melanura), silvereye/tauhou (Zosterops lateralis lateralis), flax widow maker moth (Orthoclydon praefectata), Yellow admiral butterfly (Vanessa itea) and nursery web spider (Dolomedes minor).	High Plains
SNA027	Waimakariri Gorge Bridge River Terraces Mixed Forest	Low canopy mixed forest.  Notable flora include black beech (Fuscospora solandri), tutu (Coriaria sp.), kōhūhū (Pittosporum tenuifolium), five-	High Plains

SNA028	Burnt Hill Southern Outcrop Shrubland	finger/whauwhaupaku ( <i>Pseudopanax arboreus</i> ), kōwhai ( <i>Sophora sp.</i> ) wineberry/makomako ( <i>Aristotelia serrata</i> ), akiraho ( <i>Olearia paniculata</i> ), <i>Hebe salicifolia</i> , karamū ( <i>Coprosma robusta</i> ) and native iris/mīkoikoi ( <i>Libertia ixioides</i> ). A rich array of shrubs and ground-based ferns are also present.  Burnt Hill Southern Outcrop Shrubland is a volcanic hill with small rock outcrops.  Notable flora on site include prostrate kōwhai ( <i>Sophora prostrata</i> ).	High Plains
SNA029	Reserve Road Wetland	Reserve Road Wetland is a spring-fed wetland along the bottom of a riparian scarp, and a small area of palustrine wetland with areas of flaxland and sedgeland and a steep terrace scarp containing secondary growth hardwood forest.  Notable flora include lowland flax/harakeke (Phormium tenax), mikimiki (Coprosma propinqua), pūkio (Carex secta), swamp kiokio (Blechnum minus), large-leaved pōhuehue (Muehlenbeckia australis), giant rush (Juncus pallidus), baumea (Machaerina rubiginosa), Carex species, including Carex tenuiculmis (at risk-declining), whiteywood/māhoe (Melicytus ramiflorus), tree fuchsia/kōtukutuku (Fuchsia excorticata), bracken/rārahu (Pteridium esculentum), mānuka (Leptospermum scoparium) (at risk-declining), five-finger/whauwhaupaku (Pseudopanax arboreus), broadleaf/kāpuka (Griselinia littoralis), karamū (Coprosma robusta), wineberry/makomako (Aristotelia serrata), kōhūhū (Pittosporum tenuifolium), and cabbage tree/tī kōuka (Cordyline australis), and New Zealand myrtle/rōhutu (Lophomyrtus obcordata) (threatenednationally critical) which was planted at the site. Fauna identified on this site include Australiasian harrier/kahu (Circus approximans), bellbird/korimako (Anthornis melanura melanura), grey warbler (Gerygone igata), paradise shelduck (Tadorna variegata), South Island fantail/pīwakawaka (Rhipidura fuliginosa subsp. fuliginosa), and the New Zealand praying mantis (Orthodera novaezealandiae) (at risk-declining).	High Plains

SNA030	Garry River Shrubland	Garry River Shrubland is a large silver tussock shrubland situated on two alluvial terraces.  Notable flora on site include seven indigenous plant species. Notable flora include matagouri ( <i>Discaria toumatou</i> ) (at risk-declining), mikimiki ( <i>Coprosma propinqua</i> ), and species considered to be uncommon in the High Plains Ecological District silver tussock ( <i>Poa cita</i> ), porcupine shrub ( <i>Melicytus alpinus</i> ), and creeping pōhuehue ( <i>Muehlenbeckia axillaris</i> ).  Fauna identified on site include the South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa subsp. fuliginosa</i> ), paradise shelduck ( <i>Tadorna variegata</i> ), and spurwinged plover ( <i>Vanellus miles</i> ). Porcupine shrub is also known to provide habitat for a number of specialist indigenous moth species such as leaf-roller ( <i>Harmologa</i> sp.), crambid moth ( <i>Heliothela</i> sp.), and several noctuids ( <i>Graphania, Andesia</i> and <i>Homohadena</i> spp.).	High Plains
SNA031	Rockford Bottom Flax Swamp	Rockford Bottom Flax Swamp is a wetland dominated by lowland flax.  Notable flora on site include lowland flax/harakeke ( <i>Phormium tenax</i> ) and cabbage tree/tī kōuka ( <i>Cordyline australis</i> ).  Notable fauna on site include bellbird/korimako ( <i>Anthornis melanura melanura</i> ).	High Plains
SNA032	Waimakariri Gorge Kōwhai and Kānuka Treeland	Waimakariri Gorge Kōwhai and Kānuka Treeland is a shrubland representative of what was once common along the margins of the Waimakariri River.  Notable flora include matagouri/tūmatakuru ( <i>Discaria toumatou</i> ) (at risk-declining), and kānuka ( <i>Kunzea robusta</i> or <i>K. serotina</i> ) (threatened-nationally vulnerable).	High Plains
SNA033	Waimakariri Gorge Terrace Shrubland	Waimakariri Gorge Terrace Shrubland is a shrubland at the toe of a large terrace.  Notable flora include matagouri/tūmatakuru ( <i>Discaria toumatou</i> ) (at risk-declining), and several indigenous plant species that are	High Plains

		considered to be uncommon in the High Plains Ecological District including silver tussock ( <i>Poa cita</i> ), porcupine shrub ( <i>Melicytus alpinus</i> ), <i>Clematis</i> spp and native bindweed ( <i>Calystegia tuguriorum</i> ).  Notable fauna on site include pied stilt ( <i>Himantopus himantopus leucocephalus</i> ) and pūkeko ( <i>Porphyrio melanotus melanotus</i> ).	
SNA034	Manor Park Bush	Manor Park Bush is an area of remnant forest with some regenerating forest on the upper edge of the high plains.  In total, 48 indigenous plant species were recorded at this site. Main plant species include black beech (Fuscospora solandri), kōhūhū (Pittosporum tenuifolium), five-finger/whauwhaupaku (Pseudopanax arboreus), wineberry/makomako (Aristotelia serrata), cabbage tree/tī kōuka (Cordyline australis), shining karamū (Coprosma lucida), pūkio (Carex secta), harakeke (Phormium tenax), broadleaf/kāpuka (Griselinia littoralis), matai (Prumnopitys taxifolia), kahikatea (Dacrycarpus dacrydioides), and pōkākā (Elaeocarpus hookerianus).  This site contains New Zealand myrtle/rōhutu (Lophomyrtus obcordata) (threatenednationally critical), and various indigenous plant species that are uncommon in the High Plains Ecological District including swamp kiokio (Blechnum discolor), yellow-wood (Coprosma linariifolia), rimu (Dacrydium cupressinum), kahikatea (Dacrycarpus dacrydioides), rough tree fern/whekī (Dicksonia squarrosa), pōkākā (Elaeocarpus hookerianus), tree fuschia/kōtukutuku (Fuchsia excorticata), akiraho (Olearia paniculata), lowland tōtara (Podocarpus tōtara), mataī (Prumnopitys taxifolia), pepper tree/horopito (Pseudowintera colorata) and seven-finger/patē (Schefflera digitata).  Fauna identified on this site include South Island fantail/pīwakawaka (Rhipidura fuliginosa subsp. fuliginosa), bellbird/korimako (Anthornis melanura melanura melanura), grey warbler (Gerygone igata), morepork/ruru (Ninox novaeseelandiae),	High Plains

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		paradise shelduck ( <i>Tadorna variegata</i> ), silvereye/tauhou ( <i>Zosterops lateralis lateralis</i> ) and tūī ( <i>Prosthemadera novaeseelandiae</i> ).	
SNA035	Hayland Wooded Gully Treeland	Hayland Wooded Gully Treeland is a black beech forest/treeland with mixed indigenous-exotic scrub.  Notable flora include black beech (Fuscospora solandri), whiteywood/māhoe (Melicytus ramiflorus), broadleaf/kāpuka (Griselinia littoralis), wineberry/makomako (Aristotelia serrata) and mountain five-finger/whauwhaupaku (Pseudopanax colensoi).  Notable fauna includes bellbird/korimako (Anthornis melanura melanura) and New Zealand wood pigeon/kererū (Hemiphaga novaeseelandiae).	Partly located within High Plains and partly located within Oxford. Refer to planning map.
SNA036	House Terraces Beech and Podocarp Forest	Beech and podocarp forest.  Notable flora include lowland tōtara (Podocarpus tōtara), matai (Prumnopitys taxifolia), kahikatea (Dacrycarpus dacridioides), black beech (Fuscospora solandri), native broom (Carmichaelia australis), pōkākā (Elaeocarpus hookerianus) and prostrate kōwhai (Sophora prostrata). A rich diversity of indigenous shrubs and grasses are also present.	High Plains
SNA037	Rockford Road Dry Shrubland	Rockford Road Dry Shrubland is a coprosma dominated shrubland remnant on a small volcanic rock outcrop.  Notable flora include necklace fern (Asplenium flabellifolium), native broom (Carmichaelia australis), matagouri/tūmatakuru (Discaria toumatou) (at risk-declining), porcupine shrub (Melicytus alpinus), creeping pōhuehue (Muehlenbeckia axillaris), silver tussock (Poa cita) and NZ harebell (Wahlenbergia albomarginata).	High Plains
SNA038	Hills Bush Beech Forest	Hills Bush Beech Forest is a mosaic of remnant black beech forest and secondary growth indigenous hardwood and kānuka forest.  In total, 106 indigenous plant species have been recorded on site. Main plant species	Oxford

		include black beech (Fuscospora solandri), kānuka (Kunzea robusta) (threatenednationally vulnerable), whiteywood/māhoe (Melicytus ramiflorus), broadleaf/kāpuka (Griselinia littoralis), kōhūhū (Pittosporum tenuifolium), wineberry/makomako (Aristotelia serrata), five-finger/whauwhaupaku (Pseudopanax arboreus), prickly mikimiki (Leptecophylla juniperina subsp. juniperina) and large-leaved pōhuehue (Muehlenbeckia australis).  Other rase flora include dwarf mistletoe (Korthalsella salicornioides) (threatenednationally critical), mānuka (Leptospermum scoparium) (at risk-declining), and filmy fern (Hymenophyllum cupressiforme) (at risk-naturally uncommon).	
SNA039	Whiterock Limestone Vegetation	Whiterock Limestone Vegetation contains indigenous grassland, shrubland, and indigenous limestone rock outcrop vegetation.  Notable flora on site includes at risk-declining species such as speargrass (Aciphylla subflabellata), matagouri/tūmatakuru (Discaria toumatou) and New Zealand linen flax (Linum monogynum). It also contains threatened-nationally endangered species such as Gingidia enysii var. enysii and Weka Pass sun hebe (Heliohebe maccaskillii), kānuka (Kunzea serotina) (threatened-nationally vulnerable), and Waipara gentian (Gentianella calcis subsp. waipara) (threatened-nationally critical).	Oxford
SNA040	Okuku River Kānuka Forest	Okuku River Kānuka Forest is an area of secondary growth kānuka scrub, forest and woodland on badland and incised gullies over several hectares.  In total, 23 indigenous species have been recorded at this site. Notable flora on site includes kōhūhū ( <i>Pittosporum tenuifolium</i> ), cabbage tree/tī kōuka ( <i>Cordyline australis</i> ), kānuka ( <i>Kunzea robusta</i> ) (threatenednationally vulnerable), mikimiki ( <i>Coprosma propinqua</i> ), lowland flax/harakeke ( <i>Phormium tenax</i> ) and large-leaved pōhuehue ( <i>Muehlenbeckia australis</i> ).	Oxford

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		Notable fauna on site include bellbird/korimako ( <i>Anthornis melanura melanura</i> ) and grey warbler ( <i>Gerygone igata igata</i> ).	
SNA041	Okuku River Beech-Kānuka Forest	Okuku River Beech-Kānuka Forest is an incised valley in downland-steepland interface. In total, 55 indigenous plant species were recorded at the site. Notable flora include kānuka ( <i>Kunzea robusta</i> ) (threatenednationally vulnerable), mānuka ( <i>Leptospermum scoparium</i> ) (at riskdeclining), and black beech ( <i>Fuscopora solandri</i> ).	Oxford
SNA042	Blowhard Track Beech Forest	Blowhard Track Beech Forest is a mature black beech forest.  In total, 36 indigenous plant species have	Oxford
		been identified on site. None of the species are classified as threatened or at risk, or are known to be uncommon in the Oxford Ecological District.	
		Notable fauna on site include bellbird/korimako ( <i>Anthornis melanura melanura</i> ), South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa subsp. fuliginosa</i> ) and tūī ( <i>Prosthemadera novaeseelandiae</i> ). The site also contains the New Zealand Falcon/kārearea ( <i>Falco novaeseelandiae novaeseelandiae</i> ) (at risk-recovering).	
SNA043	Bald Hills Eastern Beech Forest	Bald Hills Eastern Beech Forest is a black beech forest with secondary growth indigenous hardwood forest/scrub.	Oxford
		Notable flora on this site includes black beech (Fuscospora solandri).	
SNA044	Bald Hills Middle Beech Forest	Bald Hills Middle Beech Forest is a black beech forest with secondary growth indigenous hardwood forest/scrub.	Oxford
		Notable flora on this site includes black beech (Fuscospora solandri).	
SNA045	Bald Hills Western Beech Forest	Bald Hills Western Beech Forest is a black beech forest with secondary growth indigenous hardwood forest/scrub.	Oxford
		Notable flora on this site includes black beech	

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		(Fuscospora solandri).	
		Notable fauna on site include bellbird/korimako ( <i>Anthornis melanura</i> ).	
SNA046	Westering Downs Beech Forest	Westering Downs Beech Forest is a black beech forest with small areas of broadleaf-five-finger.	Oxford
		In total, 66 indigenous plant species have been recorded at this site. Notable flora includes mānuka ( <i>Leptospermum scoparium</i> ) (at risk-declining), and threatened-nationally critical species New Zealand Myrtle/rōhutu ( <i>Lophomyrtus obcordata</i> ), and myrtle/rōhutu ( <i>Neomyrtus pedunculata</i> ).	
		Fauna identified on this site include bellbird/korimako, (Anthornis melanura melanura), brown creeper (Mohoua novaeseelandiae), grey warbler (Gerygone igata), New Zealand wood pigeon/kererū (Hemiphaga novaeseelandiae), paradise shelduck (Tadorna variegata), shining cuckoo (Chrysococcyx lucidus lucidus), silvereye/tauhou (Zosterops lateralis lateralis), and South Island fantail/pīwakawaka (Rhipidura fuliginosa subsp. fuliginosa).	
SNA047	Tawhai Bush	Tawhai Bush is a mosaic of hill-slope black beech forest with occasional podocarps, hill-top mānuka with succession towards beech forest and a valley-floor sedge wetland plus a stream.	Oxford
		In total, 175 indigenous plant species have been recorded at this site between 1977 and 2005. The most recent survey in 2005 recorded 90 indigenous plant species.	
		Notable flora on site includes species with a conservation status of at risk-declining such as speargrass (Aciphylla subflabellata), yellow mistletoe (Alepis flavida), Coprosma pedicellata, dwarf mistletoe (Korthalsella clavata, mānuka (Leptospermum scoparium), and New Zealand mint (Mentha cunninghamii).	
		This site contains threatened-nationally	

		vulnerable species such as Carmichaelia kirkii, Coprosma obconica, and threatened-nationally critical species such as New Zealand myrtle/rōhutu (Lophomyrtus obcordata) and myrtle (Neomyrtus pedunculata).	
SNA048	Island Road Beech Remnant	Island Road Beech Remnant is a remnant of black beech forest, with regenerating indigenous trees, shrubs and vines.	Oxford
		Notable flora on site includes black beech (Fuscospora solandri) and mānuka (Leptospermum scoparium) (at riskdeclining).	
		Fauna identified on site includes New Zealand wood pigeon/kererū (Hemiphaga novaeseelandiae).	
SNA049	Miro Downs Trig Shrubland	Miro Downs Trig Shrubland is a mosaic of secondary growth indigenous shrubland.	Oxford
		In total 56 indigenous plant species were recorded at the site. This includes at risk-declining species such as matagouri/tūmatakuru ( <i>Discaria toumatou</i> ) and mānuka ( <i>Leptospermum scoparium</i> ). This site also contains kānuka ( <i>Kunzea robusta</i> ) (threatened-nationally vulnerable), and wīwī ( <i>Juncus distegus</i> ) (at-risk naturally uncommon).	
		Notable fauna on site includes bellbird/korimako ( <i>Anthornis melanura melanura</i> ), grey warbler ( <i>Gerygone igata</i> ), paradise shelduck ( <i>Tadorna variegata</i> ) and shining cuckoo ( <i>Chrysococcyx lucidus</i> ).	
SNA050	Middle Bridge Flax Wetland	Middle Bridge Flax Wetland is a palustrine wetland situated on a high river terrace.	Oxford
		In total, 28 indigenous plant species were recorded on site. Notable flora include wīwī ( <i>Juncus distegus</i> ) (at risk-naturally uncommon), kānuka ( <i>Kunzea robusta</i> ) (threatened-nationally vulnerable), and mānuka ( <i>Leptospermum scoparium</i> ) (at risk-declining).	
		Notable fauna on site include bellbird/korimako ( <i>Anthornis melanura</i>	

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		melanura) and South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa</i> subsp. fuliginosa).	
SNA051	Taylors Bush	Taylors Bush is a rare remnant of toeslope and fertile floodplain beech-podocarp forest, scrub and wetland shrubland.  Notable flora on site include black beech (Fuscospora solandri), myrtle (Neomyrtus pedunculata) (threatened-nationally critical), kahikatea (Dacrycarpus dacrydioides) and pōkākā (Elaeocarpus hookerianus).  Notable fauna include bellbird/korimako (Anthornis melanura melanura), New Zealand pigeon/kererū (Hemiphaga novaeseelandiae), Australasian harrier/kahu (Circus approximans), South Island fantail/pīwakawaka (Rhipidura fuliginosa subsp. fuliginosa), shining cuckoo (Chrysococcyx lucidus), silvereye/tauhou (Zosterops lateralis lateralis) and grey warbler (Gerygone igata igata).	Partly located within Oxford and partly located within High Plains. Refer to planning map.
SNA052	Ashley Gorge Road Beech and Hardwood Remnants	A collection of hardwood remnants in the Oxford Ecological District.  These sites contain a diverse range of indigenous flora, with 60 indigenous plant species recorded across all sites. This includes a variety of trees, shrubs, sedges, ferns, vines, grasses, rushes and herbs.  Rare and threatened flora identified include kānuka ( <i>Kunzea robusta</i> ) and white climbing rātā ( <i>Metrosideros diffusa</i> ) which have a conservation status of threatened-nationally vulnerable. Mānuka ( <i>Leptospermum scoparium</i> ) (at risk-declining) was also identified on site.  Fauna identified on site included five indigenous bird species bellbird/korimako ( <i>Anthornis melanura melanura</i> ), grey warbler ( <i>Gerygone igata</i> ), silvereye/tauhou ( <i>Zosterops lateralis lateralis</i> ), South Island Fantail/pīwakawaka ( <i>Rhipidura fuliginosa subsp. fuliginosa</i> ), and spur-winged plover ( <i>Vanellus miles</i> ).	Oxford

SNA053	Okuku Shrub and Flax Wetland	Okuku Shrub and Flax Wetland is an area of shrubland surrounding a wetland.  This site contains 27 indigenous plant species. Notable indigenous flora include mikimiki (Coprosma propinqua), lowland flax/harakeke (Phormium tenax), mānuka (Leptospermum scoparium) (at riskdeclining), and kānuka (Kunzea robusta) (threatened-nationally vulnerable).  Indigenous fauna identified on site include the Australasian harrier/kahu (Circus approximans), grey warbler (Gerygone igata), and South Island fantail/pīwakawaka	Oxford
		(Rhipidura fuliginosa subsp. fuliginosa).	
SNA054	Okuku Hardwood Scrub	Okuku Hardwood Scrub is an area of hardwood scrub adjacent to a wetland in a narrow gully.  This site contains 27 indigenous plant species. Notable indigenous flora include marbleleaf/putaputawētā (Carpodetus serratus), five-finger/whauwhaupaku (Pseudopanax arboreus), mānuka (Leptospermum scoparium) (at risk-declining), large-leaved pōhuehue (Muehlenbeckia australis) and wineberry/makomako (Aristotelia serrata).  Indigenous fauna identified on site include bellbird/korimako (Anthornis melanura melanura), silvereye/tauhou (Zosterops lateralis lateralis) and South Island fantail/pīwakawaka (Rhipidura fuliginosa subsp. fuliginosa).	Oxford
SNA055	Okuku Mānuka Gully Shrubland	Okuku Mānuka Gully Shrubland is an area of shrubland on the edge of a small, shallow gully.  This site contains 20 indigenous plant species. Notable indigenous flora include marbleleaf/putaputawētā (Carpodetus serratus), five-finger/whauwhaupaku (Pseudopanax arboreus), mānuka (Leptospermum scoparium) (at riskdeclining), large-leaved pōhuehue (Muehlenbeckia australis) and wineberry/makomako (Aristotelia serrata).	Oxford

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		Indigenous fauna identified on site include bellbird/korimako ( <i>Anthornis melanura melanura</i> ), silvereye/tauhou ( <i>Zosterops lateralis lateralis</i> ) and South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa subps. fuliginosa</i> ).	
SNA056	Okuku Flaxland	Okuku Flaxland is a lowland flax wetland on a shallow gully floor.	Oxford
		This site contains four indigenous plant species. Notable indigenous flora include lowland flax/harakeke ( <i>Phormium tenax</i> ), mānuka ( <i>Leptospermum scoparium</i> ) (at riskdeclining), mikimiki ( <i>Coprosma propinqua</i> ) and pūkio ( <i>Carex secta</i> ).	
SNA057	Boundary Road Scrub	Boundary Road Scrub occupies a narrow, incised gully with a small stream. The vegetation consists of secondary growth scrub and vineland.	Oxford
		In total, 18 indigenous plant species were recorded on site. Main plant species include large-leaved pōhuehue ( <i>Muehlenbeckia australis</i> ), cabbage tree/tī kōuka ( <i>Cordyline australis</i> ), and kōhūhū ( <i>Pittosporum tenuifolium</i> ).	
		Notable fauna identified on site include Australasian harrier/kahu ( <i>Circus approximans</i> ), grey warbler ( <i>Gerygone igata</i> ), sacred kingfisher ( <i>Todiramphus sanctus</i> ), silvereye/tauhou ( <i>Zosterops lateralis lateralis</i> ) and South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa subsp. fuliginosa</i> ).	
SNA058	Woodburn Kānuka Forest	Woodburn Kānuka Forest consists of secondary growth kānuka forest on a south facing hillslope and terrace.	Oxford
		36 indigenous plant species have been recorded at this site. This matagouri/tūmatakuru ( <i>Discaria toumatou</i> ) (at risk-declining), wīwī ( <i>Juncus distegus</i> ) (at risk-naturally uncommon), and kānuka ( <i>Kunzea robusta</i> ) (threatened-nationally vulnerable).	
		Notable fauna identified on site include Australiasian harrier/kahu <i>(Circus approximans)</i> , bellbird/korimako <i>(Anthornis</i>	

SNA061	Miro Downs Beech Forest	Miro Downs Beech Forest is a ridge with shallow gullies dominated by beech forest.	Oxford
01471000	Wetland	sedgeland.  Notable vegetation on site includes flax ( <i>Phormium tenax</i> ), mānuka ( <i>Leptospermum scoparium</i> ) (at risk-declining), and <i>carex</i> .	Oxiora
SNA060	Forestdale	(Hydrocotyle heteromeria, H. moschata), grass lily (Arthropodium candidum), willowherb (Epilobium nummulariifolium), Lagenophora pumila, Geranium aff. microphyllum, and Viola cunninghamii.  All parts of the site contain kānuka (Kunzea robusta) (threatened-nationally vulnerable).  Across these sites a number of indigenous fauna was identified. This includes the Australasian harrier/kahu (Circus approximans), bellbird/korimako (Anthornis melanura melanura), grey warbler (Gerygone igata igata), South Island fantail/pīwakawaka (Rhipidura fuliginosa subsp. fuliginosa), chirping cicada (Amphipsalta strepitans), and yellow admiral butterfly (Vanessa itea).	Oxford
SNA059	Woodburn Kānuka Dryland	igata igata), and South Island fantail/pīwakawaka ( <i>Rhipidura fuliginosa subsp. fuliginosa</i> ).  Woodburn Kānuka Dryland is a series of small secondary growth kānuka forests and treeland in narrow gullies and on hillslopes.  Notable flora include cabbage tree/tī kōuka ( <i>Cordyline australis</i> ), whiteywood/māhoe ( <i>Melicytus ramiflorus</i> ), kōhūhū ( <i>Pittosporum tenuifolium</i> ), lancewood ( <i>Pseudopanax crassifolius</i> ), and five-finger/whauwhaupaku ( <i>Pseudopanax arboreus</i> ).  These sites also contain shrub species such as niniao ( <i>Helichrysum lanceolatum</i> ), mikimiki ( <i>Coprosma propinqua</i> and <i>C. rhamnoides</i> ) and poroporo ( <i>Solanum laciniatum</i> ).  Site OX052a contains a high diversity of ground cover with species such as pennywort	Oxford

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		Notable flora include black beech (Fuscospora solandri).	
SNA062	The Gully Cabbage Trees	The Gully Cabbage Trees is a small area of vegetation at the base of a terrace.	Oxford
		Notable flora on site include cabbage tree/tī kōuka ( <i>Cordyline australis</i> ) and pūkio ( <i>Carex secta</i> ).	
SNA063	Upper Karetu River Limestone Ridge	Upper Karetu River Limestone Ridge is an area of low canopy mixed forest, shrubs and grassland on a limestone ridge.	Oxford
		Notable flora includes broadleaf/kāpuka ( <i>Griselinia littoralis</i> ), coprosma and silver tussock ( <i>Poa cita</i> ).	
		Notable fauna on site include bellbird/korimako ( <i>Anthornis melanura melanura</i> ) and bush robin.	
SNA064	Glentui River Beech and Podocarp	An area of beech and podocarp forest.	Partly located within Oxford
	Forest	Notable flora include beech (unknown sp.).	and partly located within
		Notable fauna on site include bellbird/korimako ( <i>Anthornis melanura</i>	High Plains. Refer to
		melanura), New Zealand pigeon/kererū	planning map.
		( <i>Hemiphaga novaeseelandiae</i> ) and sacred kingfisher ( <i>Todiramphus sanctus</i> )	
SNA065	Māori Reserve Road Tussock Strips	Māori Reserve Road Tussock Strips is an area of tussock grassland along fencelines.	High Plains
		Notable vegetation includes silver tussock ( <i>Poa cita</i> ).	
SNA066	Corner Block Beech Forest	Corner Block Beech Forest is an area of beech forest in steep slopes and shallow gullies.	Oxford
		Notable vegetation include beech and cabbage tree/tī kōuka ( <i>Cordyline australis</i> ).	
SNA067	Ashley Gorge Bush Strips	Ashley Gorge Bush Strips is an area of forest, treeland scrub and rush sedgeland.	Oxford
		Notable flora include lowland flax/harakeke ( <i>Phormium tenax</i> ) and cabbage tree/tī kōuka ( <i>Cordyline australis</i> ).	

SNA068	Doctors Rock Beech Remnant	Doctors Rock Beech Remnant is a beech forest remnant.  Notable flora on site include beech (unknown sp.).  Notable fauna on site include bellbird/korimako ( <i>Anthornis melanura</i>	Oxford
		melanura)	
SNA069	Mears Bush Beech Forest	Forest of black beech.	Oxford
SNA070	Gammons Creek Beech Forest	Gammons Creek Beech Forest consists of mature scattered beech remnants.  Notable flora on site include black beech (Fuscospora solandri).  Notable fauna on site include bellbird/korimako (Anthornis melanura melanura).	Oxford
SNA071	Sladdens Bush Beech Forest	Sladdens Bush Beech Forest is a mosaic of ridges and small stream systems with beech remnant.  This site contains a range of native flora including trees such as broadleaf/kāpuka ( <i>Griselinia littoralis</i> ), pōkākā ( <i>Elaeocarpus hookerianus</i> ), marbleleaf/putaputawētā ( <i>Carpodetus serratus</i> ), pepper tree/horopito ( <i>Pseudowintera colorata</i> ), wineberry/makomako ( <i>Aristotelia serrata</i> ), tree fuchsia ( <i>Fuchsia excorticata</i> ) and kānuka ( <i>Kunzea ericoides</i> ) (threatened-nationally vulnerable).  Native shrubs on site include include mikimiki ( <i>Coprosma propinqua, C. linariifolia, C. rhamnoides</i> ), <i>Coprosma robusta x linariifolia</i> and weeping mapou ( <i>Myrsine divaricata</i> ).  Native climbers on site include large leaved muehlenbeckia ( <i>Muehlenbeckia australis</i> ), native jasmine ( <i>Parsonsia capsularis</i> ), bush lawyer ( <i>Rubus cissoides</i> ) and clematis ( <i>Clematis paniculata</i> ).  Native herbs on site include red bidibid/piripiri ( <i>Acaena novae-zelandiae</i> ).	Oxford

		Native ferns include prickly shield fern (Polystichum vestitum), small kiokio (Blechnum procerum) and creek fern/kiwikiwi (Blechnum fluviatile).  Native sedges, grasses and rushes on site include giant rush (Juncus pallidus), wīwī (Juncus distegus) (at risk-naturally uncommon), bastard grass (Uncinia uncinata), Uncinia distans and pūkio (Carex secta).  Notable fauna on site include bellbird/korimako (Anthornis melanura melanura).	
SNA072	Washpen Road Shrubland	Washpen Road Shrubland is an area of beech shrub on the true left of the Eyre River.  Notable flora include beech.	Oxford
SNA073	Upper Karetu River Wetland	A wetland area consisting of rush and sedgeland.  Notable flora include pūkio ( <i>Carex secta</i> ).	Oxford
SNA074	Thongcaster Road Kānuka Dryland	Large area of dryland kānuka.  Notable flora include kānuka ( <i>Kunzea robusta</i> ) (threatened-nationally vulnerable), mānuka ( <i>Leptospermum scoparium</i> ) (at riskdeclining), grass orchid (unknown sp.) and native daisy (unknown sp.).	Partly located within Low Plains and partly located within High Plains. Refer to planning map.
SNA075	Lundy Kānuka Dryland	Area of dryland kānuka.  Notable flora include kānuka (unknown sp.),  Coprosma intertexta (at risk-declining), and  Leptinella.	High Plains
SNA076	Carleton Road Kānuka Dryland	Dryland kānuka remnant.  Notable flora include kānuka ( <i>Kunzea robusta</i> ) (threatened-nationally vulnerable), mikimiki ( <i>Coprosma propinqua, C. rhamnoides</i> ) and <i>Clematis marata</i> .	Low Plains
SNA077	Langstone Kānuka Dryland	Kānuka and native grassland. Notable flora on site include kānuka ( <i>Kunzea robusta</i> ) (threatened-nationally vulnerable).	Low Plains
SNA078	Main Race Road Kānuka Dryland	Dryland kānuka remnant.	Low Plains

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		Notable flora on site include kānuka ( <i>Kunzea robusta</i> ) (threatened-nationally vulnerable).	
SNA079	Poyntzs Road	Dryland kānuka remnant.	Low Plains
	Kānuka Dryland	Notable flora include kānuka ( <i>Kunzea robusta</i> ) (threatened-nationally vulnerable).	
SNA080	Heatherton Road Kānuka	Dryland kānuka remnant.	Low Plains
	Dryland	Notable flora include kānuka ( <i>Kunzea robusta</i> ) (threatened-nationally vulnerable).	
SNA081	Pesters Road Kānuka	Dryland kānuka remnant.	Low Plains
	Dryland	Notable flora include kānuka (unknown sp.) and mikimiki ( <i>Coprosma propinqua</i> ). A number of other herbs and shrubs are also present.	
SNA082	Point Paddock Kōwhai	Area of indigenous trees and shrubs.	High Plains
	Kowiiai	Notable flora includes prostrate kōwhai (Sophora prostrata).	
SNA083	Oxford Conservation Area Forest	Beech and podocarp forest.  Significant dry mixed hardwood forest.	Partly located within Oxford and partly located within Torlesse. Refer to planning map.
SNA084	Mount Thomas Forest	Lowland to montane beech forest, podocarp mixed beech forest with lowland shrub and subalpine shrubland.	Oxford
SNA085	Puketeraki Forest Conservation Area	Mountain beech forest with snow tussock. Notable flora includes mountain beech (Nothofagus solandri) and snow tussock (Chionochloa macra).	Torlesse
SNA086	Lower Gorge Forest	Mixed podocarp and mānuka ( <i>Leptospermum scoparium</i> ) (at risk-declining).	Oxford
SNA087	Mid Gorge Forest	Beech forest and mānuka gullies ( <i>Leptospermum scoparium</i> ) (at riskdeclining).	Oxford
SNA088	Lower Bridge Forest	Beech forest and mānuka ( <i>Leptospermum scoparium</i> ) (at risk-declining).	Oxford
SNA089	Top Gorge Forest	Beech forest and mānuka ( <i>Leptospermum scoparium</i> ) (at risk-declining).	Oxford

SNA090	Ashley River Gorge Riverbed & Banks Shrubland	An area of shrubland along the length of the Ashley River Gorge.	Oxford
SNA091	Lees Valley Road Shrubland	Lees Valley Road Shrubland is a steep sided ridge and rock outcrop gully with shrubland.  Notable flora on site includes silver tussock ( <i>Poa cita</i> ).	Oxford
SNA092	Break Neck Gully Forest	Break Neck Gully Forest is a mixed beech, hardwood and podocarp forest with scrub, riparian vegetation and rock bluffs.  Notable flora on site include black beech (Fuscospora solandri), mountain beech (Fuscospora cliffortioides), five-finger/whauwhaupaku (Pseudopanax arboreus), ribbonwood (Hoheria), fuchsia, broadleaf/kāpuka (Griselinia littoralis), matipo (Myrsine australis), kōwhai (Sophora sp.) lancewood (Pseudopanax crassifolius), tree daisy (Oleari sp.) and mātai (Prumnopitys taxifolia).	Oxford

# ECO-SCHED2 - Schedule of significant indigenous vegetation or significant habitat of indigenous fauna types comprising unmapped SNAs

Geographic Area (Ecological)	Ecological District	Vegetation / Habitat Type	Occupying a minimum contiguous area of	Naturally occurring indigenous plant species (common and/or notable) that may be present, including but not limited to:
Coastal	Low Plains	Coastal sand dunes	0.1ha	<ul> <li>Discaria toumatou</li> <li>Pteridium         <ul> <li>esculentum</li> </ul> </li> <li>Ficinia nodosa</li> <li>Poa billardierei</li> <li>Carex pumila</li> </ul>
	Low Plains	Saline wetlands, including lagoons, estuaries, saltmarshes	0.1ha	<ul> <li>Plagianthus divaricatus</li> <li>Apodasmia similis</li> <li>Ficinia nodosa</li> </ul>

			<ul> <li>Juncus kraussii subsp. australiensis</li> <li>Lepidosperma australe</li> <li>Schoenoplectus pungens</li> <li>Cotula coronopifolia</li> <li>Thyridia repens</li> <li>Samolus repens</li> <li>Sarcocornia quinqueflora subsp. quinqueflora</li> <li>Selliera radicans</li> </ul>
Low Plains	Freshwater wetlands	0.1ha	Cordyline australis Phormium tenax Leptospermum scoparium Coprosma propinqua, C. robusta Typha orientalis Bolboschoenus caldwellii Carex coriacea, C. maorica, C. secta Urtica perconfusa Blechnum minus Juncus edgariae, J. pallidus Eleocharis acuta
Low Plains	An area of vegetation which provides habitat for an indigenous fauna species that has a conservation status of Threatened Nationally Critical or Threatened Nationally Endangered	N/A	

Plains	Low Plains	Kānuka forest/	<del>0.1ha</del>	• Kunzea serotine,
	High Plains	treeland/ shrubland (including narrow and sparse roadside 'threads')		<ul> <li>Kanzea seretine, K. robusta</li> <li>Carmichaelia australis</li> <li>Clematis spp.</li> <li>Coprosma intertexta, C. rhamnoides</li> <li>Discaria toumatou</li> <li>Helichrysum lanceolatum</li> <li>Leptecophylla juniperina subsp. juniperina</li> <li>Leptospermum scoparium</li> <li>Pomaderris amoena</li> <li>Leptinella serrulata, L. squalida</li> <li>Rytidosperma clavatum</li> <li>Senecio glomeratus, S. aff. quadridentatus</li> </ul>
	Low Plains High Plains	Indigenous small-leaved shrubland- grassland	0.2ha	Sophora microphylla Discaria toumatou Coprosma crassifolia, C. propinqua Leucopogon fasciculatus Sophora prostrata Carmichaelia australis, C. corrugata Muehlenbeckia axillaris, M. complexa, M. ephedroides Melicytus alpinus Aciphylla subflabellata Poa cita Rytidosperma clavatum Senecio spp.

			<ul> <li>Thelymitra spp.</li> <li>Racomitrium spp., Triquetrella         papillata</li> </ul>
Low Plains High Plains	Indigenous mossfield- herbfield- stonefield	0.2ha	<ul> <li>Carmichaelia         corrugata</li> <li>Coprosma         brunnea, C. petriei</li> <li>Leucopogon fraseri</li> <li>Muehlenbeckia         axillaris, M.         ephedroides</li> <li>Mosses and         lichens, e.g. Bryum         spp., Racomitrium         spp., Triquetrella         papillata</li> </ul>
Low Plains High Plains	Uncultivated dryland soils, including riverbanks and terraces	0.2ha	<ul> <li>Carmichaelia         australis</li> <li>Rytidosperma         clavatum</li> <li>Leucopogon fraseri</li> <li>Muehlenbeckia         axillaris</li> <li>Pteridium         esculentum</li> <li>Thelymitra spp.</li> <li>Dichondra repens</li> <li>Triquetrella         papillata</li> <li>Hypnum         cuppressiforme</li> </ul>
Low Plains High Plains	Freshwater wetlands (e.g. swamp, marsh, fen, bog)	0.1ha	<ul> <li>Cordyline australis</li> <li>Phormium tenax</li> <li>Typha orientalis</li> <li>Coprosma propinqua</li> <li>Blechnum minus</li> <li>Carex coriacea, C. secta</li> <li>Eleocharis acuta</li> </ul>
High Plains	Beech forest	0.3ha	• Fuscospora solandri, F. cliffortioides
High Plains	Podocarp- hardwood forest	<del>0.3ha</del>	Dacrycarpus     dacrydioides

				<ul> <li>Prumnopitys taxifolia</li> <li>Podocarpus totara</li> <li>Elaeocarpus hookerianus</li> <li>Fuchsia excorticata</li> <li>Griselinia littoralis</li> <li>Hoheria angustifolia</li> <li>Lophomyrtus obcordata</li> <li>Melicytus ramiflorus</li> <li>Myrsine divaricata</li> <li>Pennantia corymbosa</li> <li>Pittosporum tenuifolium</li> <li>Pseudopanax arboreus, P. crassifolius</li> <li>Schefflera digitata</li> <li>Hebe salicifolia</li> <li>Coprosma linariifolia, C. pedicellata</li> <li>Neomyrtus pedunculata</li> </ul>
	High Plains	An area of vegetation which provides habitat for an indigenous fauna species that has a conservation status of Threatened Nationally Critical or Threatened Nationally Endangered	N/A	
Lees Valley	Oxford Torlesse	Indigenous short tussock grassland- herbfield-	<del>0.2ha</del>	<ul> <li>Discaria toumatou</li> <li>Festuca novae- zelandiae</li> <li>Aciphylla subflabellata</li> </ul>

		mossfield- stonefield		Carmichaelia     monroi
			0.01-	<ul> <li>Leucopogon fraseri, L. nanum</li> <li>Melicytus alpinus</li> <li>Plantago spathulata</li> <li>Rytidosperma clavatum, R. merum</li> <li>Brachyscome pinnata</li> <li>Sonchus novae- zelandiae</li> </ul>
	Oxford Torlesse	Uncultivated dryland soils, including riverbanks, terraces, screes, and fans	0.2ha	<ul> <li>Discaria toumatou</li> <li>Melicytus alpinus</li> <li>Carmichaelia         monroi</li> <li>Leucopogon         fraseri, L. nanum</li> </ul>
	Oxford Torlesse	Indigenous shrubland/scrub in riparian habitats and on screes/fans and rock outcrops (does not include recently induced matagouri shrubland (scattered, low stature shrubs) over exotic grassland)	<del>0.2ha</del>	<ul> <li>Aristotelia fruticosa</li> <li>Coprosma         intertexta, other         Coprosma spp.</li> <li>Corokia         cotoneaster</li> <li>Discaria toumatou</li> <li>Dracophyllum spp.</li> <li>Leptospermum         scoparium</li> <li>Melicytus alpinus</li> <li>Olearia         avicenniifolia, O.         bullata</li> </ul>
	Oxford Torlesse	Indigenous forest (beech, kānuka, podocarp)	0.3ha	<ul> <li>Fuscospora cliffortioides, F. solandri</li> <li>Griselinia littoralis</li> <li>Hoheria lyallii</li> <li>Kunzea robusta, K. serotina</li> <li>Sophora microphylla</li> </ul>
	Oxford Torlesse	Snow tussock grassland	<del>0.2ha</del>	• Chionochloa macra, C. rubra

	Oxford Torlesse	Valley floor and toeslope wetlands (e.g. swamps, marsh, bogs, fens, seepages)	0.1ha	<ul> <li>Leptospermum scoparium</li> <li>Carmichaelia torulosa</li> <li>Austroderia richardii</li> <li>Phormium tenax</li> <li>Typha orientalis</li> <li>Coprosma propinqua</li> <li>Chionochloa rubra</li> <li>Carex secta, C. tenuiculmis</li> <li>Drosera arcturi</li> <li>Eleocharis acuta</li> <li>Juncus spp.</li> <li>Oreobolus spp.</li> <li>Schoenus</li> </ul>
	Oxford Torlesse	An area of vegetation which provides habitat for an indigenous fauna species that has a conservation status of Threatened Nationally Critical or Threatened Nationally Endangered	N/A	pauciflorus
Foothills	Oxford Torlesse Ashley	Beech forest	<del>0.3ha</del>	• Fuscospora solandri, F. cliffortioides
	Oxford Torlesse Ashley	Podocarp- hardwood forest	0.3ha	<ul> <li>Dacrycarpus dacrydioides</li> <li>Podocarpus totara, P. laetus</li> <li>Prumnopitys taxifolia</li> <li>Fuscospora solandri</li> <li>Aristotelia serrata</li> <li>Carpodetus serratus</li> </ul>

T	T		
			<ul> <li>Griselinia littoralis</li> <li>Hebe salicifolia</li> <li>Hoheria lyallii</li> <li>Melicytus         ramiflorus</li> <li>Myrsine australis</li> <li>Olearia paniculata</li> <li>Pennantia         corymbosa</li> <li>Pittosporum         eugenioides, P.         tenuifolium</li> <li>Pseudopanax         arboreus, P.         colensoi,</li> <li>P. crassifolius</li> <li>Pseudowintera         colorata</li> <li>Schefflera digitata</li> </ul>
Oxford Torlesse Ashley	Kānuka forest/scrub (height threshold - kānuka >4m in height and lower stature kānuka adjoining taller indigenous forest - provides buffering)	<del>0.1ha</del>	<ul> <li>Kunzea robusta, K. serotina</li> <li>Coprosma spp.</li> <li>Leptospermum scoparium</li> </ul>
Oxford Torlesse Ashley	Indigenous shrubland/scrub in riparian habitats and on screes/fans and rock outcrops <sup>1</sup>	<del>0.2ha</del>	<ul> <li>Discaria toumatou</li> <li>Aristotelia fruticosa</li> <li>Carmichaelia australis</li> <li>Coprosma brunnea, C. intertexta and other small-leaved Coprosma spp.</li> <li>Corokia cotoneaster</li> <li>Dracophyllum spp.</li> <li>Hebe spp.</li> <li>Leptospermum scoparium</li> <li>Melicytus alpinus</li> <li>Olearia avicenniifolia, Occymbifolia</li> </ul>

			leptophyllus
Oxford Forlesse Ashley	Tall tussock grassland	<del>0.2ha</del>	<ul> <li>Chionochloa         macra, C. rigida</li> <li>Aciphylla spp.</li> <li>Celmisia spp.</li> </ul>
Oxford Forlesse Ashley	Short tussock grassland on dry ridges, rock outcrops, slips, and valley floors (does not include recently induced silver tussock grassland in sites that historically supported indigenous forest)	<del>0.2ha</del>	<ul> <li>Discaria toumatou</li> <li>Festuca novae- zelandiae</li> <li>Poa cita</li> <li>Aciphylla subflabellata</li> </ul>
Oxford Forlesse Ashley	Wetlands (e.g. swamps, marshes, fens, bogs)	0.1ha	<ul> <li>Cordyline australis</li> <li>Phormium tenax</li> <li>Coprosma         propinqua</li> <li>Carex coriacea, C.         secta</li> <li>Juncus spp.</li> </ul>
Oxford Forlesse Ashley	An area of vegetation which provides habitat for an indigenous fauna species that has a conservation status of Threatened Nationally Critical or Threatened Nationally Endangered	N/A	
	Oxford Corlesse Ashley  Oxford Corlesse Ashley  Oxford Corlesse Ashley  Oxford Corlesse	Short tussock grassland on dry ridges, rock outcrops, slips, and valley floors (does not include recently induced silver tussock grassland in sites that historically supported indigenous forest)  Oxford Ox	Oxford Ox

 The New Zealand Plant Conservation Network https://www.nzpcn.org.nz/flora/ provides photos and details about these species.<sup>147</sup>

ECO-SCHED32<sup>148</sup> - Schedule of naturally uncommon ecosystems, and species that are threatened, at risk, or reach their national or regional distribution limits in the District



#### Table ECO-1: Naturally uncommon ecosystem types in the District

Naturally uncommon ecosystem type
Ephemeral wetlands
Active sand dunes
Braided riverbeds
Coastal lagoons
Dune slacks
Seepages and flushes
Basic cliffs, scarps, and tors
Calcareous cliffs, scarps and tors
Estuaries
Snow banks

**Advisory Note:** <a href="https://www.landcareresearch.co.nz/publications/naturally-uncommon-ecosystems/">https://www.landcareresearch.co.nz/publications/naturally-uncommon-ecosystems/</a> provides an outline of these ecosystems.

Table ECO-2: Threatened and at risk species recorded or likely to be present in the District (naturally occurring species only)

Scientific Name	Common Name	<b>Conservation Status</b>
Brachyscome pinnata		Threatened-Nationally Critical
Carmichaelia torulosa	Canterbury pink broom	Threatened-Nationally Critical
Gentianella calcis subsp. waipara	Native gentian	Threatened-Nationally Critical

<sup>&</sup>lt;sup>147</sup> Federated Farmers [414.123], DoC [419.92], CCC [360.18], Judith Roper-Lindsay [120.2 & 120.14], and ECan [316.108]. ECO s42A Report.

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<sup>&</sup>lt;sup>148</sup> Consequential renumbering as a result of ECO-SCHED2 being deleted. ECO s42A Report.

Korthalsella salicornioides	Dwarf mistletoe	Threatened-Nationally Critical
Lophomyrtus obcordata	Rōhutu, NZ myrtle	Threatened-Nationally Critical <sup>1</sup>
Neomyrtus pedunculata	Rōhutu, myrtle	Threatened-Nationally Critical <sup>1</sup>
Sebaea ovata	Sebaea	Threatened-Nationally Critical
Heliohebe maccaskillii / Veronica maccaskillii	Weka Pass sun hebe	Threatened-Nationally Endangered
Carex inopinata	Grassy mat sedge, unexpected sedge	Threatened-Nationally Vulnerable
Carmichaelia corrugata	Dwarf broom	Threatened-Nationally Vulnerable
Carmichaelia kirkii	Climbing broom	Threatened-Nationally Vulnerable
Coprosma obconica		Threatened-Nationally Vulnerable
Geranium retrorsum	Turnip-rooted geranium	Threatened-Nationally Vulnerable
Kunzea robusta	Kānuka, rawirinui	Threatened-Nationally Vulnerable <sup>1</sup>
Kunzea serotina	Kānuka, makahikatoa	Threatened-Nationally Vulnerable <sup>1</sup>
Melicytus flexuosus		Threatened-Nationally Vulnerable
Metrosideros diffusa	Climbing rātā	Threatened-Nationally Vulnerable <sup>1</sup>
Muehlenbeckia ephedroides	Leafless pōhuehue	Threatened-Nationally Vulnerable
Olearia fimbriata		Threatened-Nationally Vulnerable
Ranunculus ternatifolius		Threatened-Nationally Vulnerable
Raoulia monroi	Fan-leaved mat daisy	Threatened-Nationally Vulnerable
Solanum aviculare subsp. aviculare	Poroporo	Threatened-Nationally Vulnerable
	-	•

Sonchus novae-zelandiae	Kirkianella	Threatened-Nationally Vulnerable
Acaena buchananii	Bidibidi, piripiri	At Risk-Declining
Aciphylla subflabellata	Grassland speargrass, grassland spaniard, kurikuri	At Risk-Declining
Alepis flavida	Yellow mistletoe, pirita	At Risk-Declining
Carex buchananii	Cutty grass, matirewa	At Risk-Declining
Carex litorosa	Salt sedge	At Risk-Declining
Carex tenuiculmis		At Risk-Declining
Carmichaelia monroi	Stout dwarf broom	At Risk-Declining
Coprosma brunnea / Coprosma acerosa		At Risk-Declining
Coprosma intertexta		At Risk-Declining
Coprosma pedicellata		At Risk-Declining
Coprosma virescens	Mikimiki	At Risk-Declining
Coprosma wallii	Bloodwood	At Risk-Declining
Daucus glochidiatus	Dwarf carrot	At Risk-Declining
Discaria toumatou	Matagouri, tūmatakuru	At Risk-Declining
Eleocharis neozelandica	Sand spike sedge	At Risk-Declining
Ficinia spiralis	Pīngao, pīkao, golden sand sedge	At Risk-Declining
Geranium solanderi	Native geranium	At Risk-Declining
Hypericum involutum	Grassland hypericum	At Risk-Declining
Juncus caespiticius		At Risk-Declining
Korthalsella clavata	Dwarf mistletoe	At Risk-Declining
Leptinella serrulata	Dryland button daisy	At Risk-Declining
Leptospermum scoparium	Mānuka, tea tree	At Risk-Declining <sup>1</sup>
Leucopogon nanum		At Risk-Declining
Linum monogynum	NZ linen flax	At Risk-Declining
Mentha cunninghamii	NZ mint	At Risk-Declining
Olearia lineata	Narrow-leaved tree daisy	At Risk-Declining
Poa billardierei	Sand tussock, hinarepe	At Risk-Declining
Raoulia australis	Common mat daisy	At Risk-Declining
Rytidosperma exiguum	Danthonia, bristle grass	At Risk-Declining

Rytidosperma merum	Danthonia, bristle grass	At Risk-Declining
Tupeia antarctica	White mistletoe, pirita, tupia	At Risk-Declining
Urtica perconfusa	Swamp nettle	At Risk-Declining
Zoysia minima	Native twitch	At Risk-Declining
Xanthoparmelia semiviridis	Resurrection lichen	At Risk-Declining
Centipeda aotearoana	New Zealand sneezewort	At Risk-Naturally Uncommon
Chenopodium allanii		At Risk-Naturally Uncommon
Hymenophyllum cupressiforme	Filmy fern	At Risk-Naturally Uncommon
Juncus distegus	Wīwī	At Risk-Naturally Uncommon
Pimelea pseudolyallii	Pimelea	At Risk-Naturally Uncommon
Pseudopanax ferox	Fierce lancewood	At Risk-Naturally Uncommon
Thyridia repens	Native musk	At Risk-Naturally Uncommon
Mosses		
<u>Ceratodon purpureus</u>		<u>Threatened – Nationally</u> <u>Critical</u>
Tortula viridipila		<u>Threatened – Nationally</u> <u>Endangered</u>
Bryum pallescens		At Risk – Naturally Uncommon
<u>Liverworts</u>		•
Ricciocarpos natans		At Risk - Declining
Chiloscyphus erosus		At Risk – Naturally Uncommon
<u>Lichens</u>		
Cladia inflata		At Risk – Declining
Xanthoparmelia semiviridis		At Risk - Declining
Badimiella pteridophila		At Risk – Naturally Uncommon
Menegazzia aeneofusca		At Risk – Naturally Uncommon
Menegazzia globulifera		At Risk – Naturally Uncommon
Parmeliella gymnocheila		At Risk – Naturally Uncommon

Podostictina ardesiaca	At Risk – Naturally Uncommon
Pseudocyphellaria gretae	At Risk – Naturally Uncommon
Pseudocyphellaria intricata	At Risk – Naturally Uncommon
Pseudocyphellaria <u>lividofusca</u>	At Risk – Naturally Uncommon <sup>149</sup>

All species of Myrtaceae in New Zealand, including kānuka (*Kunzea robusta* and *K. serotina*), mānuka (*Leptospermum scoparium*), and rātā (*Metrosideros* spp.), have been classified as Threatened or At Risk nationally due to the potential threat posed by myrtle rust (*Austropuccinia psidii*). However, this fungus has not yet been recorded in the wild in Canterbury, and kānuka, mānuka and rātā are still relatively common and widespread in the Canterbury Region.

#### **Advisory Note**

• The New Zealand Plant Conservation Network https://www.nzpcn.org.nz/flora/provides photos and details about these species.

## Table ECO-3: Indigenous plant species that reach their national or regional distribution limits in the District (naturally occurring species only)

Scientific Name	Common Name	Distribution limit
Astelia grandis	Swamp astelia	Southern regional limit
Cardamine cubita	Bittercress	Only known from the Lees Valley
Carex dipsacea	Teasel sedge	Eastern distribution limit
Gratiola sexdentata	Gratiola	Possible northern regional limit
Hebe leiophylla / Veronica leiophylla		Southern national limit
Leucogenes grandiceps	South Island eidelweiss	Possible eastern national limit
Pomaderris amoena	Pomaderris	Southern national limit

#### **Advisory Note**

• The New Zealand Plant Conservation Network https://www.nzpcn.org.nz/flora/provides photos and details about these species.

#### **Appendices**

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<sup>&</sup>lt;sup>149</sup> ECan [316.109]. ECO Reply Report.

# ECO-APP1 - Criteria for determining significant indigenous vegetation and significant habitat of indigenous fauna

Representativeness	<ul> <li>Indigenous vegetation or habitat of indigenous fauna that is representative, typical or characteristic of the natural diversity of the relevant ecological district. This can include degraded examples where they are some of the best remaining examples of their type, or represent all that remains of indigenous biodiversity in some areas.</li> <li>Indigenous vegetation or habitat of indigenous fauna that is a relatively large example of its type within the relevant ecological district.</li> </ul>
Rarity/Distinctiveness	<ul> <li>Indigenous vegetation or habitat of indigenous fauna that has been reduced to less than 20% of its former extent in the region, or relevant land environment, ecological district, or freshwater environment.</li> <li>Indigenous vegetation or habitat of indigenous fauna that supports an indigenous species that is threatened, at risk, or uncommon, nationally or within the relevant ecological district.</li> <li>The site contains indigenous vegetation or an indigenous species at its distribution limit within the Canterbury Region or nationally.</li> <li>Indigenous vegetation or an association of indigenous species that is distinctive, of restricted occurrence, occurs within an originally rare ecosystem, or has developed as a result of an unusual environmental factor or combinations of factors.</li> </ul>
Diversity and Pattern	Indigenous vegetation or habitat of indigenous fauna that contains a high diversity of indigenous ecosystem or habitat types, indigenous taxa, or has changes in species composition reflecting the existence of diverse natural features or ecological gradients.
Ecological Context	<ul> <li>Vegetation or habitat of indigenous fauna that provides or contributes to an important ecological linkage or network, or provides an important buffering function.</li> <li>A wetland which plays an important hydrological, biological or ecological role in the natural functioning of a river or coastal system.</li> <li>Indigenous vegetation or habitat of indigenous fauna that provides important habitat (including refuges from predation, or key habitat for feeding, breeding, or resting) for indigenous species, either seasonally or permanently.</li> </ul>

### ECO-APP2 - Principles for biodiversity offsetting

Adherence to	A biodiversity offset is a commitment to redress more than minor
mitigation hierarchy	residual adverse impacts. It should only be contemplated after

	steps to avoid, remedy and mitigate adverse effects have been
	demonstrated to have been sequentially exhausted and thus applies only to residual indigenous biodiversity impacts.
Limits to offsetting	Many biodiversity values cannot be offset and if they are adversely affected then they will be permanently lost. These situations include where:  a. residual adverse effects cannot be offset because of the irreplaceability or vulnerability of the indigenous biodiversity affected;  b. there are no technically feasible or socially acceptable options by which to secure gains within acceptable timeframes; and  c. effects on indigenous biodiversity are uncertain, unknown or little understood, but potential effects are significantly adverse.  In these situations, an offset would be inappropriate. This principle reflects a standard of acceptability for offsetting and a proposed offset must provide an assessment of these limits that supports its success.
No net loss and preferably a net gain	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 biodiversity. No net loss and net gain are measured by type, amount and condition at the impact and offset site and require an explicit loss and gain calculation.
Additionality	A biodiversity offset must achieve gains in indigenous biodiversity above and beyond gains that would have occurred in the absence of the offset, including that gains are additional to any remediation and mitigation undertaken in relation to the adverse effects of the activity. Offset design and implementation must avoid displacing activities harmful to indigenous biodiversity to other locations.
Like-for-like	The ecological values being gained at the offset site are the same as those being lost at the impact site across types of indigenous biodiversity, amount of indigenous biodiversity (including condition), over time and spatial context.
Landscape context	Biodiversity offset actions must be undertaken where this will result in the best ecological outcome, preferably close to the location of development or within the same ecological district, and must consider the landscape context of both the impact site and the offset site, taking into account interactions between species, habitats and ecosystems, spatial connections and ecosystem function.
Long-term outcomes	The biodiversity offset must be managed to secure outcomes of the activity that last as least as long as the impacts, and preferably in perpetuity.

Time lags	The delay between loss of indigenous biodiversity at the impact site and gain or maturity of indigenous biodiversity at the offset site must be minimised so that gains are achieved within the consent period.
Trading up	When trading up forms part of an offset, the proposal must demonstrate that the indigenous biodiversity values gained are demonstrably of higher value than those lost, and the values lost are not indigenous taxa that are listed as Threatened, At-risk or Data deficient in the New Zealand Threat Classification System lists, or considered vulnerable or irreplaceable.
Offsets in advance	A biodiversity offset developed in advance of an application for resource consent must provide a clear link between the offset and the future effect. That is, the offset can be shown to have been created or commenced in anticipation of the specific effect and would not have occurred if that effect were not anticipated.
Proposing a biodiversity offset	A proposed biodiversity offset must include a specific biodiversity offset management plan.
Science and matauranga Māori	The design and implementation of a biodiversity offset must be a documented process informed by science, including an appropriate consideration of matauranga Māori.
Stakeholder participation	Opportunity for the effective participation of stakeholders should be demonstrated when planning for biodiversity offsets, including their evaluation, selection, design, implementation and monitoring. Stakeholders are best engaged early in the offset consideration process.
Transparency	The design and implementation of a biodiversity offset and communication of its results to the public should be undertaken in a transparent and timely manner. This includes transparency of the loss and gain calculation and the data that informs a biodiversity offset.

#### **ECO-APP3 - Principles for biodiversity compensation**

These principles apply to the use of biodiversity compensation for adverse effects on indigenous biodiversity:

- (1) Adherence to effects management hierarchy: Biodiversity compensation is a commitment to redress more than minor residual adverse effects, and should be contemplated only after steps to avoid, minimise, remedy, and offset adverse effects are demonstrated to have been sequentially exhausted.
- (2) When biodiversity compensation is not appropriate: Biodiversity compensation is not appropriate where indigenous biodiversity values are not able to be compensated for.

  Examples of biodiversity compensation not being appropriate include where: (a) the indigenous biodiversity affected is irreplaceable or vulnerable;

- (b) effects on indigenous biodiversity are uncertain, unknown, or little understood, but potential effects are significantly adverse or irreversible;
- (c) there are no technically feasible options by which to secure a proposed net gain within acceptable timeframes.
- (3) **Scale of biodiversity compensation:** The indigenous biodiversity values lost through the activity to which the biodiversity compensation applies are addressed by positive effects to indigenous biodiversity (including when indigenous species depend on introduced species for their persistence), that outweigh the adverse effects.
- (4) **Additionality:** Biodiversity compensation achieves gains in indigenous biodiversity above and beyond gains that would have occurred in the absence of the compensation, such as gains that are additional to any minimisation and remediation or offsetting undertaken in relation to the adverse effects of the activity.
- (5) **Leakage:** Biodiversity compensation design and implementation avoids displacing harm to other indigenous biodiversity in the same or any other location.
- (6) **Long-term outcomes:** Biodiversity compensation is managed to secure outcomes of the activity that last as least as long as the impacts, and preferably in perpetuity. Consideration must be given to long-term issues around funding, location, management, and monitoring.
- (7) Landscape context: Biodiversity compensation is undertaken where this will result in the best ecological outcome, preferably close to the impact site or within the same ecological district. The action considers the landscape context of both the impact site and the compensation site, taking into account interactions between species, habitats and ecosystems, spatial connections, and ecosystem function.
- (8) **Time lags:** The delay between loss of, or effects on, indigenous biodiversity values at the impact site and the gain or maturity of indigenous biodiversity at the compensation site is minimised so that the calculated gains are achieved within the consent period or, as appropriate, a longer period (but not more than 35 years).
- (9) **Trading up:** When trading up forms part of biodiversity compensation, the proposal demonstrates that the indigenous biodiversity gains are demonstrably greater or higher than those lost. The proposal also shows the values lost are not to Threatened or At Risk (declining) species or to species considered vulnerable or irreplaceable.
- (10) **Financial contributions:** A financial contribution is only considered if: (a) there is no effective option available for delivering biodiversity gains on the ground; and
- (b) it directly funds an intended biodiversity gain or benefit that complies with the rest of these principles.
- (11) **Science and mātauranga Māori:** The design and implementation of biodiversity compensation is a documented process informed by science, and mātauranga Māori.
- (12) **Tangata whenua and stakeholder participation:** Opportunity for the effective and early participation of tangata whenua and stakeholders is demonstrated when planning for biodiversity compensation, including its evaluation, selection, design, implementation, and monitoring.

(13) **Transparency:** The design and implementation of biodiversity compensation, and communication of its results to the public, is undertaken in a transparent and timely manner.<sup>150</sup>

### ECO-APP3 - Biodiversity Management Plan (BMP) contents

- a. <u>BMP assessors' details and qualifications and details about the timing of the initial and subsequent evaluations;</u>
- b. <u>site details including area, topography, ecological district and habitat description, habitat modification, fence conditions;</u>
- c. <u>biodiversity values including ecosystem type, composition, presence of rare/threatened</u> species/habitats, condition;
- d. <u>threats to biodiversity values such as presence of pests/weeds, edge effects from adjacent</u> activities, erosion, fire risk, climate change risks;
- e. <u>recommended management, conservation and restoration actions with associated timeframes;</u>
- f. monitoring and reporting conditions; and
- g. review clause. 151

<sup>&</sup>lt;sup>150</sup> Forest and Bird [192.2] and DoC [419.14]. ECO s42A Report.

<sup>&</sup>lt;sup>151</sup> ECan [316.105]. ECO s42A Report.