

TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS
SURVEY

FAIRLIGHT (FOREST CREEK)
STATION



Report prepared for Timaru District Council by Mike Harding
May 2016

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: Fairlight Station c/-Roger Johnston
Valuation References: . 24640/004.01 and 24640/004.00
Address: Rangitata Gorge Road, Geraldine 7992
Location:..... Southwest side of upper Rangitata River
Ecological District:..... Hakatere

ECOLOGICAL CONTEXT:

The property lies on the southwest (true right) side of the upper Rangitata River, inland from Peel Forest South Canterbury. It covers broad lateral moraine (Butler Downs) rising to approximately 1000m and lower-altitude (c.450m) river terraces alongside the Rangitata River. The property lies between Forest Creek, Rangitata River, Mesopotamia Station and the lower slopes of Sinclair Range. The underlying geology is predominantly glacial till (lateral moraine) and outwash, with a smaller area of sandstone (greywacke) and mudstone (argillite) along Forest Creek and recent alluvial deposits alongside the Rangitata River (Cox and Barrell, 2007).

The property is in Hakatere Ecological District (McEwen, 1987). Most parts of the Butler Downs lie within the E4.1b and E4.2b Level IV Land Environments as defined by Leathwick *et al* (2003), with small areas in the N2.1b Land Environment. Lower-altitude terraces along the Rangitata River boundary lie within J2.2b and N2.1b Land Environments. Indigenous vegetation within the E4.1b Land Environment is regarded as 'at risk'; and within the J2.2b and N2.1b Land Environments as 'acutely threatened' (Walker *et al*, 2006).

It is unclear how much of this part of Hakatere Ecological District was forested in pre-human times. Forested areas were most likely dominated by mountain beech (*Nothofagus solandri*), though mountain totara (*Podocarpus cunninghamii*), kowhai (*Sophora microphylla*), broadleaf (*Griselinia littoralis*) and kanuka (*Kunzea ericoides*) may have been present. Narrow-leaved snow tussock (*Chionochloa rigida*) grassland is likely to have dominated frost-prone terraces and flats, with red tussock (*Chionochloa rubra*) grassland at damper sites and fescue tussock (*Festuca novae-zelandiae*) grassland on young surfaces. Sedgeland, rushland and reedland (wetland vegetation) would have been present at poorly drained sites.

Today indigenous vegetation cover in this part of Hakatere Ecological District is largely confined to undeveloped slopes and terraces, where tussockland and sedgeland (wetland) communities are present, and to small patches of beech forest. Habitats of indigenous fauna have been depleted or modified. However, the property is likely to provide habitat for karearea/eastern falcon (*Falco novaeseelandiae*), a species listed as 'at risk' (recovering) by Robertson *et al* (2012), and for 'at risk' and 'threatened' lizard species listed by Hitchmough *et al* (2012), such as common skink (*Oligosoma polychroma*) (declining).

SIGNIFICANT AREAS ON THE PROPERTY:

This property was not surveyed as part of the District-wide survey of Significant Natural Areas because permission for access was declined by the landowner. However, there is some survey data from properties in the area and parts of Forest Creek Station (Butler Downs) have been inspected previously. Also, there are good recent aerial images of the area. So it is possible to determine the indigenous vegetation and habitat that is likely to be present on the property.

Indigenous vegetation on parts of Butler Downs that are not developed into pasture or planted with exotic trees appears to comprise relatively extensive areas of tussockland, grassland and

sedgeland/rushland (seepage wetland) plant communities. Several small wetlands and ephemeral tarns are present within the plantation forest on Butler Downs. Steep slopes along the Forest Creek property boundary support remnants of mountain beech forest. Terraces adjacent to the Rangitata River are largely developed into pasture, except for two relatively large wetlands and strips of wetland vegetation along streams.

Without the benefit of a field survey it is difficult to accurately determine the extent of significant indigenous vegetation and habitat on the property. Aerial images and roadside views indicate the presence of a number of mostly small areas of indigenous vegetation and habitat that are likely to be Significant Natural Areas (SNAs) when assessed against the Timaru District Plan and/or Canterbury Regional Policy Statement criteria. Note that only areas at altitudes lower than 900m were assessed, as activities at higher-altitude areas are covered by other plan rules.

In summary, likely SNAs identified in this report are:

- five beech forest remnants (one large and four small) on slopes beside Forest Creek (total area c.74 ha)
- ten small wetlands and tarns within plantation forest on Butler Downs (total area c.19 ha)
- two larger areas of wetlands, tarns and boulderfield on Butler Downs (total area c.114 ha)
- two wetlands (one large and one small) on Rangitata River terraces (total area c.43 ha)
- two small lakes with wetland vegetation in small tributaries near Forest Creek (total area c.5 ha)

The Rangitata River and Forest Creek floodplains adjacent to the property are also listed as SNAs.

The likely values and boundaries of these areas are described on the SNA Forms in this report. Note that the boundaries of the SNAs are indicative, rather than precise. These areas are likely to meet the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) (and Canterbury Regional Policy Statement), and are considered to be sustainable in the long term, or sustainable with appropriate management (criterion vii, page B19). SNAs are subject to confirmation by Council after regarding the matters listed in the District Plan (pages B19-B20). It is expected that SNAs will be listed in the District Plan by way of a plan review.

At present, consent is required from Council for clearance of areas of indigenous vegetation or habitat which meet the Interim Definitions in the District Plan. Clearance includes burning, track construction, spraying with herbicides and over-planting. To assist with the protection and management of any SNA, landowners can apply to Council for financial assistance. Any questions regarding the protection, management and use of SNAs should be directed to the District Planner.

There may be other areas of significant indigenous vegetation or habitat on the property. This report should not be regarded as a comprehensive assessment; instead, it describes areas that are readily assessed from aerial photography and roadside views. Other possible significant sites include smaller areas of wetland vegetation not readily discernible from aerial photographs, tussockland plant communities on Butler Downs (which may support threatened species such as *Kirkianella novae-zealandiae*), and other habitats of threatened plant or animal species.

TIMARU DISTRICT SNA SURVEY

SNAs 776-780

Area Name: Forest Creek beech forest remnants	Property: Fairlight (Forest Creek) Station	
Ecological District: Hakatere	Nearest Locality: Peel Forest	
776 central map ref. (NZTM): 1428250E-5156770N	Area Size (ha): c. 64	Altitude (m): 700-900
777 central map ref. (NZTM): 1429600E-5157030N	Area Size (ha): c. 1.5	Altitude (m): 640-660
778 central map ref. (NZTM): 1431180E-5158500N	Area Size (ha): c. 2.5	Altitude (m): 590-610
779 central map ref. (NZTM): 1431980E-5158750N	Area Size (ha): c. 0.8	Altitude (m): 580-600
780 central map ref. (NZTM): 1429850E-5157400N	Area Size (ha): c. 5.1	Altitude (m): 650-800
Assessor: Mike Harding	Survey Time: n/a	Survey Date: n/a

General Description:

These SNAs are located on steep slopes above Forest Creek at the southeast boundary of the property. They were viewed from the Forest Creek riverbed and from aerial photographs. The SNAs encompass areas of mountain beech forest and areas of rock scree and shrubland on steep slopes adjacent to the forest patches.

These SNAs lie within Hakatere Ecological District (McEwen, 1987). The western (upper-valley) forest patches (SNAs 776, 777 and 780) lie on glacial deposits (moraine); the eastern forest patches (SNAs 778 and 779) lie on greywacke/argillite. Moraine is an 'originally rare' ecosystem, in which indigenous vegetation is listed as 'threatened' (nationally vulnerable) (Holdaway *et al*, 2012).

Plant Communities:

This main plant community present is mountain beech (*Nothofagus solandri* var. *cliffortioides*) forest. This forest was not surveyed on the property, though it is clear that the forest canopy is dominated by mountain beech. Earlier surveys of beech forest in this area indicate that yellow mistletoe (*Alepis flavida*) and red mistletoe (*Peraxilla tetrapetala*) are likely to be present in the forest canopy. Understorey species recorded in nearby stands are mingimingi (*Coprosma propinqua*), *Coprosma dumosa*, celery pine (*Phyllocladus alpinus*), snow totara (*Podocarpus alpinus*) and bush lawyer (*Rubus cissoides*). Ground-cover species likely to be present are prickly shield fern (*Polystichum vestitum*), thousand-leaved fern (*Hypolepis millefolium*), *Blechnum penna-marina*, *Blechnum minus*, mountain kiokio (*Blechnum montanum*), *Lagenifera strangulata*, wall lettuce* (*Mycelis muralis*), *Chiloglottis cornuta* and moss species.

Species observed at the forest margin along Forest Creek were mountain ribbonwood (*Hoheria lyallii*), koromiko (*Hebe salicifolia*), mountain akeake (*Olearia aviceniifolia*), tutu (*Coriaria sarmentosa*) and mingimingi.

Rocky slopes adjacent to SNAs 776 and 780 are sparsely vegetated though are likely to support indigenous plant species that are representative of the flora originally present. The four smaller SNAs (all SNAs except 776) have exotic plantation forest at their up-slope margins. Indigenous shrubland is present at other beech forest margins.

The lack of access to the main areas of forest precluded effective survey of indigenous fauna. However, bird species observed in the Forest Creek area were rifleman (*Acanthisitta chloris*), grey warbler (*Gerygone igata*), tomtit (*Petroica macrocephala*), welcome swallow (*Hirundo tabitica*), harrier hawk (*Circus approximans*), black shag (*Phalacrocorax carbo*) and two adult falcon (*Falco novaeseelandiae*), presumably a pair. Open rubbly slopes and shrubland are likely to provide favourable habitat for lizards, including common skink (*Oligosoma polychroma*).

Notable Flora, Fauna and Habitats:

Notable features of these SNAs are the presence of remnant indigenous vegetation (beech forest) in an area where woody vegetation is substantially depleted and that the three up-valley SNAs are on a 'nationally vulnerable' ecosystem (moraine).

Populations of two plant species listed ‘at risk’ by de Lange *et al* (2012) are likely to be present:
yellow mistletoe (*Alepis flavida*) declining
red mistletoe (*Peraxilla tetrapetala*) declining

Two NZ falcon/karearea were observed nearby and are likely to utilize similar habitats throughout the area. Falcon are listed by Robertson *et al* (2012) as an ‘at risk’ (recovering) species. Areas adjacent to the beech forest appear to provide favourable habitat for common skink, a species listed as ‘at risk’ by Hitchmough *et al* (2012).



SNA 780, viewed from Forest Creek

Notable Plant and Animal Pests:

Assessment of plant and animal pests was not practical, however wilding Douglas fir (*Pseudotsuga menziesii*) trees are present on slopes adjacent to the beech forest.



SNA 778, viewed from Forest Creek

Boundaries (buffering, fencing, adjoining plant communities and habitats):

The boundaries of these SNAs have been drawn to include the main areas of forest and adjacent areas of rocky ground or shrubland. Ground survey would be required to confirm the accuracy of these proposed boundaries.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	H	Indigenous vegetation which is highly representative of the original vegetation and typical of that remaining in the ecological district.
Rarity	M/H	Likely to support populations of two 'at risk' plant species. Likely to provide habitat for an 'at risk' bird species (falcon). Forest is rare in this part of the ecological district.
Diversity and pattern	?	Unclear
Distinctiveness/special features	M	Part of a network of forest patches in the Forest Creek area that collectively provide important habitat for indigenous fauna.
Other Criteria		
Size/shape	M/H	Moderate-sized SNAs that are well buffered by their locations and by adjacent plantation forest.
Connectivity	M	These SNAs lie close to other forest patches in the area and are linked to each other by exotic forest, shrubland and tussockland.
Long-term Sustainability	M/H	Control of Douglas fir and probably animal pests (e.g. possums) will be required to maintain ecological values in the long term.

ASSESSMENT AGAINST REGIONAL POLICY STATEMENT CRITERIA:

Criteria	Yes/No	Comments
Representativeness	Yes	Indigenous vegetation that is highly representative and is typical/characteristic of the natural diversity of the ecological district.
Rarity/Distinctiveness	Yes	Indigenous vegetation that is reduced to less than 20% of its former extent in the ecological district. Likely to support two 'at risk' plant species. Provides habitat for an 'at risk' bird species.
Diversity and Pattern	?	Unclear
Ecological Context	Yes	Part of a network of forest patches in the Forest Creek area that collectively provide important habitat for indigenous fauna.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):

These areas represent remnants of the indigenous vegetation that was once widespread in this area. The older parts of the forest patches have presumably escaped earlier disturbance (notably fire) due to their locations at sheltered sites. These areas have only very limited potential for development.

Discussion:

If the above assessment is accurate, these sites easily meet the District Plan and Regional Policy Statement criteria for significant natural areas (SNAs). Important values are the presence of highly representative indigenous vegetation, likely populations of 'at risk' plant species, and important habitat for an 'at risk' bird species.



SNAs 776, 777 and 780, presumed extent



SNAs 778 and 779, presumed extent

TIMARU DISTRICT SNA SURVEY SNAs 781-784 and 786-791

Area Name: Butler Downs wetlands and tarns	Property: Fairlight (Forest Creek) Station	
Ecological District: Hakatere	Nearest Locality: Peel Forest	
781 central map ref. (NZTM): 1429990E-5160000N	Area Size (ha): c. 5.5	Altitude (m): c. 700
782 central map ref. (NZTM): 1430240E-5160290N	Area Size (ha): c. 4.2	Altitude (m): c. 700
783 central map ref. (NZTM): 1430550E-5160230N	Area Size (ha): c. 0.5	Altitude (m): c. 700
784 central map ref. (NZTM): 1431900E-5161470N	Area Size (ha): c. 1	Altitude (m): c. 650
786 central map ref. (NZTM): 1428850E-5160400N	Area Size (ha): c. 0.8	Altitude (m): c. 730
787 central map ref. (NZTM): 1428570E-5160580N	Area Size (ha): c. 1.4	Altitude (m): c. 730
788 central map ref. (NZTM): 1428440E-5160780N	Area Size (ha): c. 1	Altitude (m): c. 730
789 central map ref. (NZTM): 1429030E-5160910N	Area Size (ha): c. 0.9	Altitude (m): c. 730
790 central map ref. (NZTM): 1427960E-5161090N	Area Size (ha): c. 0.7	Altitude (m): c. 730
791 central map ref. (NZTM): 1428030E-5162340N	Area Size (ha): c. 2.7	Altitude (m): c. 760
Assessor: Mike Harding	Survey Time: n/a	Survey Date: n/a

General Description:

These SNAs are located in depressions and small valleys within the extensive Douglas fir plantation forest on Butler Downs. Permission for access for a ground survey was denied by the landowner. The SNAs were viewed and selected from aerial photographs. The SNAs appear to comprise areas of wetland vegetation and small tarns, including periodically dry (ephemeral) tarns. Ten sites are selected as SNAs although all are small, together comprising approximately 19 hectares.

The SNAs lie on lateral moraine, in valleys formed by meltwater streams or depressions formed by melting ice. They are within Hakatere Ecological District (McEwen, 1987). Moraine, ephemeral wetlands and seepages/flushes are regarded as an 'originally rare' ecosystems, in which indigenous vegetation is listed by Holdaway *et al* (2012) as 'critically endangered' (ephemeral wetlands), 'endangered' (seepages/flushes) and 'vulnerable' (moraine).

Plant Communities:

As far as can be determined from aerial photographs, these sites support indigenous sedgeland/rushland/tussockland plant communities (seepage wetlands) at permanently wet valley-floor sites, herbfield (turf) plant communities at ephemeral tarn margins, and open water habitat at permanent tarns.

The sedgeland/rushland/tussockland plant communities are likely to be dominated by red tussock (*Chionochloa rubra*) or red tussock/narrow-leaved snow-tussock (*Chionochloa rigida*) hybrids. Other dominant species are likely to be bog rush (*Schoenus pauciflorus*), pukio (*Carex secta*), *Juncus edgariae* and soft rush* (*Juncus effusus*)¹. A range of inter-tussock species are likely to be present. Wetland margins are likely to support shrubs such as mingimingi (*Coprosma propinqua*), matagouri (*Discaria toumatou*), *Olearia bullata*, native broom (*Carmichaelia australis*), manuka (*Leptospermum scoparium*) and possibly *Coprosma intertexta*.

Ephemeral tarn margins are likely to support a specialized herbfield flora. Plant species recorded at similar sites surveyed elsewhere on Butler Downs (Harding, 2011) were jointed rush* (*Juncus articulatus*), *Carex gaudichaudiana*, spike sedge (*Eleocharis acuta*), *Galium* aff. *perpusillum*, *Epilobium angustum*, *Isolepis* sp., selfheal* (*Prunella vulgaris*), *Lobelia angulata*, oval sedge* (*Carex ovalis*) and occasionally Scotch thistle* (*Cirsium vulgare*). Additional species present in free standing water were *Myriophyllum propinquum* and sweetgrass* (*Glyceria* sp.). Survey timing and conditions were not favourable during the 2011 survey. A number of other species are likely to be present in this plant community, including threatened and at risk species.

Survey of indigenous fauna was not possible, although these sites are likely to provide important habitat for paradise shelduck (*Tadorna variegata*) and other wetland/open country birds.

¹ Naturalized (exotic) species are indicated with an asterisk.

Notable Flora, Fauna and Habitats:

Notable features of these SNAs are the presence of indigenous vegetation and habitat in 'originally rare' ecosystems (ephemeral wetlands, seepages/flushes and moraine), the likely presence of threatened turf-margin plant species, and the habitat the areas likely provide for birds.

Notable Plant and Animal Pests:

Assessment of plant and animal pests was not possible.

Boundaries (buffering, fencing, adjoining plant communities and habitats):

The boundaries of these SNAs have been drawn to include the main areas of wetland vegetation and the larger tarns and their margins, as determined from aerial photographs. Ground survey would be required to confirm the accuracy of these proposed boundaries.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	H	Indigenous vegetation which is representative of that originally present in the ecological district, and typical of that remaining in the ecological district.
Rarity	H	Indigenous vegetation within 'originally rare' ecosystems. Tarn margins are likely to support threatened plant species.
Diversity and pattern	?	Plant species diversity could not be assessed.
Distinctiveness/special features	M/H	The number and likely condition of the Butler Downs wetlands and tarns is notable and regionally important.
Other Criteria		
Size/shape	M	Mostly small sites but well buffered.
Connectivity	M	The sites form a network of habitat. Some are linked hydrologically by streams and seepages.
Long-term Sustainability	?	Unclear.

ASSESSMENT AGAINST REGIONAL POLICY STATEMENT CRITERIA:

Criteria	Yes/No	Comments
Representativeness	Yes	Indigenous vegetation that is representative and is typical/characteristic of the natural diversity of the ecological district.
Rarity/Distinctiveness	Yes	Indigenous vegetation which is reduced to less than 10% of its former extent in the ecological district. Likely presence of 'threatened' or 'at risk' plant species. Indigenous vegetation within an originally rare ecosystem.
Diversity and Pattern	?	Unclear.
Ecological Context	Likely	Likely to provide important habitat for birds.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):

These areas appear to have been set aside from forestry plantings. They have only limited potential for further development, due to poor drainage and altitude.

Discussion:

If the above assessment is accurate, these sites meet the Timaru District Plan and Canterbury Regional Policy Statement criteria for significant natural areas. Important values are the presence of wetland vegetation, ephemeral tarn margin communities and habitat for birds.



Butler Downs SNAs 786-791, presumed extent



Butler Downs SNAs 781-784, presumed extent

TIMARU DISTRICT SNA SURVEY

SNAs 792 and 793

Area Name: Butler Downs wetlands	Property: Fairlight (Forest Creek) Station
Ecological District: Hakatere	Nearest Locality: Peel Forest
792 central map ref. (NZTM): 1429640E-5161900N	Area Size (ha): c. 100 Altitude (m): c. 700
793 central map ref. (NZTM): 1428930E-5162740N	Area Size (ha): c. 14 Altitude (m): c. 700
Assessor: Mike Harding	Survey Time: n/a Survey Date: n/a

General Description:

These two SNAs are located on the part of Butler Downs on the property that is not planted in Douglas fir. Permission for access for a ground survey was denied by the landowner, though this area was surveyed in 2011 as part of assessment of a resource consent application (Harding, 2011). The SNAs are selected from the results of that survey and present-day aerial photographs. The SNAs encompass the main areas of wetland vegetation and small tarns, including periodically dry (ephemeral) tarns, and an area of boulderfield.

The SNAs lie on lateral moraine, including valleys formed by meltwater streams and depressions formed by melting ice. They are within Hakatere Ecological District (McEwen, 1987). Moraine, ephemeral wetlands and seepages/flushes are regarded as an ‘originally rare’ ecosystems, in which indigenous vegetation is listed by Holdaway *et al* (2012) as ‘critically endangered’ (ephemeral wetlands), ‘endangered’ (seepages/flushes) and ‘vulnerable’ (moraine).

Plant Communities:

These sites support indigenous sedgeland/rushland/tussockland plant communities (seepage wetlands) on poorly-drained slopes, herbfield (turf) plant communities at ephemeral tarn margins, and one area of boulderfield.

The sedgeland/rushland/tussockland plant communities were (in 2011) dominated by red tussock (*Chionochloa rubra*) or red tussock/narrow-leaved snow-tussock (*Chionochloa rigida*) hybrids. Other dominant species were bog rush (*Schoenus pauciflorus*), pukio (*Carex secta*), *Juncus edgariae* and soft rush* (*Juncus effusus*). A range of inter-tussock species were present. Wetland margins support shrubs including mingimingi (*Coprosma propinqua*), matagouri (*Discaria toumatou*), *Olearia bullata*, native broom (*Carmichaelia australis*), manuka (*Leptospermum scoparium*) and possibly *Coprosma intertexta*.

Ephemeral tarn margins support a specialized herbfield flora. Plant species recorded in 2011 jointed rush* (*Juncus articulatus*), *Carex gaudichaudiana*, spike sedge (*Eleocharis acuta*), *Galium* aff. *perpusillum*, *Epilobium angustum*, *Isolepis* sp., selfheal* (*Prunella vulgaris*), *Lobelia angulata*, oval sedge* (*Carex ovalis*) and occasionally Scotch thistle* (*Cirsium vulgare*). Additional species present in free standing water were *Myriophyllum propinquum* and sweetgrass* (*Glyceria* sp.). Survey timing and conditions were not favourable during the 2011 survey. A number of other species are likely to be present in this plant community, including threatened and at risk species.

Survey of indigenous fauna was not possible, although these sites are likely to provide important habitat for paradise shelduck (*Tadorna variegata*) and other wetland/open country birds.

Notable Flora, Fauna and Habitats:

Notable features of these SNAs are the presence of indigenous vegetation and habitat in ‘originally rare’ ecosystems (ephemeral wetlands, seepages/flushes and moraine), the likely presence of threatened turf-margin plant species, and the habitat the areas likely provide for birds.

Notable Plant and Animal Pests:

Assessment of plant and animal pests was not possible. Important plant pests observed in 2011 were wilding Douglas fir (*Pseudotsuga menziesii*), sweet brier (*Rosa rubiginosa*), jointed rush (*Juncus articulatus*), oval sedge (*Carex ovalis*) and sweetgrass* (*Glyceria* sp.).

Boundaries (buffering, fencing, adjoining plant communities and habitats):

The boundaries of these SNAs have been drawn to include the main areas of wetland vegetation as determined from aerial photographs. Ground survey would be required to confirm the accuracy of these proposed boundaries.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	Indigenous vegetation which is largely representative of that originally present in the ecological district, and typical of that remaining in the ecological district.
Rarity	H	Indigenous vegetation within 'originally rare' ecosystems. Tarn margins are likely to support threatened plant species.
Diversity and pattern	M	Plant species diversity was (in 2011) moderate.
Distinctiveness/special features	M/H	The number and likely condition of the Butler Downs wetlands and tarns is notable and regionally important.
Other Criteria		
Size/shape	H	Large areas of contiguous wetland vegetation, especially SNA 792.
Connectivity	M	The sites are part of large number of wetland habitats on Butler Downs.
Long-term Sustainability	M	Continued plant and animal pest control is probably required to maintain ecological values in the long term.

ASSESSMENT AGAINST REGIONAL POLICY STATEMENT CRITERIA:

Criteria	Yes/No	Comments
Representativeness	Yes	Indigenous vegetation that is representative and is typical/characteristic of the natural diversity of the ecological district.
Rarity/Distinctiveness	Yes	Indigenous vegetation which is reduced to less than 10% of its former extent in the ecological district. Likely presence of 'threatened' or 'at risk' plant species. Indigenous vegetation within originally rare ecosystems.
Diversity and Pattern	Yes	A diverse range of habitat types, with moderate species diversity.
Ecological Context	Likely	Likely to provide important habitat for birds.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):

These areas appear to have been set aside from forestry plantings. They have only limited potential for other development, due to poor drainage and altitude.

Discussion:

If the above assessment is accurate, these sites meet the Timaru District Plan and Canterbury Regional Policy Statement criteria for significant natural areas. Important values are the presence of wetland vegetation, ephemeral tarn margin communities and habitat for birds.



Butler Downs SNAs 792 and 793, presumed extent

TIMARU DISTRICT SNA SURVEY

SNAs 794 and 795

Area Name: Rangitata River terrace wetlands	Property: Fairlight (Forest Creek) Station
Ecological District: Hakatere	Nearest Locality: Peel Forest
794 central map ref. (NZTM): 1434950E-5162040N	Area Size (ha): c. 1 Altitude (m): c. 450
795 central map ref. (NZTM): 1432250E-5164300N	Area Size (ha): c. 42 Altitude (m): c. 465
Assessor: Mike Harding	Survey Time: ½ hour Survey Date: 08-04-16

General Description:

These two SNAs are located on the floodplain of the Rangitata River, where the lower reaches of Scour Stream flow across the river flats. Permission for access for a ground survey was denied by the landowner. However, parts of these areas are visible from Rangitata Gorge Road and the vegetation boundaries are visible on aerial photographs. These two SNAs encompass areas of wetland vegetation.

The SNAs lie on recent alluvial deposits (gravel and silt) from the Rangitata River. They are within Hakatere Ecological District (McEwen, 1987) and the J2.2b and N2.1b Land Environments, within which indigenous vegetation is regarded as ‘acutely threatened’ (Walker *et al*, 2006). Seepage/flush wetlands are regarded as an ‘originally rare’ ecosystem, in which indigenous vegetation is listed by Holdaway *et al* (2012) as ‘endangered’.

Plant Communities:

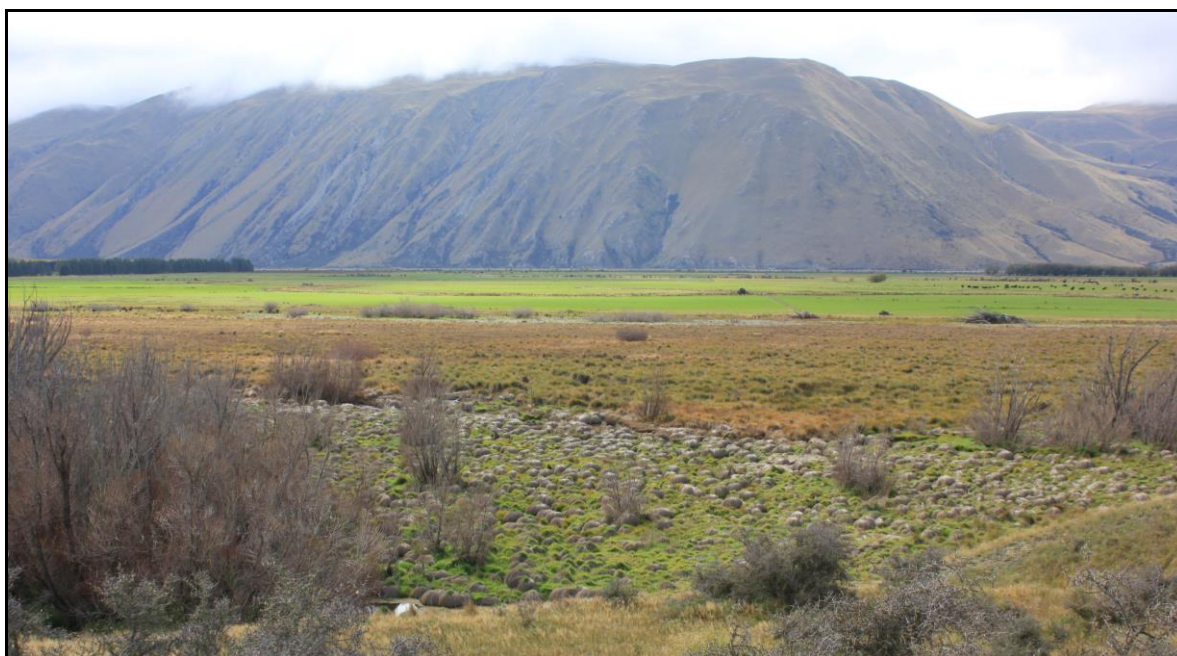
As far as can be determined from roadside views the smaller wetland (SNA 794) is dominated by bog rush (*Schoenus pauciflorus*) and sedges (*Carex* spp.), including *Carex geminata*. Vegetation grades, at the margins, to pasture grasses.



SNA 794, viewed from roadside

The larger wetland (SNA 795) appears to be dominated bog rush, pukio (*Carex secta*) and other sedges. Red tussock (*Chionochloa rubra*) is present at the wetland margins. A substantial area is dominated by a dense tall stand of crack willow* (*Salix fragilis*). These trees are mostly dead having presumably been recently treated with herbicide.

Survey of indigenous fauna was not possible. However, it is likely that the wetlands provide important habitat for birds and native fish. Streams in this area provide spawning habitat for salmon.



SNA 795, dead willow trees visible in foreground

Notable Flora, Fauna and Habitats:

Notable features of these SNAs are the presence of indigenous vegetation in an ‘originally rare’ (nationally endangered) ecosystem, within an ‘acutely threatened’ land environment. Also important is the size of SNA 795.

Notable Plant and Animal Pests:

Assessment of plant and animal pests was not possible. Clearly visible is the large infestation of crack willow, though it appears that this has been recently treated.

Boundaries (buffering, fencing, adjoining plant communities and habitats):

The boundaries of these SNAs have been drawn to include the main areas of wetland vegetation, as determined from aerial photographs. Ground survey would be required to confirm the accuracy of these proposed boundaries.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	Indigenous vegetation which is representative of that originally present in the ecological district, and typical of that remaining in the ecological district.
Rarity	H	Indigenous vegetation within an ‘acutely threatened’ land environment and part of a ‘nationally endangered’ ecosystem.
Diversity and pattern	?	Plant species diversity could not be accurately assessed.
Distinctiveness/special features	?	Likely to provide favourable habitat for birds and fish.
Other Criteria		
Size/shape	M/H	Relatively large areas of indigenous vegetation at this altitude.
Connectivity	M	Lie close to the open bed of the Rangitata River (SNA 772).
Long-term Sustainability	?	Unclear.

ASSESSMENT AGAINST REGIONAL POLICY STATEMENT CRITERIA:

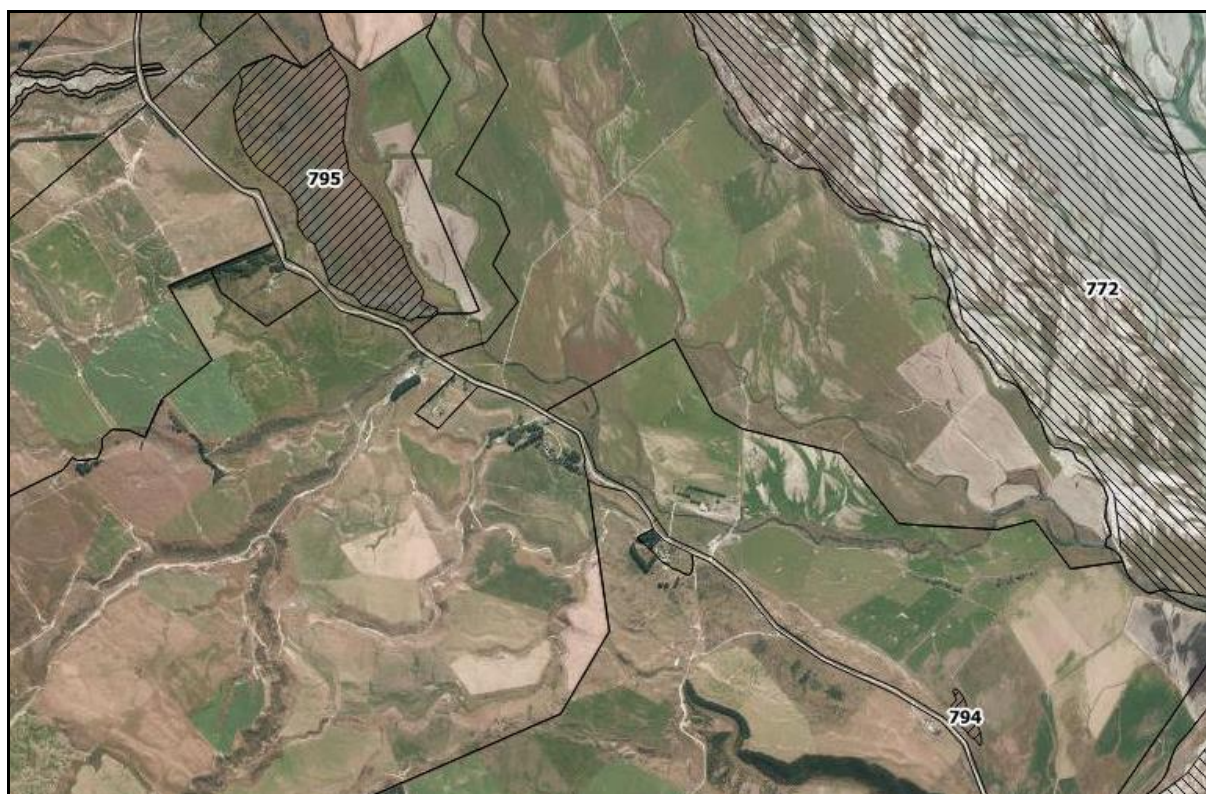
Criteria	Yes/No	Comments
Representativeness	Yes	Indigenous vegetation that is representative and typical/characteristic of the natural diversity of the ecological district. SNA 795 is a large example of its type in the ecological district.
Rarity/Distinctiveness	Yes	Indigenous vegetation which is reduced to less than 10% of its former extent in the land environment. Indigenous vegetation within an originally rare ecosystem.
Diversity and Pattern	?	Unclear.
Ecological Context	Yes	Wetlands which plays an important hydrological role in the natural functioning of a river.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):

These areas appear to have been set aside from farm development. The larger area (SNA 795) appears to be formally protected and managed. Both areas have limited potential for further development, due to poor drainage. Vegetation at SNA 795 is affected by a plant pest (crack willow), though this infestation appears to have been recently controlled.

Discussion:

If the above assessment is accurate, these sites meet the Timaru District Plan and Canterbury Regional Policy Statement criteria for significant natural areas. Important values are the presence of wetland vegetation within an acutely threatened land environment.



SNAs 794 and 795, presumed extent

TIMARU DISTRICT SNA SURVEY

SNAs 785 and 796

Area Name: Forest Creek ponds/wetlands

Ecological District: Hakatere

785 central map ref. (NZTM): 1433980E-5160200N

796 central map ref. (NZTM): 1434900E-5161570N

Assessor: Mike Harding

Property: Fairlight (Forest Creek) Station

Nearest Locality: Peel Forest

Area Size (ha): c. 2.3

Altitude (m): c. 500

Area Size (ha): c. 2.7

Altitude (m): c. 465

Survey Time: n/a

Survey Date: n/a

General Description:

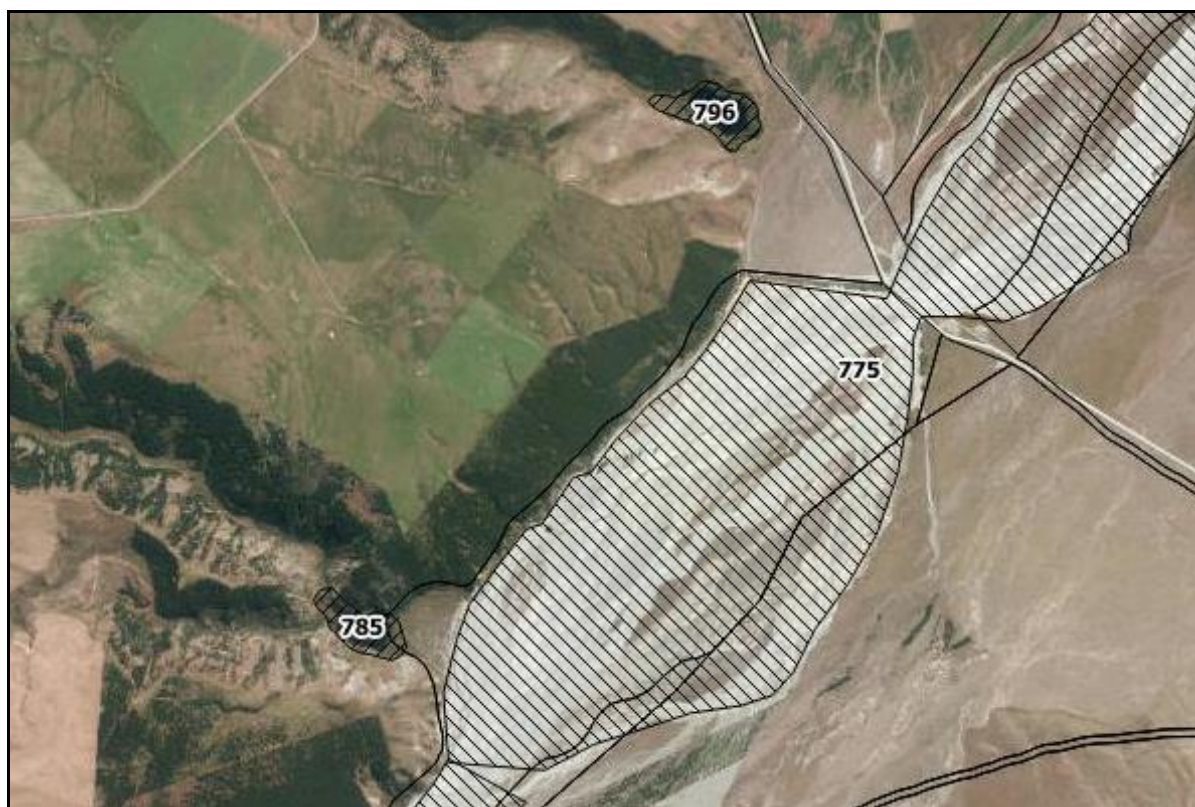
These two SNAs are located in small tributaries of lower Forest Creek, where the side streams are impounded by the gravel bed of Forest Creek. Permission for access for a ground survey was denied by the landowner, so the presence and extent of these SNAs was determined from aerial photographs. These two SNAs comprise small ponds with riparian wetland vegetation.

The SNAs lie on recent alluvial deposits (gravel and silt) from the small streams and Forest Creek. They are within Hakatere Ecological District (McEwen, 1987). Seepage/flush wetlands are regarded as an 'originally rare' ecosystems, in which indigenous vegetation is listed by Holdaway *et al* (2012) as 'endangered'.

Plant Communities:

As far as can be determined from aerial photographs these SNAs comprise areas of bird habitat (open water) with either sedgeland/shrubland (SNA 785) or crack willow* (*Salix fragilis*) (SNA 796) at their margins.

Survey of indigenous fauna was not possible. However, it is likely that the ponds and associated wetland vegetation provide important habitat for birds and possibly native fish.



Notable Flora, Fauna and Habitats:

Notable features of these SNAs are the presence of open water habitat and wetland vegetation.

Notable Plant and Animal Pests:

Assessment of plant and animal pests was not possible. SNA 796 appears to have crack willow at its margin.

Boundaries (buffering, fencing, adjoining plant communities and habitats):

The boundaries of these SNAs have been drawn to include the open water habitat and adjacent riparian vegetation. Ground survey would be required to confirm the accuracy of these proposed boundaries.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	Bird habitat which is representative of that originally present in the ecological district, and typical of that remaining in the ecological district.
Rarity	M/H	Open water habitat, especially at a sheltered location, is uncommon in this area.
Diversity and pattern	?	Plant species diversity could not be accurately assessed.
Distinctiveness/special features	?	Likely to provide favourable habitat for birds.
Other Criteria		
Size/shape	M/H	Moderate-sized areas, but well buffered.
Connectivity	M	Lie close to the open bed of the Forest Creek (SNA 775).
Long-term Sustainability	?	Unclear.

ASSESSMENT AGAINST REGIONAL POLICY STATEMENT CRITERIA:

Criteria	Yes/No	Comments
Representativeness	Yes	Habitat that is representative and typical/characteristic of the natural diversity of the ecological district.
Rarity/Distinctiveness	Yes	Habitat that is distinctive and uncommon in this area.
Diversity and Pattern	?	Unclear.
Ecological Context	Yes	Wetlands which plays an important hydrological role in the natural functioning of a river.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):

These areas appear to have been set aside from farm development. Both areas have very limited potential for further development, due to poor drainage. Vegetation at SNA 796 appears to be affected by a plant pest (crack willow).

Discussion:

If the above assessment is accurate, these sites meet the Timaru District Plan and Canterbury Regional Policy Statement criteria for significant natural areas. Important values are the presence of open water habitat and adjacent wetland vegetation.

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