

TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS SURVEY

FOUR PEAKS
McATAMNEY



Report prepared for the Timaru District Council by Mike Harding
February 2014

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: Steve and Jo McAtamney
Valuation Reference: ...24660/007.00
Address: 126 Clayton Settlement Road, Fairlie 7987.
Location: Four Peaks Range, South Canterbury.
Ecological Districts: Orari Ecological District.
TDC Land Types: Hard Rock Hills and Downs.
Land Environments: Q2 (south-eastern hill country).

ECOLOGICAL CONTEXT:

This large property straddles the Four Peaks Range in the South Canterbury foothills. The Significant Natural Areas (SNAs) described in this report are areas of indigenous forest in the upper tributaries of the Hae Hae Te Moana River. The property lies within the Orari Ecological District and comprises moderately-steep to steep slopes from an altitude of 400m at the southeast edge of the property to more than 1500m on the range crest.

The original vegetation of this area would have been predominantly hardwood forest with emergent podocarps (matai, totara and mountain totara). Areas of mountain beech forest were present, such as that which remains in the Hare valley. Dense sub-alpine scrub, dominated by inaka, would have been present at higher altitudes. The indigenous fauna would have been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area.

Indigenous vegetation on the property in the Hare River is part of the largest areas of indigenous forest remaining in this part of the ecological district. Notable are remnant stands of mountain beech forest in the Hare valley, and southern rata and a population of an at-risk plant species in Pleasant Gully.

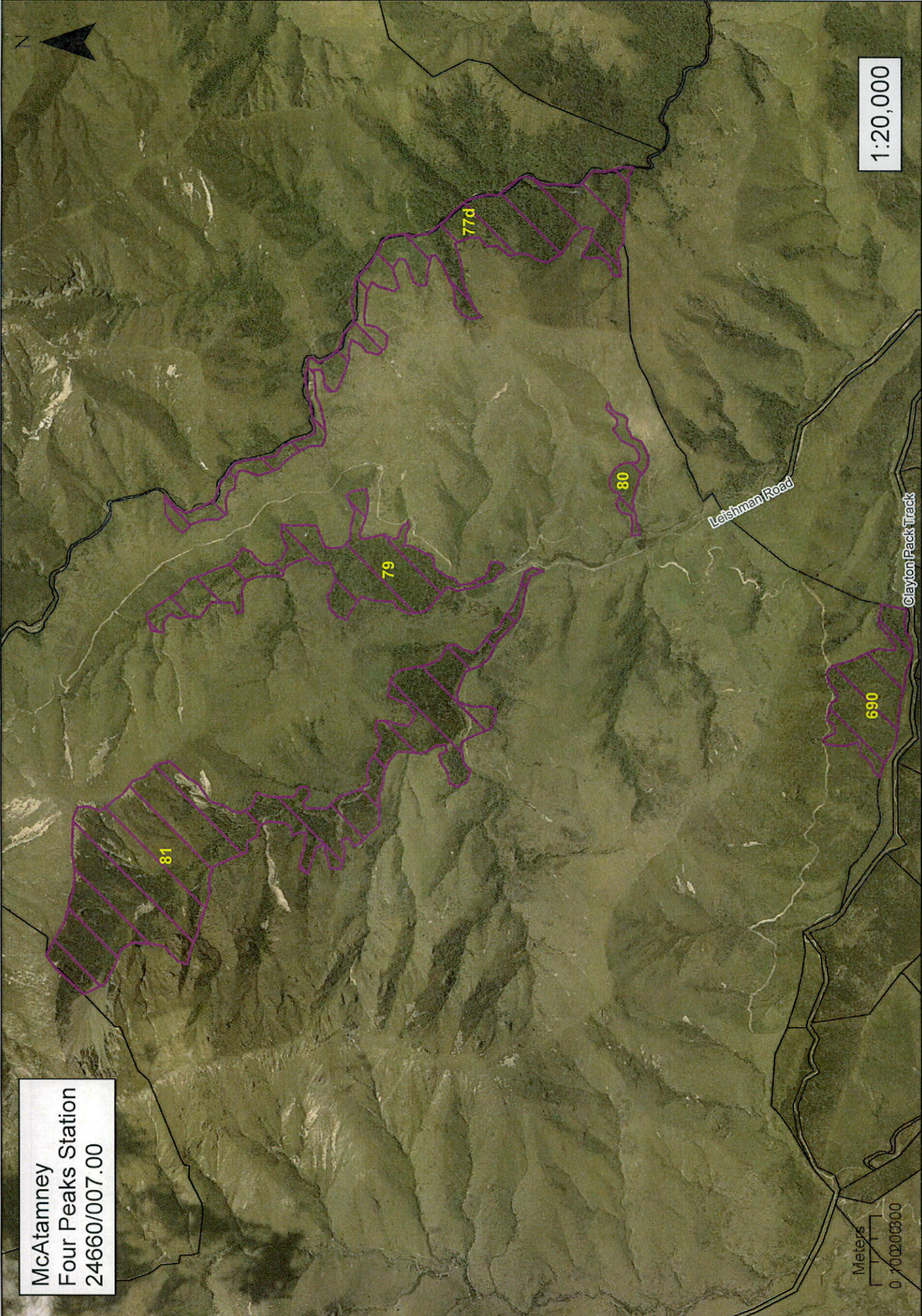
Rifleman, an at-risk (declining) species, was observed on the property. Eastern falcon/karearea, a threatened (nationally vulnerable) species, is present in the area, though was not observed during this survey. Rivers and streams of the Four Peaks Range provide good habitat for blue duck (a nationally vulnerable species), though it has been several years since this species has been observed in this area.

Forests within the SNAs are generally in good condition. The main management issues identified during this survey are the effects of feral pigs, the threat posed by Spanish heath and the presence of an infestation of cherry.



1:20,000

McAtamney
Four Peaks Station
24660/007.00



Meters
0 100 200

SIGNIFICANT NATURAL AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during October and November 2013, and January 2014. Lower-altitude (below 900m) south eastern parts of the property were visited and assessed. Areas above 900m are not covered by the SNA survey. Five separate areas are regarded as significant when assessed against the District Plan criteria.

Area No.	Area Name	Central map ref.	Aprox. size(ha)	Vegetation/habitat type
77d	Upper Hare River	J37: 550-880	40.3	Hardwood forest; beech forest; scrub
79	Upper Leishman Stm.	J37: 535-880	25.8	Hardwood (podocarp) forest
80		J37: 538-869	3.6	Hardwood (podocarp) forest
81	Pleasant Gully	J37: 526-880	79.7	Hardwood (podocarp) forest
690	Clayton Pack Track	J37: 530-859	15.1	Hardwood forest; scrub

These SNAs are illustrated on the aerial photograph below and described in greater detail on the SNA Survey Forms in this report. Note that the boundaries of the SNAs are indicative, rather than precise. These areas meet the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) and are considered to be 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 eventually be listed in the District Plan by way of a notified plan change.

At present, consent is required from Council for clearance of areas of indigenous vegetation or habitat that meet the Interim Definitions in the District Plan. Clearance includes burning, spraying with herbicides and over-planting. SNAs encompass most, but not necessarily all, areas of vegetation and habitat which meet the Interim Definitions.

To assist with the protection and management of any SNA, such as plant or animal pest control, 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.

OTHER AREAS INSPECTED ON THE PROPERTY:

Other areas of indigenous vegetation and habitat on the property were inspected but are not regarded as significant when assessed against the criteria on pages B18-B20 of the Timaru District Plan. These are generally smaller or more modified areas of indigenous vegetation.

Failure of an area to meet the significance criteria does not necessarily mean that it is not important for nature conservation or the protection of indigenous biodiversity; it simply means that the area (as assessed at this time) does not meet the criteria in the Timaru District Plan. Some of these areas have considerable potential value and, if left alone, may eventually become significant.

The forest floor is dominated in most places by prickly shield fern. Other ground-cover species are hound's tongue fern, mountain kiokio, *Blechnum penna-marina*, hen and chickens fern, *Asplenium richardii*, necklace fern, bush lily, nettle, hookgrass, cardamine, bidibid and spider orchid.

Additional species present in forest openings or at the forest margin are Himalayan honeysuckle*, mountain akeake, mountain flax, inaka, koromiko, *Gaultheria crassa*, thousand-leaved fern, bidibid, cotton daisy and many of the species described for the shrubland community below.

Two areas of mountain beech forest are present along the river. They comprise small patches of dense beech trees and larger areas of tall scattered beech trees emergent from a hardwood canopy. Denser stands of beech trees differ from the surrounding hardwood forest by the presence of bush snowberry, *Coprosma rhannoides* and *Raukana simplex* in the understorey.

Species present on the riverbanks or at other damp sites are toetoe, mountain akeake, *Olearia arborescens*, koromiko, pate, mountain flax, tutu, *Grammitis billardierei*, *Blechnum chambersii*, *Blechnum fluviatile*, *Hymenophyllum bivalve*, *Hymenophyllum minimum*, hen and chickens fern, *Pratia angulata* and, at one location, southern rata.

Shrubland:

Shrubland and scrub are present at the forest margin and on rocky spurs. Dominant canopy species are *Coprosma propinqua*, *Coprosma dumosa* and scrub pohuehue. Other canopy species are *Coprosma rigida*, *Coprosma rugosa*, matagouri, mountain wineberry, korokio, scrambling fuchsia, porcupine shrub, *Meliclytus* "Blondin", *Clematis marata*, native bindweed, *Parsonsia capsularis* and lawyer.

Ground-cover species are *Blechnum penna-marina*, necklace fern, *Asplenium appendiculatum*, button fern, *Dichondra repens*, cardamine and patotara. Species present within the shrubland are silver tussock, fescue tussock, blue tussock, prickly shield fern, bracken, golden speargrass, harebell, woolly mullein*, mountain kiokio and Maori onion.

On shady slopes dominant plant species are prickly shield fern, mountain kiokio and mountain flax.

Birds/Fauna Observed:

Native birds observed during this survey were bellbird, fantail, kereru, grey warbler, brown creeper, silvereye, rifleman and tomtit. Karearea (NZ falcon) are present in the area.

Notable Flora, Fauna and Habitats:

Important features of this area are: the extent of the forest and shrubland community; the presence of locally-uncommon species (southern rata, mountain beech and *Raukana simplex*); the diversity of indigenous plant species (95 vascular species); the habitat the area provides for birds, including an 'at risk' (declining) species (rifleman); and the role of the area in buffering and protecting the river in this water-supply catchment.

Notable Plant and Animal Pests:

Himalayan honeysuckle is the only woody plant pest observed within this area. This species does not pose a significant threat to the forest. Spanish heath is present nearby and does pose a threat

to the shrubland community. Animal pests were not surveyed. However, feral pigs have caused substantial damage to forest understorey in some areas. Possums are present.

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

The boundaries of this area are the river (the property boundary) and the edge of the forest or denser shrubland on the lower slopes. The area is not fenced and it would not be practical to fence along this boundary. It is relatively well buffered by its location on moderately-steep lower slopes. The area adjoins intact and regenerating indigenous forest and extensive areas of scrub and fernland across the river.

Condition and Management Issues:

The forest canopy is in good condition. The forest understorey and ground cover are depleted in places, though well protected in others. The main management issue is continued control of wild animals, notably feral pigs and possums.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of indigenous forest typical of the ecological district, with a species composition that is representative of the original vegetation.
Rarity	M	Provides good habitat for an 'at-risk' (declining) bird species (rifleman) and likely habitat for a threatened species (NZ falcon). Supports populations of three locally-uncommon plant species.
Diversity and pattern	M/H	Plant species diversity is high (at least 95 vascular species).
Distinctiveness/special features	M/H	The presence of mountain beech forest and southern rata are notable features.
Other Criteria		
Size/shape	M/H	A relatively large area, though long and narrow in shape.
Connectivity	H	Adjoins other areas of indigenous forest and shrubland along the river boundary. Provides a corridor of vegetation along the Hare River.
Long-term Sustainability	M/H	Ongoing animal pest control will probably be needed to maintain ecological values in the long term.

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

This area has been deliberately set aside from development. The steep slopes it occupies limit its potential for farm development.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are: the extent of the forest and shrubland community; the presence of three locally-uncommon species; the diversity of indigenous plant species (95 vascular species); the habitat the area provides for birds, including an 'at risk' (declining) species (rifleman); and the role of the area in buffering and protecting the river in this water-supply catchment.

Area Name: Upper Leishman Stream
Location (central map ref.): J37: 535-880
Ecological District: Orari
Surveyors: Mike Harding

Property: Four Peaks (McAtamney)
Nearest Locality: Four Peaks
Area Size (ha): 25.8 **Altitude (m):** 450-700
Survey Time: 3 hours **Survey Date:** 07-11-13

General Description:

This SNA lies on moderately steep slopes in the upper reaches of the north branch of Leishman Stream. It occupies lower slopes along the stream except at the lower end where it includes forest higher on a rocky east-facing slope. The SNA lies close to other areas of indigenous forest (SNAs 77d and 81) in adjacent valleys.

Plant Communities:

The main plant community present is hardwood forest, described below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy is dominated by broadleaf, mountain ribbonwood and marbleleaf. Other canopy species are cabbage tree, fuchsia, kowhai, wineberry, three-finger, matipo, mountain totara, weeping mapou, lancewood (uncommon), lemonwood, pohuehue, bush lawyer, native jasmine and native bindweed.



Forest alongside the stream at the upper part of SNA 79

Understorey species are weeping mapou, yellowwood, mingimingi, *Coprosma rigida*, *Coprosma dumosa*, pate, lawyer, saplings of mountain ribbonwood, mountain totara, wineberry and kowhai and, on tree trunks, hound's tongue fern and *Huperzia varia* (uncommon).

The dominant species on the forest floor is prickly shield fern. Other ground-cover species are mountain kiokio, *Blechnum penna-marina*, *Blechnum procerum*, hen and chickens fern, necklace fern, thousand-leaved fern, cardamine, nettle, buttercup, hookgrass, foxglove*, green-hooded orchid, spider orchid, pennywort and seedlings of wineberry, mountain ribbonwood, native jasmine and *Coprosma* species.

Species commonly present along the stream or at other damp sites are koromiko, mountain akeake, tutu, bush lily, *Blechnum chambersii*, *Blechnum fluviatile*, bidibid, *Pratia angulata*, wall lettuce*, giant buttercup* and monkey musk*.

The forest community grades at its margins on sunny slopes to shrubland and grassland. Shrubland is dominated by mingimingi, *Coprosma dumosa* and *Coprosma rigida*. Other species are matagouri, *Coprosma rugosa*, weeping mapou, Himalayan honeysuckle*, korokio, inaka, bush lawyer, prickly shield fern, mountain flax, bush snowberry, toatoa, *Parsonsia capsularis*, scrub pohuehue, *Hypolepis ambigua*, bracken, fescue tussock and silver tussock.

On shady slopes the forest grades to shrubland and fernland dominated by *Coprosma rugosa*, mountain flax, mountain kiokio and cotton daisy. Other species are inaka, *Coprosma dumosa*, *Gaultheria crassa*, narrow-leaved snow-tussock, *Pimelea pseudo-lyallii*, snowberry, bush lawyer and prickly shield fern.



Forest on steep slopes at the lower part of SNA 79

Birds/Fauna Observed:

Native birds observed during this survey were fantail, tomtit, rifleman, grey warbler, bellbird, brown creeper and welcome swallow.

Notable Flora, Fauna and Habitats:

Important features of this area are: the size of the area; the presence of podocarp trees (mountain totara) especially along the lower stream margins; the habitat the area provides for forest birds, including an 'at risk' species (rifleman); and the buffering the forest provides for the stream.

Notable Plant and Animal Pests:

Himalayan honeysuckle and herbaceous species are the only naturalized plants present within the forest community. These species do not pose a significant threat. One Spanish heath bush was observed on open slopes just west of the area, at map reference (NZTM) 1443545E-5126788N. This bush was removed and the cut stump treated with herbicide.

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

The boundaries of this area are the forest and shrubland edge. The area extends in the lower valley to include the strip of forest along the incised banks of the stream. The area is not fenced and it would not be necessary to fence the area, as it is well buffered by its location on steeper rocky slopes.

Condition and Management Issues:

The forest appears in relatively good condition, though the understorey is affected in places by pig rooting and cattle trampling. Continued animal pest control and prevention of the establishment of Spanish heath are important management issues.

Property Owner Comment:

Concerned at threat posed by Spanish heath.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of indigenous forest typical of the ecological district with plant species composition representative of the original forest.
Rarity	M	Provides habitat for an 'at risk' (declining) bird species (rifleman).
Diversity and pattern	M	Moderate plant species diversity (63 vascular plant species).
Distinctiveness/special features	M	The relative abundance of totara in the lower valley is a notable feature.
Other Criteria		
Size/shape	M/H	A large to moderate-sized area that is relatively well buffered, though narrow in places.
Connectivity	M	Lies close to other areas of indigenous forest in adjacent valleys.
Long-term Sustainability	M/H	Continued wild animal control will be necessary to maintain ecological values in the long term.

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

This area supports regenerating forest with older trees in places. It lies on slopes that have limited potential for farm development.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the size of the area; the presence of podocarp trees (mountain totara) especially along the lower stream margins; the habitat the area provides for forest birds, including an 'at risk' species (rifleman); and the buffering the forest provides for the stream.

Area Name:	Property: Four Peaks (McAtamney)		
Location (central map reference): J37: 538-869	Nearest Locality: Four Peaks		
Ecological District: Orari	Area Size (ha): 3.6	Altitude (m): 400-500	
Surveyors: Mike Harding	Survey Time: 1 hour	Survey Date: 31-10-13	

General Description:

This SNA lies in a small tributary gully of Leishman Stream, down-valley from other larger patches of indigenous forest (SNAs 79 and 81). It occupies moderately-steep south-facing slopes and extends to the main valley floor.

Plant Communities:

The main plant community present is hardwood forest with podocarps (mountain totara). This forest was not inspected closely, but is likely to have a similar species composition to SNA 79. Species observed during this brief inspection are described below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy is dominated by broadleaf. Other canopy species are mountain ribbonwood, mountain totara, wineberry, matipo, fuchsia, lancewood, kowhai, three-finger, cabbage tree, mountain akeake, yellowwood, marbleleaf, pohuehue, bush lawyer and, at the lower end of the site, cherry*.

Understorey species, at the lower end of the site, are *Coprosma rhamnoides*, pate, flowering cherry* and saplings of yellowwood and mountain totara.

The forest floor is dominated by prickly shield fern. Other ground-cover species are mountain kiokio, *Blechnum fluviatile*, *Blechnum penna-marina*, *Blechnum chambersii*, thousand-leaved fern, hen and chickens fern, nettle, bidibid, wall lettuce* and seedlings of kowhai, broadleaf and *Coprosma* species.

Species present at the forest margin are mingimingi, *Coprosma rigida*, *Coprosma dumosa*, koromiko, matipo, matagouri, scrub pohuehue, lawyer, native bindweed and prickly shield fern.

Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird, warbler, brown creeper and fantail.

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of podocarp trees (mountain totara) and the habitat it provides for birds.

Notable Plant and Animal Pests:

The most important naturalized plant species is cherry. This species presumably became established at the lower part of the site and is now spreading vigorously. It poses a threat to the indigenous forest, as it spreads readily by suckering, and to the margins of the main stream. Animal pests were not surveyed.

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

The boundaries of this relatively small area are the edge of taller regenerating indigenous forest. This forest is well buffered by its location in an incised gully and lies close to other areas of indigenous forest, notably SNAs 79 and 81.

Condition and Management Issues:

The main management issue is control and eventual removal of cherry. Timaru District Council's Natural Heritage Fund may be able to contribute to that control work.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	An example of indigenous forest typical of that remaining in the ecological district and supporting canopy species (notably mountain totara) that are representative of the original vegetation.
Rarity	L/M	The forest is likely to provide habitat for an 'at risk' (declining) bird species (rifleman).
Diversity and pattern	M	Plant species diversity appears typical of forest patches in this area.
Distinctiveness/special features	L/M	Mountain totara is relatively common, especially at the lower end of the site.
Other Criteria		
Size/shape	M	A relatively small area but well buffered.
Connectivity	M	Lies close to other areas of indigenous forest.
Long-term Sustainability	M	Control of cherry and continued wild animal control will be necessary to maintain ecological values in the long term.

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

This area has been protected from disturbance by its location in a steep-sided gully. It has limited potential for farm development.

Discussion:

This area just meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of podocarp trees (mountain totara) and the habitat it provides for birds, though the area is small.

Area Name: Pleasant Gully

Location (central map reference): J37: 526-880

Ecological District: Orari

Surveyors: Mike Harding

Property: Four Peaks (McAtamney)

Nearest Locality: Four Peaks

Area Size (ha): 79.7

Altitude (m): 400+

Survey Time: 4 hours

Survey Date: 07-11-13

General Description:

This SNA lies in Pleasant Gully, in the upper reaches of Leishman Stream. It occupies lower slopes and rocky faces and extends downstream along the incised stream banks. Parts of the area are fenced from grazing and the Four Peaks Walking Track traverses the area. It lies near to areas of indigenous forest in adjacent valleys.

Plant Communities:

Two main plant communities are present: hardwood forest and rock-bluff vegetation. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

Hardwood Forest:

The forest canopy is dominated by broadleaf and, in the lower valley, marbleleaf and mountain totara. Other canopy species are matipo, kowhai, three-finger, mountain ribbonwood, fuchsia, lancewood, lemonwood, cabbage tree, yellowwood, wineberry, mountain akeake, *Clematis paniculata*, *Clematis foetida*, pohuehue, bush lawyer, and, in the lower valley, narrow-leaved mahoe and southern rata.



The upper part of Pleasant Gully (SNA 81)

Species present in the forest understorey are marbleleaf, kowhai, matipo, mapou, *Coprosma rigida*, mingimingi, pate, bush lawyer, and, on tree trunks, hound's tongue fern and hanging spleenwort.

Prickly shield fern is the dominant species on the forest floor. Other ground-cover species are bush lily, mountain kiokio, *Blechnum fluviatile*, thousand-leaved fern, hound's tongue fern, common shield fern, buttercup, pennywort, bidibid, *Libertia ixioides*, pearlwort* and seedlings of mountain ribbonwood, wineberry, broadleaf and *Coprosma* species.

Species present near the stream or at other damp locations are mountain akeake, Himalayan honeysuckle*, tutu, grey willow*, *Blechnum chambersii*, *Grammitis billardierei*, *Gonocarpus montanus* and *Pratia angulata*.

The forest community grades, at its margins, to shrubland, scrub and fernland. Shrubland and scrub are dominated by mingimingi and *Coprosma dumosa*. Other species are koromiko, *Olearia bullata*, inaka, korokio, golden speargrass, *Gaultheria crassa*, lawyer and native bindweed. Small areas of gorse* and broom* are present in open grassland near the site.

The fernland community is dominated by mountain kiokio and prickly shield fern, with mountain flax, *Coprosma rugosa*, *Coprosma dumosa*, bush lawyer, scrub pohuehue and cotton daisy. Young broadleaf, mountain ribbonwood and fuchsia trees are frequently present.

Rock Bluffs:

One large and a number of smaller rock bluffs are present within the area. These sparsely vegetated habitats support a distinctive plant community. Species present on the main (usually inaccessible) rock faces are southern rata, *Helichrysum intermedium*, mountain akeake, *Hebe amplexicaulis* and an unidentified (it could not be reached to collect a sample) leafless species presumed to be *Exocarpus bidwillii*.



The main rock bluff in Pleasant Gully (SNA 81)

Other species associated with steep rocky sites are *Hebe traversii*, korokio, *Helichrysum lanceolatum*, mapou, *Coprosma rugosa*, porcupine shrub, native broom, tutu, mountain flax, *Gingidia montana*, necklace fern, *Ctenopteris heterophylla*, rock fern, *Asplenium trichomanes*, *Blechnum penna-marina*, leather-leaf fern, button fern, hound's tongue fern, blue tussock, white fuzzweed, *Dichondra repens*, *Senecio quadridentatus* and toatoa.

Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird, grey warbler, fantail, silvereye, rifleman, tomtit, and, adjacent to the site, South Island pied oystercatcher. Kereru (NZ pigeon) and karearea (NZ falcon) are likely to be present. Rocky sites provide suitable habitat for lizards.

Notable Flora, Fauna and Habitats:

Important features of this area are: the diversity of plant communities and plant species (76 vascular species); the size of the area; the habitat it provides for forest birds, including an 'at risk' (declining) species (rifleman); the presence of an 'at risk' (naturally uncommon) plant species (*Hebe amplexicaulis*) at its distributional limit, a number of locally-uncommon plant species (*Asplenium trichomanes*, rock fern, *Exocarpus bidwillii*, *Gingidia montana*, *Helichrysum intermedium*, southern rata and white fuzzweed); and the buffering it provides to the stream.



Helichrysum intermedium on rock bluffs at SNA 81

Notable Plant and Animal Pests:

The main areas of forest and bluff are free of invasive plant pests except for Himalayan honeysuckle, which does not pose a significant threat. Gorse and broom are present nearby and Spanish heath is present in the area. Animal pests were not surveyed.

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

The boundaries of this area are defined by the steeper slopes where forest and rock-bluff communities have been protected from disturbance. The area extends upstream (though areas above 900m altitude are not covered by this survey) and downstream on the banks of the incised (gorged) part of the stream. Part of the area, in the upper valley, is fenced from grazing animals and is in very good condition. Other parts of the area are largely protected by the steep rocky slopes.

Condition and Management Issues:

Plant communities at most parts of this area are in good condition due to protective management by the landowners. The main management issues are continued control of feral animals (especially pigs and possums) and to prevent the establishment of woody weeds (notably gorse, broom and Spanish heath) in the area.

Property Owner Comment:

Concerned about threat posed by Spanish heath.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H to H	Hardwood forest within this area is typical of that remaining in the ecological district and, in places, representative of the original vegetation. The rock bluff plant community is representative of the original vegetation.
Rarity	M/H	Provides habitat for an 'at risk' (declining) bird species (rifleman) and an 'at risk' (naturally uncommon) plant species (<i>Hebe amplexicaulis</i>). Supports populations of at least seven locally uncommon plant species.
Diversity and pattern	M/H	A diverse range of habitats and plant species (76 vascular species).
Distinctiveness/special features	M/H	The rock bluff vegetation and the stand of southern rata are special features.
Other Criteria		
Size/shape	H	A large area that is well buffered and protected.
Connectivity	M	Lies close to other areas of indigenous vegetation.
Long-term Sustainability	M/H	Some plant and animal pest control (or monitoring) will be necessary to maintain ecological values in the long term.

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

This area has been deliberately protected by the landowners. The steep rocky terrain over much of the area is unsuitable for farm development. The area is an important part of the Four Peaks Walking Track.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are: the diversity of plant communities and plant species (76 vascular species); the size of the area; the habitat it provides for forest birds, including an 'at risk' (declining) species (rifleman); the presence of an 'at risk' (naturally uncommon) plant species (*Hebe amplexicaulis*) at its distributional limit, seven locally-uncommon plant species; and the buffering it provides to the stream.

Area Name: Clayton Pack Track	Property: McAtamney (Four Peaks)
Location (central map ref.): J37: 530-859	Nearest Locality: Four Peaks
Ecological District: Orari	Area Size (ha): 15.1 Altitude (m): 400-520
Surveyors: Mike Harding and Jo McAtamney	Survey Time: 2 hours Survey Date: 15-01-14

General Description:

This SNA lies on moderately steep slopes at the southern part of the property adjacent to the Clayton Pack Track. It comprises regenerating forest with scrub and fernland on open spurs.

Plant Communities:

The main plant community present is hardwood forest, described below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy is dominated by broadleaf, mountain ribbonwood and wineberry. Other canopy species are marbleleaf, matipo, mountain akeake, kowhai, cabbage tree, lemonwood, three-finger, pohuehue, native bindweed, native jasmine and bush lawyer.



The forest understorey vegetation is relatively sparse. Species present are marbleleaf, weeping mapou, poataniwha, bush lawyer, *Coprosma dumosa* and *Coprosma propinqua*.

Ground-cover species are prickly shield fern, mountain kiokio, *Blechnum fluviatile*, *Blechnum chambersii*, *Blechnum penna-marina*, *Blechnum procerum*, swamp kiokio, hen and chickens fern, *Asplenium hookerianum*, *Asplenium richardii*, necklace fern, *Lycopodium fastigiatum*, nettle, buttercup, wall lettuce*, selfheal*, foxglove*, hookgrass, bush lily, burdock* (uncommon), green-hooded orchid and seedlings of broadleaf, mountain ribbonwood, matipo, native jasmine, pohuehue and *Coprosma* species.

Species present on the forest margin and on open spurs within the area are *Coprosma rugosa*, *Coprosma propinqua*, *Coprosma dumosa*, koromiko, Himalayan honeysuckle*, matagouri, bush lawyer, mountain flax, bracken, prickly shield fern, mountain kiokio, thousand-leaved fern, golden spaniard, cotton daisy, tutu, scrub pohuehue, patotara, *Pimelea oreophila*, creeping pohuehue, blue tussock, narrow-leaved snow-tussock, *Gaultheria crassa*, bush snowberry and pasture grasses*.

Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird, silvereye, fantail, brown creeper and kereru (NZ pigeon). Rifleman and karearea (NZ falcon) are present in the area.

Notable Flora, Fauna and Habitats:

Important features of this area are the extent of the forest and the habitat it provides for forest birds.

Notable Plant and Animal Pests:

Himalayan honeysuckle is the most common plant pest present. Burdock was observed at one location. These plants, and the naturalized herbs and grasses present, do not pose a significant threat to the forested parts of the site. Animal pests were not surveyed, though pig rooting was observed.

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

The boundaries of this SNA encompass the main area of regenerating indigenous forest. Other smaller areas of regenerating forest and extensive areas of shrubland and scrub are not included. The area lies between the property boundary at the Clayton Pack Track and a farm vehicle track mid-way up the slope. The SNA lies reasonably close to other areas of indigenous forest on the property.

Condition and Management Issues:

The forest and adjacent shrubland are in good condition. Seedlings of canopy species are present within the forest and hardwood trees, notably broadleaf, are regenerating at the forest margins. Himalayan honeysuckle is dominant at forest openings, though not at the forest margins. There is sign of cattle at the lower part of the site, though the effects of grazing appear minor. Forest condition should continue to improve under the existing farm management.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	A good example of young (regenerating) forest typical of this part of the ecological district.
Rarity	L/M	Likely to provide habitat for an 'at risk' (declining) bird species (rifleman).
Diversity and pattern	M	Plant species diversity is moderate and typical.
Distinctiveness/special features	L/M	The presence of kowhai in the forest canopy is a notable feature.
Other Criteria		
Size/shape	M/H	A moderate-sized area with a good shape and reasonably well buffered.
Connectivity	M	Lies relatively close to other areas of indigenous forest, contributing to the network of forest bird habitat in the area.
Long-term Sustainability	M/H	There is healthy regeneration of indigenous woody species. Some animal pest control may be necessary to maintain ecological values.

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

This area occupies a moderately steep south-facing slope that has limited potential for farm development. Identification of the area as an SNA does not require fencing or any other change in farm management; it only restricts forest clearance.

Discussion:

This area just meets the District Plan criteria for a Significant Natural Area. It is not highly significant but is important for its size and the habitat it provides for forest birds.

Scientific names of species cited by common name in this report

This is not a complete species list; it is a list only of species cited by common name in this report. Species names are as listed in the Flora of NZ (volumes 1 to V) and as listed in NZ Indigenous Vascular Plant Checklist (P.J. de Lange and J.R. Rolfe, NZ Plant Conservation Network, 2010).

Common Name	Scientific name
(* = naturalised species)	
bidibid	<i>Acaena anserinifolia</i>
blue tussock	<i>Poa colensoi</i> agg.
bracken	<i>Pteridium esculentum</i>
broadleaf	<i>Griselinia littoralis</i>
broom*	<i>Cytisus scoparius</i>
bush lawyer	<i>Rubus cissoides</i> agg.
bush lily	<i>Astelia fragrans</i>
bush snowberry	<i>Gaultheria antipoda</i>
buttercup	<i>Ranunculus</i> sp.
button fern	<i>Pellaea rotundifolia</i>
cabbage tree/ti rakau	<i>Cordyline australis</i>
cardamine*	<i>Cardamine debilis</i> agg.
cherry*	<i>Prunus avium</i>
common shield fern	<i>Polystichum neozelandicum</i>
cotton daisy	<i>Celmisia spectabilis</i>
fescue tussock	<i>Festuca novae-zelandiae</i>
foxglove*	<i>Digitalis purpurea</i>
fuchsia	<i>Fuchsia excorticata</i>
giant buttercup*	<i>Ranunculus acris</i>
golden speargrass	<i>Aciphylla aurea</i>
gorse*	<i>Ulex europaeus</i>
green-hooded orchid	<i>Pterostylis</i> sp.
grey willow*	<i>Salix cinerea</i>
hanging spleenwort	<i>Asplenium flaccidum</i>
harebell	<i>Wahlenbergia albomarginata</i>
hen and chickens fern	<i>Asplenium gracillimum</i> agg.
Himalayan honeysuckle*	<i>Leycesteria formosa</i>
Himalayan lily*	<i>Cardiocrinum giganteum</i>
hookgrass	<i>Uncinia uncinata</i>
hound's tongue fern	<i>Microsorium pustulatum</i>
inaka	<i>Dracophyllum longifolium</i>
korokio	<i>Corokia cotoneaster</i>
koromiko	<i>Hebe salicifolia</i>
kowhai	<i>Sophora microphylla</i>
lancewood	<i>Pseudopanax crassifolius</i>
lawyer	<i>Rubus schmidelioides</i> agg.
leather-leaf fern	<i>Pyrrosia eleagnifolia</i>
lemonwood/tarata	<i>Pittosporum eugenioides</i>
mahoe/whiteywood	<i>Meliccytus ramiflorus</i> agg.
Maori onion	<i>Bulbinella angustifolia</i>
mapou	<i>Myrsine australis</i>
marbleleaf/putaputaweta	<i>Carpodetus serratus</i>
matagouri	<i>Discaria toumatou</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
mingimingi	<i>Coprosma propinqua</i>
monkey musk*	<i>Mimulus guttatus</i>
mountain akeake	<i>Olearia avicenniifolia</i>
mountain beech	<i>Nothofagus solandri</i> var. <i>cliffortioides</i>
mountain flax	<i>Phormium cookianum</i>
mountain kiokio	<i>Blechnum montanum</i>

mountain ribbonwood	<i>Hoheria lyallii</i>
mountain totara/Hall's totara.....	<i>Podocarpus cunninghamii</i>
mountain wincherry	<i>Aristotelia fruticosa</i>
narrow-leaved mahoe.....	<i>Melicytus lanceolatus</i>
narrow-leaved snow-tussock.....	<i>Chionochloa rigida</i> subsp. <i>rigida</i>
native bindweed	<i>Calystegia tuguriorum</i>
native broom	<i>Carmichaelia australis</i>
native jasmine	<i>Parsonsia heterophylla</i>
necklace fern	<i>Asplenium flabellifolium</i>
nettle.....	<i>Urtica incisa</i>
pate.....	<i>Schefflera digitata</i>
patotara.....	<i>Leucopogon fraseri</i>
pearlwort*	<i>Sagina procumbens</i>
pennywort	<i>Hydrocotyle novae-zelandiae</i>
poataniwha	<i>Melicope simplex</i>
pohuehue	<i>Muehlenbeckia australis</i> agg.
porcupine shrub.....	<i>Melicytus alpinus</i> agg.
prickly shield fern	<i>Polystichum vestitum</i> agg.
rock fern	<i>Cheilanthes sieberi</i>
scrambling fuchsia	<i>Fuchsia perscandens</i>
scrub pohuehue	<i>Muehlenbeckia complexa</i> agg.
silver tussock.....	<i>Poa cita</i> agg.
snowberry.....	<i>Gaultheria depressa</i>
soft tree fern	<i>Cyathea smithii</i>
southern rata.....	<i>Metrosideros umbellata</i>
Spanish heath*	<i>Erica lusitanica</i>
spider orchid.....	<i>Corybas</i> sp.
thousand-leaved fern	<i>Hypolepis millefolium</i>
three-finger.....	<i>Pseudopanax colensoi</i> var. <i>colensoi</i>
toatoa.....	<i>Haloragis erecta</i>
toetoe.....	<i>Cortaderia richardii</i>
totara	<i>Podocarpus totara</i> var. <i>totara</i>
tutu	<i>Coriaria sarmentosa</i>
wall lettuce*	<i>Mycelis muralis</i>
weeping mapou	<i>Myrsine divaricata</i> agg.
white fuzzweed	<i>Vittadina australis</i>
wineberry	<i>Aristotelia serrata</i>
woolly mullein*	<i>Verbascum thapsus</i>
yellowwood.....	<i>Coprosma linariifolia</i>