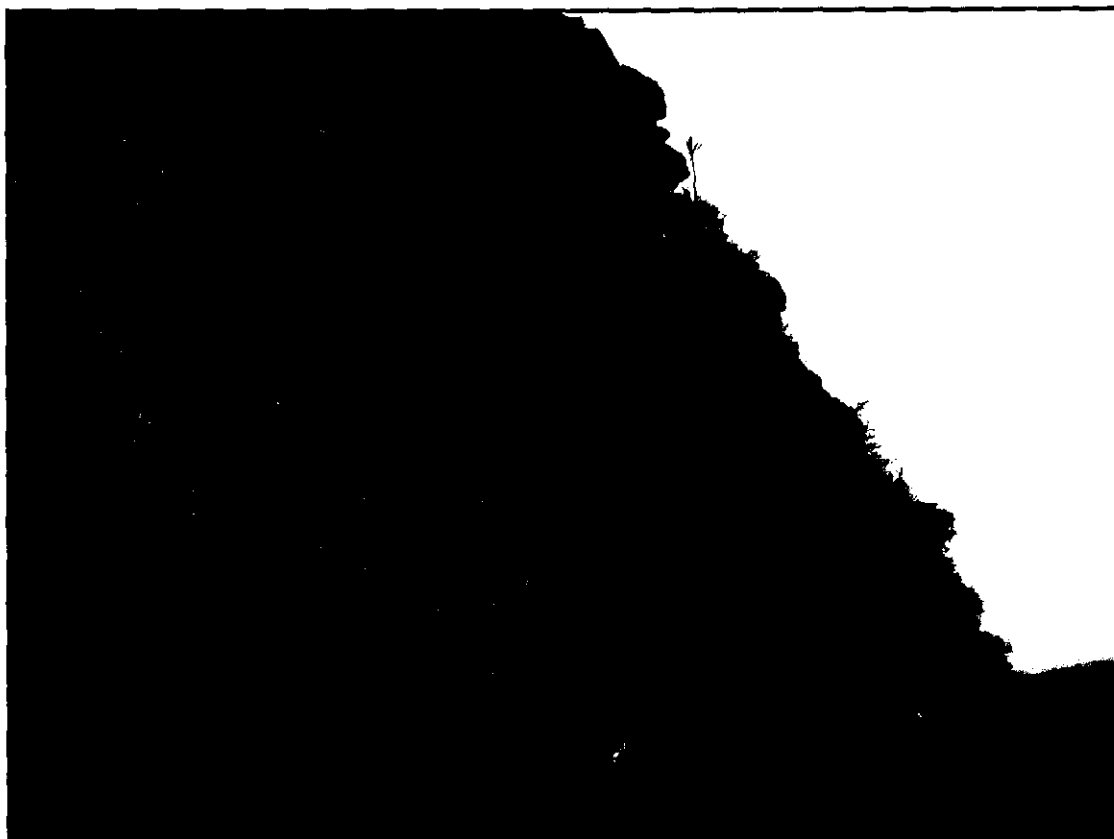


TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS
SURVEY

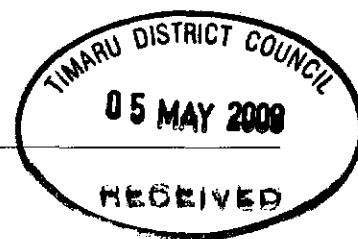
MOGINIE/GERRARD PROPERTY



Report prepared for the Timaru District Council by Mike Harding
April 2009

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT



PROPERTY DETAILS:

Owner: Kevin Moginie and Robbie Gerrard
Valuation Reference: 24660/221.04 and 05
Address: Sercombe Road, Geraldine
Location: On a steep scarp on the north side of the Geraldine Downs,
adjacent to Sercombe Road.
Ecological District:..... Geraldine Ecological District
TDC Land Type: Soft Rock Hills and Downs
Land Environment: N3 (downlands of South Canterbury and coastal Otago)

ECOLOGICAL CONTEXT:

The property lies at the eastern edge of the Geraldine Ecological District, on the northern scarp of the Geraldine Downs. The original vegetation of this area would have been predominantly podocarp-hardwood forest, dominated by totara, matai and kahikatea emergent over a hardwood canopy. Important canopy hardwood species would probably have been narrow-leaved lacebark, pokaka, kowhai, lemonwood, five-finger, broadleaf and mahoe. The exposed rock bluff would have been sparsely vegetated, much as it is today. 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.

One prominent basalt bluff and adjoining areas of restoration planting are present on the property. The bluff represents the largest exposed outcrop of Geraldine Basalt on the Geraldine Downs (and the Timaru District). It supports three locally uncommon species, including a species not previously recorded during SNA surveys of the District. This basalt bluff and the associated restoration plantings are part of a more extensive collection of scattered patches of forest and treeland on the Geraldine Downs.

Areas of forest, treeland and rock bluff on the Geraldine Downs may provide roost sites (though maybe only occasionally used) for long-tailed bat (a 'nationally endangered' species). Long-tailed bat have been recorded nearby in Talbot Forest.

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during December 2008. Two areas of basalt bluff on the property are regarded as Significant Natural Areas (SNAs) when assessed against the District Plan criteria.

Area No.	Area Name	Central grid reference	Aprox. size (ha)	Vegetation/habitat type
150a	Moginie Basalt Scarp West	J37: 676-810	0.42	Rockland and shrubland
150b	Moginie Basalt Scarp East	J37: 678-809	0.05	Rockland

These SNAs are illustrated on the attached aerial photograph and described in greater detail on the Area Inspection Form in this report. Note that the boundaries of the SNAs are indicative, rather than precise. These SNAs meet the ecological criteria in the Timaru District

Plan (criteria i-vi, pages B18-B19) and are considered to be sustainable in the long term (criterion vii, page B19). The SNAs are subject to confirmation by Council after regarding the matters listed under Final Considerations (pages B19-B20).

The implication of an area being listed as an SNA is that consent is required from Council for clearance of indigenous vegetation by any means (including burning and spraying with herbicides) or over-planting. This does not normally prevent clearance to prevent shading of buildings, the maintenance of tracks and fences, or weed control. To assist with the protection and management of any SNA, landowners can apply to Council for financial assistance. It is expected that SNAs will eventually be listed in the District Plan by way of a notified plan change. 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. These are restoration plantings of indigenous species within gorse, broom and blackberry, and a small pond with wetland species at its margin. Some parts of these plantings are several years old and now well established. The plantings link the bluffs within SNA 150 to a small remnant of indigenous forest on an adjoining property (SNA 210h).

This area has some value as young indigenous vegetation and as habitat for birds, but does not quite meet the significance criteria in the Timaru District Plan. Failure of this area to meet the significance criteria does not 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) do not quite meet the criteria in the Timaru District Plan.

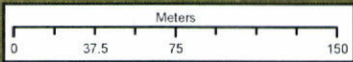


Moginie-Gerrard
Paradise Rocks
24660/221.04
24660/221.05

Sercombe Road

150a

150b



1:3,500

TIMARU DISTRICT SNA SURVEY AREA 150a and AREA 150b

Area Name: Moginie Basalt Scarp	Property: Kevin Moginie and Robbie Gerrard	
Ecological District: Geraldine	Nearest Locality: Geraldine	
AREA 150a: Location (central map ref.): J37: 676-810	Area Size (ha): 0.42	Altitude (m): 180-200
AREA 150b: Location (central map ref.): J37: 678-809	Area Size (ha): 0.05	Altitude (m): 190-200
Surveyors: Mike Harding and Robbie Gerrard	Survey Time: 2 hours	Survey Date: 10-12-08

General Description:

These SNAs cover areas of outcropping Geraldine Basalt. These outcrops form a long low scarp on the north side of the Geraldine Downs. The basalt overlies brown-weathered greywacke conglomerate (Kowai Formation). The conglomerate layer has been exposed and steepened by construction of a vehicle track at the base of the bluff. It appears likely that blocks of basalt, and perhaps parts of the bluff, have also been excavated or quarried. The area between the two sections of bluff has been planted with native species.

Plant Communities:

Two main plant communities are present, a sparsely-vegetated rockland community on the steep rock face and shrubland-pasture at the crest and base of the scarp. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

Bluff-face vegetation (SNA 150a):

The near-vertical exposed basalt is very sparsely vegetated, as is typical for such landforms. Species commonly present in crevices or on ledges on the basalt bluff and underlying conglomerate are pohuehue and barberry*. Other woody species present are mahoe, mapou, *Coprosma crassifolia*, broom*, gorse*, elderberry*, sweet brier*, one young kowhai tree, scrub pohuehue and leafless lawyer. Herbaceous species present are black nightshade*, woolly mullein*, suckling clover*, stonecrop*, grasses* and one patch of rock fern (*Cheilanthes humilis*).

Bluff-face vegetation (SNA 150b):

This smaller area of bluff lies beside a vehicle track at the eastern boundary of the property. This area is more sparsely vegetated. Species present on this bluff are mouse-ear hawkweed and necklace fern (one plant).

Bluff crest and base vegetation (SNA 150a):

A narrow strip of rank pasture and shrubs is present between the crest of the bluff and cultivated pasture. This area is dominated by pasture grasses, gorse*, broom*, barberry* and the native climber, pohuehue. Also present are two mature kowhai trees. The western tree has four main trunks, with diameters between 19 and 22 cm. The eastern tree has more than 20 trunks, with diameters ranging from 7 to 23 cm. Kowhai seedlings are present beneath this eastern tree.

Other species present on the bluff crest are cabbage tree, *Coprosma crassifolia*, matipo, hawthorn*, elderberry*, *Calystegia tuguriorum*, leafless lawyer (several large clumps), blackberry*, black nightshade* and horehound*.

Several wild plum* trees are present along the base of the bluff (beside the vehicle track).

Birds/Fauna Observed:

Native birds observed during this brief survey were silvereye, grey warbler and shag (flying from the bluff). Accumulated bird droppings indicate birds (probably welcome swallow) are roosting or nesting on the bluff. No lizards were observed. However, the habitat appears very favourable for skinks.

Notable Flora, Fauna and Habitats:

Important features of this area are: that it is the most extensive area of outcropping basalt on the Geraldine Downs; the presence of rockland vegetation, notably rock fern (*Cheilanthes humilis*) which has not been previously recorded during SNA surveys in Timaru District; the presence of other locally uncommon species (leafless lawyer and scrub pohuehue); the habitat it provides for birds (welcome swallow and shag); and, the

location of the bluff within a relatively extensive area of restoration planting. The area is close to the recorded range of long-tailed bat. The bluff crevices may provide suitable roost sites for bats.

Notable Plant and Animal Pests:

Barberry, gorse, broom, elderberry and blackberry are the most important plant pests present. Of these, barberry is the most serious, as it can easily colonise the rock bluff and is difficult to control. The succulent herb, stonecrop, also poses a significant threat, as it readily colonises bare rock surfaces. Animal pests were not surveyed.

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

The basalt/conglomerate scarp lies within a much larger area that has been recently planted with native species and, on lower slopes, exotic trees. It is not grazed and is well fenced. A small gully separates the two parts of the bluff. This gully has a small artificial pond and is surrounded by young planted native species. The gully and native plantings extend to the southern boundary of the property where they adjoin remnant and planted native species on the adjacent property (SNA 210h).

Condition and Management Issues:

The rock bluff is in good condition. Most parts, especially the upper parts, appear undisturbed or have weathered since any earlier disturbance. Invasive introduced plants pose the main threat to the bluff, though substantial parts of the upper bluff are relatively weed-free. Suitable seed sources are present for restoration of representative native species (mahoe, matipo, mapou, kowhai, leafless lawyer, *Coprosma crassifolia*).

Property Owner Comment:

The property owners are supportive of protection and dedicated to maintaining and continuing the restoration plantings.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	Good examples of basalt bluff vegetation and habitat. Supports vegetation at least partly representative of the original vegetation.
Rarity	M/H	Basalt bluffs are an uncommon habitat. The bluff supports locally uncommon plant species: rock fern, leafless lawyer and scrub pohuehue. May provide suitable roost sites for bats.
Diversity and pattern	L/M	Indigenous species diversity low and probably substantially reduced from that originally present.
Distinctiveness/special features	M/H	The bluff is the largest area of outcropping Geraldine Basalt in the District.
Other Criteria		
Size/shape	M/H	A relatively small SNA, but a large area of rockland habitat.
Connectivity	M	Adjoins areas of restoration plantings and forms part of a network of fauna habitat on the Geraldine Downs.
Long-term Sustainability	M	The steep upper bluff is resilient. The bluff crest and base are vulnerable to invasive plant pests.

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

The bluff and surrounding areas have been informally protected by the landowners. The owners have put considerable effort into native plantings and weed control associated with those plantings. The bluff and adjoining slopes provide little potential for productive use, except quarrying.

Discussion:

This area easily meets the District Plan criteria for a Significant Natural Area. Important features of the area are that it is the most extensive area of outcropping basalt on the Geraldine Downs; the presence of locally uncommon plant species (rock fern, leafless lawyer and scrub pohuehue); the habitat it provides for birds (welcome swallow and shag) and possibly bats; and the location of the bluff within a relatively extensive area of restoration planting and close to other indigenous remnants.

Scientific names of species cited by common name in this report

(Note: this is not a complete species list; it is a list only of species cited by common name in this report)

Common Name	Scientific name
(* = naturalised species)	
barberry*	<i>Berberis glaucocarpa</i>
blackberry*	<i>Rubus fruticosus</i>
black nightshade*	<i>Solanum nigrum</i>
broom*	<i>Cytisus scoparius</i>
cabbage tree/ti rakau	<i>Cordyline australis</i>
elderberry*	<i>Sambucus nigra</i>
gorse*	<i>Ulex europaeus</i>
hawthorn*	<i>Crataegus monogyna</i>
horehound*	<i>Marrubium vulgare</i>
kowhai	<i>Sophora microphylla</i>
leafless lawyer	<i>Rubus squarrosus</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
mapou	<i>Myrsine australis</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
mouse-ear hawkweed*	<i>Hieracium pilosella</i>
necklace fern	<i>Asplenium flabellifolium</i>
plum*	<i>Prunus</i> sp.
pohuehue	<i>Muehlenbeckia australis</i>
rock fern	<i>Cheilanthes humilis</i>
scrub pohuehue	<i>Muehlenbeckia complexa</i>
stonecrop*	<i>Sedum acre</i>
suckling clover*	<i>Trifolium dubium</i>
sweet brier*	<i>Rosa rubiginosa</i>
woolly mullein*	<i>Verbascum thapsus</i>