

TIMARU DISTRICT COUNCIL

SIGNIFICANT NATURAL AREAS
SURVEY

ROONEY PROPERTY
Hillview



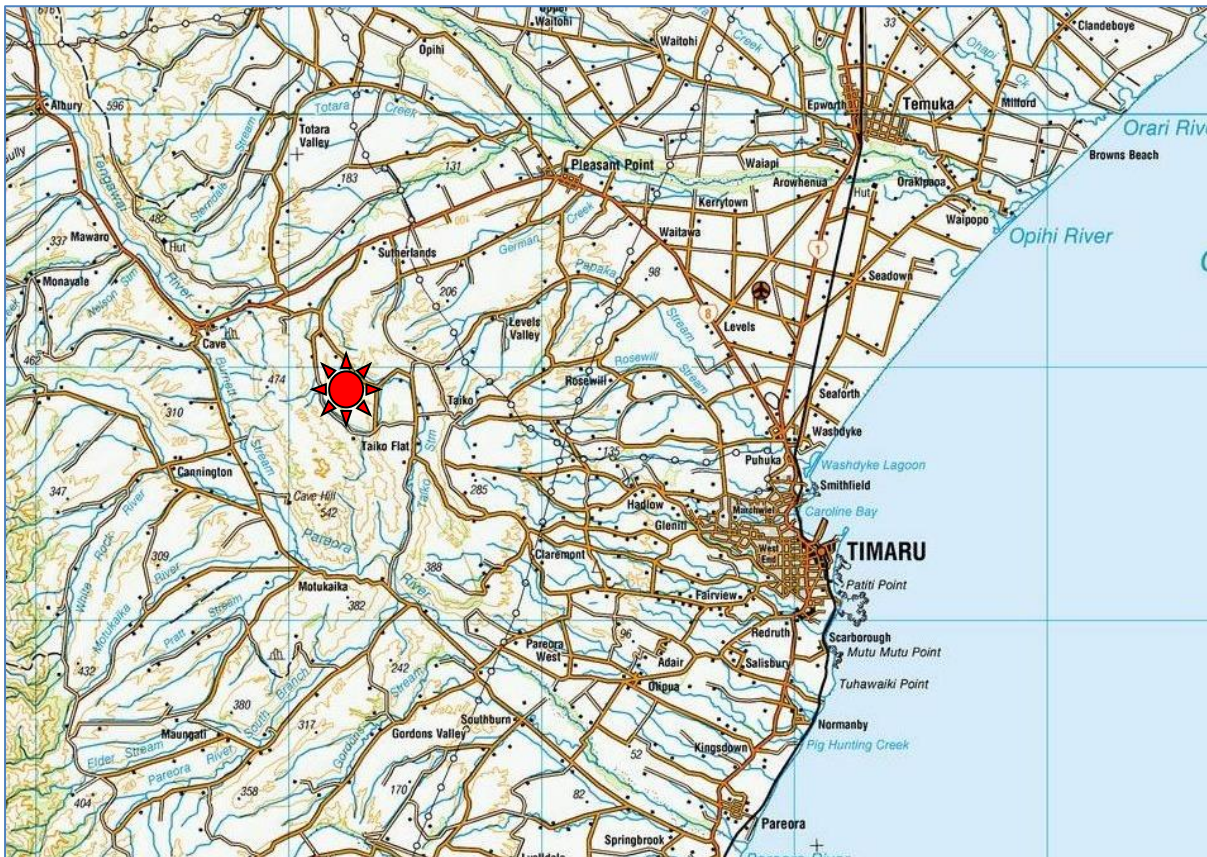
Report prepared for Timaru District Council
Mike Harding
February 2021

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY PROPERTY REPORT

PROPERTY DETAILS:

Owner: Gary Rooney
Valuation Reference: ... 24820-10600B
Location: Taiko Road
Ecological District: Waimate
Land Environment: N3.1a

LOCATION AND DESCRIPTION:



Location of Rooney Hillview Property (red star)

The Rooney property is located between Limestone Valley Road and Taiko Road, approximately 5km south-east of Cave, in South Canterbury. The property is named Hillview on the topographical map. It is located on a prominent ridge between altitudes of 200m and 300m. Underlying geology is sandy limestone and calcareous glauconitic sandstone of the Kekenodon Group (GNS Science, NZ Geology Web Map). Small streams on most parts of the property drain east to Taiko Stream (a tributary of the Pareora River); the north-west part of the property drains to Robinsons Road Creek (a tributary of the Tengawai River).

ECOLOGICAL CONTEXT:

The property lies in Waimate Ecological District, within Pareora Ecological Region (McEwen, 1987), and within the N3.1a Level IV Land Environment as defined by Leathwick *et al* (2003).

It is likely that the original vegetation of this area was predominantly podocarp-broadleaved forest, dominated by matai, totara, kowhai, broadleaf and other broadleaved trees. Shrubland, scrub, treeland and tussockland would have occupied steeper slopes and disturbed sites. Exposed limestone supported specialised flora, and valley floors would have supported areas of wetland vegetation.

Today the original forest cover in this part of Waimate Ecological District is largely confined to remnants in gullies or on steep slopes associated with limestone scarps. Otherwise, the indigenous vegetation of the ecological district is substantially depleted or modified. The indigenous fauna would have originally been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area.

SURVEY METHOD AND COVERAGE:

The field survey upon which this report is based was restricted to views from Limestone Valley Road, as permission for access to the property was declined by the landowner. This road-side survey is supplemented by interpretation of aerial images, survey of limestone habitats on adjacent properties, and by my knowledge of South Canterbury limestone ecosystems. The purpose of the survey is to determine the presence and extent of significant indigenous vegetation and significant habitats of indigenous fauna.

Names of indigenous plant species cited in this report are as listed on the Ngā Tipu o Aotearoa-New Zealand Plants database (Manaaki Whenua-Landcare Research). Plant community names follow the method proposed by Atkinson (1985). The threat status of indigenous species is as listed in the most recent publications of the Department of Conservation, referenced in this report.

SIGNIFICANT NATURAL AREAS ON THE PROPERTY:

Three separate areas are assessed as Significant Natural Areas (SNAs) under the Canterbury Regional Policy Statement (RPS) criteria.

SNA No.	Central Map Reference (NZTM)	Aprox. size(ha)	Vegetation/habitat type
922	1441466E-5089743N	4.66	rockland; grassland/herbfield
923	1441468E-5089330N	0.66	rockland; grassland/herbfield
924	1441929E-5089324N	1.37	treeland; shrubland; rockland; grassland

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.



Rooney Hillview Property SNAs (white-hatched areas).

TIMARU DISTRICT SNA SURVEY

SNA 922

Ecological District: Waimate	Nearest Locality: Cave
Map ref. (NZTM): 1441466E-5089743N	Size (ha): 4.66 Altitude (m): 300

GENERAL DESCRIPTION:

This SNA comprises a low limestone bluff (scarp), between a larger area of exposed rock pavement on the ridge crest, and large limestone boulders on the slopes below. It lies between other areas of exposed limestone on properties to the north and south, and near to other areas of exposed limestone on this property (SNA 923 and SNA 924).



SNA 922, viewed from Limestone Valley Road

VEGETATION/HABITAT TYPES:**Vegetation**

This desk-top analysis does not permit a full description of the vegetation. Indigenous plant species visible from the road are ti/cabbage tree (*Cordyline australis*) and mingimingi (*Coprosma propinqua*).

Additional indigenous plant species recorded on nearby areas of exposed limestone are native broom (*Carmichaelia australis*), pohuehue (*Muehlenbeckia australis*), blue tussock (*Poa colensoi*), limestone spleenwort (*Asplenium hyalii*), *Geranium socolatum*, *Colobanthus* aff. *brevisepalus* “limestone” and *Gingidia enysii*.

Other indigenous species less commonly present on nearby limestone are matagouri (*Discaria toumatou*), *Parietaria debilis*, *Colobanthus apetalus*, *Chenopodium allanii*, *Cardamine integra*, *Epilobium nummularifolium*, limestone gentian (*Gentianella calcis* subsp. *taiko*), woollyhead (*Craspedia* sp.), pennywort (*Hydrocotyle* sp.), toatoa (*Haloragis erecta*), *Plantago novae-zealandiae*, *Senecio* aff. *glaucophyllus* “Mt Cass”, *Libertia ixioides*, *Dichondra repens*, blue wheatgrass (*Anthosachne solandri*), maidenhair fern (*Adiantum cunninghamii*), *Geranium microphyllum* and *Azorella trifoliolatum*.

Habitats of Indigenous Fauna

Survey of fauna was not possible. Native bird species likely to be present at or in the vicinity of the SNA are grey warbler, harrier, spur-winged plover and paradise shelduck. The rocky slopes may provide suitable habitat for lizards.

RARE/NOTABLE SPECIES, HABITATS OR COMMUNITIES:

The site supports areas of exposed limestone, which is an ‘originally rare ecosystem’ (Williams *et al*, 2007) with a threat status of nationally ‘vulnerable’ (Holdaway *et al*, 2012). The Level IV Land Environment (N3.1a) in which the SNA lies is an ‘acutely threatened’ land environment, with less than 10% of indigenous cover remaining nationally (Cieraad *et al*, 2015). Several of the plant species that are likely to be present at the SNA are listed as ‘threatened’ or ‘at risk’ by de Lange *et al* (2018).

ASSESSMENT OF SIGNIFICANT NATURAL AREAS:

Significant Natural Areas (SNAs) are determined by assessing indigenous vegetation and habitats of indigenous fauna against the criteria in Appendix 3 of the Canterbury Regional Policy Statement (RPS), with reference to the guidelines for application of these criteria (Wildlands, 2013).

Selecting boundaries for SNAs can be problematic, as vegetation boundaries are not precise (plant communities frequently grade from one type to another) and habitats of indigenous fauna are not easily determined through brief site surveys. In this assessment the SNA boundary is drawn to encompass the main areas of exposed limestone. This may include areas of pasture which are not significant. A more detailed site survey would be necessary to refine this boundary.

ASSESSMENT AGAINST CANTERBURY RPS CRITERIA:

Criteria	Yes/No	Comments
Representativeness	Yes	The sparsely vegetated exposed rock (rockland) is probably typical of the natural diversity of this part of the ecological district; woody plant communities are degraded and less typical.
Rarity/Distinctiveness	Yes	Calcareous (limestone) cliffs and scarps are a nationally ‘vulnerable’ ecosystem.
Diversity and Pattern	No	The site appears to support a low diversity of indigenous species and habitats.
Ecological Context	Maybe	Indigenous vegetation/habitat that is part of a larger group of rockland and shrubland remnants in the area.

Comments/Reasons:

Important ecological values are the presence of an originally rare ecosystem (limestone) and the likely presence of populations of ‘threatened’ and ‘at risk’ plant species. There is sufficient information about this site to confirm that it is ecologically significant. An on-site survey would be required to provide further information about the presence and extent of those values.

TIMARU DISTRICT SNA SURVEY

SNA 923

Ecological District: Waimate	Nearest Locality: Cave
Map ref. (NZTM): 1441468E-5089330N	Size (ha): 0.66 Altitude (m): 300

GENERAL DESCRIPTION:

This SNA comprises an area of exposed rock pavement at the edge of the ridge crest. It lies between other areas of exposed limestone on properties to the north and south, and near to other area of exposed limestone on this property (SNA 922 and SNA 924).

VEGETATION/HABITAT TYPES:**Vegetation**

This desk-top analysis does not permit a full description of the vegetation. The only indigenous plant species clearly visible from the road is ti/cabbage tree (*Cordyline australis*).

Additional indigenous plant species recorded on nearby areas of exposed limestone are mingimingi (*Coprosma propinqua*), native broom (*Carmichaelia australis*), pohuehue (*Muehlenbeckia australis*), blue tussock (*Poa colensoi*), limestone spleenwort (*Asplenium lyallii*), *Geranium socolateum*, *Colobanthus* aff. *brevisepalus* “limestone” and *Gingidia enysii*.

Other indigenous species less commonly present on nearby limestone are matagouri (*Discaria toumatou*), *Parietaria debilis*, *Colobanthus apetalus*, *Chenopodium allanii*, *Cardamine integra*, *Epilobium nummularifolium*, limestone gentian (*Gentianella calcei* subsp. *taiko*), woollyhead (*Craspedia* sp.), pennywort (*Hydrocotyle* sp.), toatoa (*Haloragis erecta*), *Plantago novae-zelandiae*, *Senecio* aff. *glaucophyllus* “Mt Cass”, *Libertia ixioides*, *Dichondra repens*, blue wheatgrass (*Anthosachne solandri*), maidenhair fern (*Adiantum cunninghamii*), *Geranium microphyllum* and *Azorella trifoliolatum*.

Habitats of Indigenous Fauna

Survey of fauna was not possible. Native bird species likely to be present at or in the vicinity of the SNA are grey warbler, harrier, spur-winged plover and paradise shelduck. The rocky slopes may provide suitable habitat for lizards.

RARE/NOTABLE SPECIES, HABITATS OR COMMUNITIES:

The site supports areas of exposed limestone, which is an ‘originally rare ecosystem’ (Williams *et al*, 2007) with a threat status of nationally ‘vulnerable’ (Holdaway *et al*, 2012). The Level IV Land Environment (N3.1a) in which the SNA lies is an ‘acutely threatened’ land environment, with less than 10% of indigenous cover remaining nationally (Cieraad *et al*, 2015). Several of the plant species that are likely to be present at the SNA are listed as ‘threatened’ or ‘at risk’ by de Lange *et al* (2018).

ASSESSMENT OF SIGNIFICANT NATURAL AREAS:

Significant Natural Areas (SNAs) are determined by assessing indigenous vegetation and habitats of indigenous fauna against the criteria in Appendix 3 of the Canterbury Regional Policy Statement (RPS), with reference to the guidelines for application of these criteria (Wildlands, 2013).

Selecting boundaries for SNAs can be problematic, as vegetation boundaries are not precise (plant communities frequently grade from one type to another) and habitats of indigenous fauna are not easily determined through brief site surveys. In this assessment the SNA boundary is drawn to encompass the main area of exposed limestone. This may include areas of pasture which are not significant. A more detailed site survey would be necessary to refine this boundary.

ASSESSMENT AGAINST CANTERBURY RPS CRITERIA:

Criteria	Yes/No	Comments
Representativeness	Yes	The sparsely vegetated exposed rock (rockland) is probably typical of the natural diversity of this part of the ecological district; woody plant communities are degraded and less typical.
Rarity/Distinctiveness	Yes	Calcareous (limestone) cliffs and scarps are a nationally 'vulnerable' ecosystem.
Diversity and Pattern	No	The site appears to support a low diversity of indigenous species and habitats.
Ecological Context	Maybe	Indigenous vegetation/habitat that is part of a larger group of rockland and shrubland remnants in the area.

Comments/Reasons:

Important ecological values are the presence of an originally rare ecosystem (limestone) and the likely presence of populations of 'threatened' and 'at risk' plant species. There is sufficient information about this site to confirm that it is ecologically significant. An on-site survey would be required to provide further information about the presence and extent of those values.

TIMARU DISTRICT SNA SURVEY**SNA 924**

Ecological District: Waimate	Nearest Locality: Cave
Map ref. (NZTM): 1441929E-5089324N	Size (ha): 1.37 Altitude (m): 200-280

GENERAL DESCRIPTION:

This SNA covers a low limestone bluff (scarp) on the north side of a small gully near the southern property boundary. It lies near to other areas of exposed limestone on this property (SNA 922 and SNA 923).

VEGETATION/HABITAT TYPES:**Vegetation**

This desk-top analysis does not permit a full description of the vegetation. The limestone scarp is not visible from the roads, but is clearly visible on aerial images. It appears to support areas of woody vegetation, most likely dominated by indigenous shrubs. Large trees along the base of the bluff may be the exotic crack willow (*Salix fragilis*).

Additional indigenous plant species recorded on nearby areas of exposed limestone are ti/cabbage tree (*Cordyline australis*), mingimingi (*Coprosma propinqua*), native broom (*Carmichaelia australis*), pohuehue (*Muehlenbeckia australis*), blue tussock (*Poa colensoi*), limestone spleenwort (*Asplenium lyallii*), *Geranium socolatum*, *Colobanthus* aff. *brevisepalus* “limestone” and *Gingidia enysii*.

A number of other limestone plant species are likely to be present, such as those listed for SNA 922 above.

Habitats of Indigenous Fauna

Survey of fauna was not possible. Native bird species likely to be present at or in the vicinity of the SNA are grey warbler, harrier, spur-winged plover and paradise shelduck. The rocky slopes may provide suitable habitat for lizards.

RARE/NOTABLE SPECIES, HABITATS OR COMMUNITIES:

The site supports areas of exposed calcareous rock, which is an ‘originally rare ecosystem’ (Williams *et al*, 2007) with a threat status of nationally ‘vulnerable’ (Holdaway *et al*, 2012). The Level IV Land Environment (N3.1a) in which the SNA lies is an ‘acutely threatened’ land environment, with less than 10% of indigenous cover remaining nationally (Cieraad *et al*, 2015). Several of the plant species that are likely to be present at the SNA are listed as ‘threatened’ or ‘at risk’ by de Lange *et al* (2018).

ASSESSMENT OF SIGNIFICANT NATURAL AREAS:

Significant Natural Areas (SNAs) are determined by assessing indigenous vegetation and habitats of indigenous fauna against the criteria in Appendix 3 of the Canterbury Regional Policy Statement (RPS), with reference to the guidelines for application of these criteria (Wildlands, 2013).

Selecting boundaries for SNAs can be problematic, as vegetation boundaries are not precise (plant communities frequently grade from one type to another) and habitats of indigenous fauna are not easily determined through brief site surveys. In this assessment the SNA boundary is drawn to encompass the main area of exposed limestone on the valley side. This may include areas of pasture which are not significant. A more detailed site survey would be necessary to refine this boundary.

ASSESSMENT AGAINST CANTERBURY RPS CRITERIA:

Criteria	Yes/No	Comments
Representativeness	Yes	The sparsely vegetated exposed rock (rockland) is probably typical of the natural diversity of this part of the ecological district; woody plant communities are present but difficult to assess.
Rarity/Distinctiveness	Yes	Calcareous (limestone) cliffs and scarps are a nationally 'vulnerable' ecosystem.
Diversity and Pattern	No	The site appears to support a low diversity of indigenous species and habitats.
Ecological Context	Maybe	Indigenous vegetation/habitat that is part of a larger group of rockland and shrubland remnants in the area.

Comments/Reasons:

Important ecological values are the presence of an originally rare ecosystem (limestone) and the likely presence of populations of 'threatened' and 'at risk' plant species. There is sufficient information about this site to confirm that it is ecologically significant. An on-site survey would be required to provide further information about the presence and extent of those values.

REFERENCES CITED:

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