TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS SURVEY

FINCHAM PROPERTY

Report prepared for Timaru District Council
by
Mike Harding and Mark Davis
March 2012

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: ..... Norma and John Fincham
Valuation References: 24860/170.00
Address: ..... 11 William Street, RD1, Normanby.
Location: ..... Inland edge of Normanby Lagoon.
Ecological District: ..... Makikihi Ecological District.
TDC Land Type: ..... 'Soft Rock Hills and Downs'
Land Environment: ..... N3.1b (eastern South Island undulating plains and hills).

ECOLOGICAL CONTEXT:

The property covers low-lying slopes adjacent to Normanby Lagoon on the coast south of Timaru. The property lies in Makikihi Ecological District.

It is likely that the original vegetation of this area was predominantly wetland and coastal (dune) vegetation adjacent to the stream/lagoon, grading to coastal forest on inland slopes. Widespread loss of indigenous vegetation in this part of Timaru District makes it difficult to determine the precise nature of the original vegetation. An area near Normanby Lagoon was occupied in pre-European times, so there is likely to be a long history of vegetation disturbance. The area has since been altered by construction of the railway line along the coastal margin of the lagoon/wetland.

Normanby Lagoon/wetland is one of few areas of open water and wetland habitat on the South Canterbury coast. It provides regionally important habitat for migratory, wading and coastal birds. A detailed survey of indigenous fauna was not possible during this survey, though the values of the lagoon/wetland are recognised by protection of part of the lagoon as Normanby Wetland Conservation Area (formerly Normanby Wetland Wildlife Management Area).

SIGNIFICANT AREAS ON THE PROPERTY:

Indigenous vegetation and habitat on the property comprises a narrow strip of herbfield on a muddy substrate at the stream/wetland margin. This vegetation and habitat is an integral part of a much larger area of wetland vegetation and habitat that includes a DOC-administered conservation area and vegetation and habitat on other lagoon-margin properties.

The property was surveyed as part of the District-wide survey of Significant Natural Areas by ecologist Mark Davis during January 2012. One small area (SNA 96c) is regarded as a Significant Natural Area (SNA) when assessed against the District Plan criteria.

This SNA is illustrated on the attached aerial photograph and described in greater detail on the SNA Form in this report. Note that the boundaries of the SNA are indicative, rather than precise. This area meets the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) and is 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


Fincham Property
24860/170.00
Normanby Road
96c
William Street
N
1:2,500

TIMARU DISTRICT SNA SURVEY SNA 96c

Area Name: Normanby wetland
Location (NZMS 260): 2370258-5638061
Ecological District: Makikihi
Surveyors: Markus Davis
Property: Norma Fincham
Nearest Locality: Normanby
Area Size (ha): 0.17 **Altitude (m):** 10-20m
Survey Time: ½ hour **Survey Date:** 19-01-12

General Description:

This SNA lies at the inland margin of Normanby Lagoon. The lagoon and adjacent wetland vegetation are at the end of a small un-named stream which drains low-lying country to the northwest. The lagoon/wetland occupies an area of approximately 450m x 300m on the floodplain between stream terraces. A small but central part of the lagoon/wetland is protected as Normanby Wetland Conservation Area, administered by the Department of Conservation. At the time of this survey the wetland was largely under water, though during a visit in February 2010, a substantial area of mud flats were exposed. The wetland is largely bounded by farmland to the north, west and south with a mixed sand/gravel beach and low dunes to the northeast. The main trunk railway line runs between this property and the dunes.

Plant Communities:

Three main plant communities or habitats are present and these are described below. Naturalised (exotic) species are indicated with an asterisk*.

Herbfield (turf) on mud

Aerial photos indicate that a muddy substrate is present along most of the part of the property that adjoins the wetland/stream, though some of this was under water at the time of the survey.

The width of this herbfield (turf) community varies from 0.5m-5m. Arrow grass is particularly abundant here. Other prominent plants are *Lilaeopsis novae-zelandiae, Mimulus repens,* bachelor's button (seedlings) and retoreto on wet mud. Less common are mosses and salt grass. One tiny patch of spike sedge was also seen. A small channel of the stream runs behind an 'island' adjoining a lower dam site, and a similar turf is present there with the addition of a few plants of *Bolboschoenus caldwellii* and three-square. No celery-leaved buttercup* was observed, but seedlings are likely to be present or they will emerge in the turf as the water level falls. The mud turf forms a mosaic with open water of the stream, and it merges with grassland on higher ground.

Open water

Open water adjacent to the mud turf is dominated by algae on the water surface. Small amounts of retoreto and duckweed are also present and, while it was not seen, *Ruppia megacarpa* is likely to be present as it was seen in the stream from the opposite bank. As the wetland and stream water levels drop, it is likely that more mud turfs would be exposed along the stream edge and that additional species would occupy this habitat.

Grassland

The land behind the mud turf is dominated by dense exotic grasses including creeping bent*, twitch*, tall oat grass* and browntop*. Gum trees 10-15m high are fairly openly spaced through the grassland. It appears that this grassland has not been grazed by stock in recent times. The grassland is fenced from the sloping farm paddock above which is currently used for cropping.

Birds/Fauna Observed:

No native birds were seen on the property during this survey, but many were seen in the wider wetland, including pied stilt, black swan, ducks, shags and geese.

Notable Flora, Fauna and Habitats:

The limited area of mud turf and stream contribute to the biodiversity of the wider wetland and stream complex. More mud turf is likely to be exposed during periods of lower water levels. While their area is limited on this property, they are notable because of they represent original wetland communities along this coast. The mud turfs and open water are likely to be used by waterbirds and waders at times, and they will also provide habitat for a range of invertebrates.

Normanby Lagoon lies within an acutely-threatened land environment and provides regionally important habitat for migratory, wading and coastal birds. Nationally threatened species, including banded dotterel and white heron, have been observed at the lagoon. Pied stilt are listed as an at risk (declining) species.

Notable Plant and Animal Pests:
No plant or animal pests were observed during this survey.

Boundaries (buffering, fencing, adjoining plant communities and habitats):
It appears that stock are not grazed on the grassland adjoining the mud turfs. Absence of grazing will assist in maintaining or improving indigenous biodiversity values and water quality, as the grassland effectively buffers the wetland from farm activities on the slopes above. The gum trees shade the turf community to some extent, but this does not appear to limit their presence here.

Condition and Management Issues:
It is possible that stock from neighbouring properties might gain access to this area through fences that are not stock proof. The fence on the northeast side of the property is not very robust and has been damaged by falling tree branches. Sheep may be able to enter the property, particularly as water levels recede. Cattle are present nearby so it is important that the boundary fence is maintained. Cattle would cause much more damage to the turfs and water quality than sheep. Evidence from other properties clearly shows that sheep are pugging shoreline turfs and mud and, in conjunction with animal waste, this will be contributing to the degradation of indigenous plant communities and water quality. Retention of the buffer provided by the apparently un-grazed grassland beneath the gums trees is important.

Property Owner Comment:
The property owners are interested in planting vegetation such as flax at the lagoon margin.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	The mud-turf vegetation is moderately representative of the original wetland community.
Rarity	H	Lies in an acutely-threatened land environment; wetlands are a nationally rare ecosystem. Provides habitat for threatened bird species.
Diversity and pattern	L/M	Supports a small area of mud turf vegetation and open water.
Distinctiveness/special features	M	Regionally important habitat for water birds. A wetland of this nature and size in an intensively farmed area is notable, though only a small part of the wetland lies on the property.
Other Criteria		
Size/shape	L	The extent of stream and mud turfs of the property is small and narrow.
Connectivity	M	Adjoins, links and buffers other areas of wetland habitat
Long-term Sustainability	M	Ecological values of the plant communities and habitats are likely to persist with minimal management. Habitat quality is vulnerable to activities elsewhere in the wetland catchment.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):
While this property contributes only a small part of the stream and its adjoining mud turfs, it does nonetheless contribute to the integrity of the wider stream and wetland complex. It also appears likely that the extent of mud turf vegetation would increase when the water levels of the stream and wetland recede. It appears that sheep presently gain access to the stream and wetland from other properties. This issue needs to be addressed across the entire stream and wetland complex.

Discussion:

This small area meets the District Plan criteria for a Significant Natural Area. Important values are the presence of an area (albeit small) of indigenous vegetation and the contribution of this part of the wetland margin to habitat values of the wider wetland/lagoon.

Wet mud turf and algae on shallow water, forming a narrow wetland on the stream edge