

**TIMARU DISTRICT**  
**SIGNIFICANT NATURAL AREAS**  
**SURVEY**

**BINNS PROPERTY**



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

# **TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY**

## **PROPERTY REPORT**

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### **PROPERTY DETAILS:**

**Owner:** ..... Peter Binns and June Gregg  
**Valuation References:** .... 24860/170.01  
**Address:** ..... 67 Lagoon Drive, RD1, Normanby.  
**Location:** ..... South side 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).

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### **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).

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### **SIGNIFICANT AREAS ON THE PROPERTY:**

Indigenous vegetation and habitat on the property comprises a narrow strip of sedgeland and associated herbfield on a muddy substrate at the lagoon margin. This vegetation and habitat is an integral part of a much larger area of wetland vegetation and habitat that includes the 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 Christchurch-based ecologist Mark Davis during January 2012. One small narrow area (SNA 96a) 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 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 which meet the Interim Definitions in the District Plan. Clearance includes draining, 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, 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.

#### 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

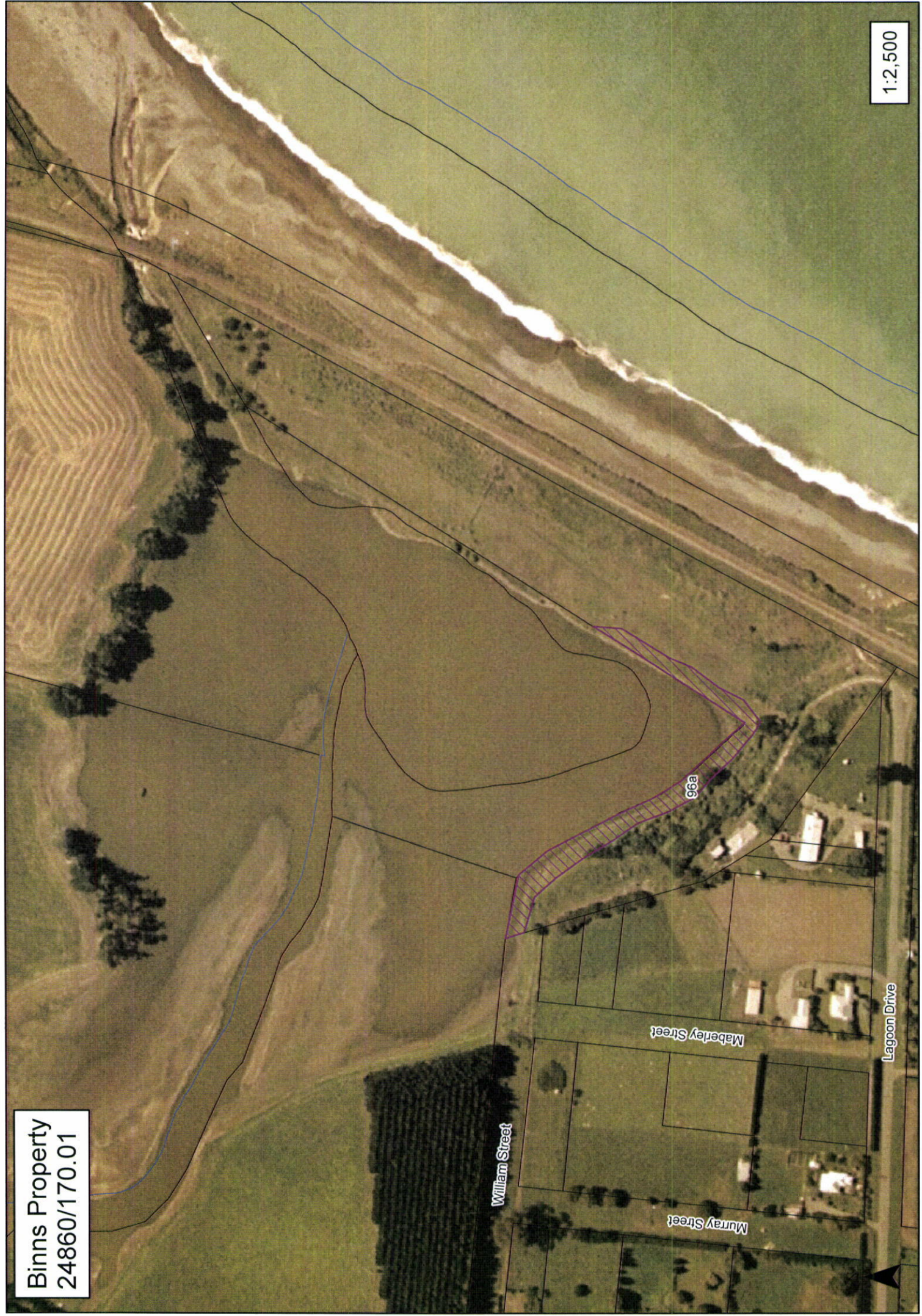
(\* = naturalised species)

arrow grass.....	<i>Triglochin striatum</i>
bachelor's button.....	<i>Cotula coronopifolia</i>
boxthorn* .....	<i>Lycium ferocissimum</i>
broom* .....	<i>Cytisus scoparius</i>
buck's horn plantain*.....	<i>Plantago coronopus</i>
celery-leaved buttercup* .....	<i>Ranunculus sceleratus</i>
coastal goosefoot.....	<i>Chenopodium glaucum</i> ssp. <i>ambiguum</i>
cocksfoot* .....	<i>Dactylis glomerata</i>
couch* .....	<i>Elytrigia repens</i>
creeping bent* .....	<i>Agrostis stolonifera</i>
curled dock* .....	<i>Rumex crispus</i>
duckweed .....	<i>Lemna minor</i>
fathen* .....	<i>Chenopodium album</i>
flax .....	<i>Phormium tenax</i>
gorse* .....	<i>Ulex europaeus</i>
orache* .....	<i>Atriplex patula</i>
pampas grass* .....	<i>Cortaderia</i> sp.
radiata pine* .....	<i>Pinus radiata</i>
retoreto .....	<i>Azolla filiculoides</i>
tree lupin* .....	<i>Lupinus arboreus</i>
white clover* .....	<i>Trifolium repens</i>
yarrow* .....	<i>Achillea millefolium</i>



Binns Property  
24860/170.01

1:2,500





# TIMARU DISTRICT SNA SURVEY

SNA 96a

**Area Name:** Normanby wetland  
**Location (NZMS 260):** 2370600-5637700  
**Ecological District:** Makikihi  
**Surveyors:** Markus Davis & Peter Binns

**Property:** Peter Binns and June Gregg  
**Nearest Locality:** Normanby  
**Area Size (ha):** 0.28      **Altitude (m):** 10-20  
**Survey Time:** 2 hours      **Survey Date:** 19-01-12

## General Description:

This SNA lies at the southern margin of Normanby Lagoon. The lagoon and adjacent wetland vegetation lie 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/habitats are present and these are described below. Naturalised (exotic) species are indicated with an asterisk\*.

### Herbfield on mudflats

Very little was exposed during this visit, and the description is therefore based on this visit and earlier observations. This community is largely restricted to a narrow zone between the sedgeland and the open water, primarily on the southwest side, but small patches are also likely to occur on the northeast side. Prominent plants in this community are *Mimulus repens*, bachelor's button, coastal goosefoot, celery-leaved buttercup\* and occasionally orache\*. Other species likely to be present with low water levels are arrow grass and *Lilaeopsis novae-zelandiae*.

### Sedgeland

This community occurs between the open water margin and the rough pasture or dryland above. It is the main wetland plant community on the southwest and northeast sides of the wetland, and is strongly dominated by semi-continuous *Bolboschoenus caldwellii* with limited retoreto and duckweed among the sedge bases. Other prominent plants include *Lilaeopsis novae-zelandiae*, *Mimulus repens*, orache\*, creeping bent\*, couch\*, white clover\* and scattered curled dock\*. A small depression behind the *Bolboschoenus caldwellii* on the southwest side supports a turf of *Lilaeopsis novae-zelandiae*, buck's horn plantain\*, bachelor's button, *Mimulus repens*, celery-leaved buttercup\*, creeping bent\* and orache\*. Closer to the fences are other plants including exotic grasses, tree lupin\*, flax and plantings of native trees and shrubs on the southwest side. One large radiata pine\* is present on this side. There are a few planted pampas grass\* on the southwest side and a few more close to the northwest boundary of the property, on DOC-administered land.

### Rough pasture

Rough pasture occurs behind the sedgeland and is separated from the wetland by a fence. This community is strongly dominated by exotic plants including grasses, buck's horn plantain\*, yarrow\*, fathen\*, scattered tree lupin\*, and localised gorse\* and broom\* towards the railway line.

## 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 discontinuous zone of *Bolboschoenus caldwellii* is characteristic of the wetland shoreline, and the property supports some of the densest and continuous parts of this community. Smaller patches of herbfield are present on mud along the water's edge and these are characteristic of the most common plant communities in the wetland. All of these habitats are likely to be used by a variety of invertebrates, while

water birds and waders use the open water and mudflats. Some cover for waterfowl may be provided by the *Bolboschoenus*.

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:**

The main plant pests observed were tree lupin\*, gorse\*, broom\* and pampas grass\*. The extent to which these could spread into the wetland will be limited by water and they are not expected to be a significant problem. The pampas grass is of some concern as observations elsewhere along this coast have shown that it can readily spread into wetland margins, dunes and upper beaches, though Peter Binns notes that it is not spreading at this site. I saw no evidence of animal pests but Peter Binns (*pers.comm.*) indicated that rabbits can be quite common at times. Rabbits could cause localised damage to exposed turf plant communities.

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

Only a narrow zone of this property is actually within the wetland, but the land behind the sedge zone provides important buffering for the wetland. The rough pasture does not include any of the wetland community except for about a patch of turf (10m x 1.5m) at the northern end of the southwest margin. The turf is within a pony paddock and it has been quite heavily grazed and pugged. It would be beneficial if the fence was re-located to exclude the turf patch from the paddock, and for the fence to leave a small buffer above the sedge zone and turf. The rough pasture on the northeast side may be intermittently grazed by horses, but this is not a concern unless the horses were able to gain access through the fence to the wetland.

#### **Condition and Management Issues:**

Except for the small patch of damaged turf within the fenced paddock, the riparian wetland plant communities are in excellent condition. If the fence was shifted so that the pony did not have access to the turf, it should recover and may at least in part develop into a *Bolboschoenus caldwellii* association. Habitat quality of the wider wetland is also affected by activities on other properties in the wetland catchment.

#### **Property Owner Comment:**

Peter Binns is enthusiastic about protection and proposes to extend fences to provide better protection for the lagoon margin.

#### **ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	<b>M</b>	A modified example of wetland margin vegetation.
Rarity	<b>H</b>	Lies in an acutely-threatened land environment; wetlands are a nationally rare ecosystem. Provides habitat for threatened bird species.
Diversity and pattern	<b>L/M</b>	Supports one main wetland community and a small portion of another.
Distinctiveness/special features	<b>M/H</b>	Regionally important habitat for water birds. A wetland of this nature and size in an intensively farmed area is notable.
<b>Other Criteria</b>		
Size/shape	<b>L</b>	The property supports only narrow wetland margins.
Connectivity	<b>M/H</b>	Adjoins, links and buffers other areas of wetland habitat, including a protected public conservation area.
Long-term Sustainability	<b>M</b>	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):**

The current owners have undertaken riparian planting of flax, shrubs and trees around some of the wetland and wish to see the wetland protected and managed to retain and improve its indigenous biodiversity values. The SNA is a small part of a larger area of important fauna habitat.

### **Discussion:**

Only a small proportion of wetland vegetation and fauna habitat is present on this property, effectively comprising riparian sedgeland and minor patches of mudflat vegetation. However, these communities contribute to the value of the wider wetland. Terrestrial vegetation behind these communities fulfils a valuable buffering function. This terrestrial vegetation appears unlikely to be used more intensively than at present. Such use does not pose any management concerns for the wetland, providing one fence is realigned as suggested and the fences are maintained in their current condition to exclude stock. It would be beneficial and would reduce wider threats to coastal values in the area if pampas grass was removed from the property (and from the adjoining DOC-administered land).



*Zone of *Bolboschoenus caldwellii* in the foreground (some may not be in property) with planted trees and shrubs beyond.*