

Part A: WETLAND RECORD SHEET

Wetland name: Rangitata River mouth hapua
Region: Canterbury Plains ER, Low Plains ED
Altitude: <5 m

Date: March 2010
GPS Ref. (NZTM): E1480870 N5106260
No. of plots sampled: Overview only

Classification: I System	IA Subsystem	II Wetland Class	IIA Wetland Form
Lacustrine	Tidal	Shallow water, unvegetated, marsh	Hapua
Riverine	Tidal	Shallow water, unvegetated, marsh	Hapua
Estuarine	Supra-tidal	Saltmarsh	Dune slack

At time of survey, the Rangitata hapua combined an area of lacustrine freshwater 'lagoon' hydrosystem at its northern end with riverine hydrosystem at its southern end. Relative extent of these two main hydrosystems shifts with location of the hapua outlet along the beach barrier. Both lacustrine and riverine sections of the hapua are subject to tidal influence, but due to the volume of inflows, remain largely freshwater habitats. Due to its highly dynamic nature, the Rangitata River hapua supports little wetland vegetation, with limited areas of freshwater marsh along the margins of the hapua, and an adjoining area of estuarine saltmarsh habitat.

Field team: Mark Parker

Indicator	Indicator components	Specify and Comment	Score 0–5 ¹	Mean score
Change in hydrological integrity	Impact of manmade structures	Stopbanks and flood protection plantings.	4	4
	Water table depth	Water levels naturally changeable, but upstream surface and groundwater abstraction alter hapua processes and water levels.	3	
	Dryland plant invasion	Wetland extent naturally changeable.	5	
Change in physico-chemical parameters	Fire damage	Occasional localised fires	4	3.7
	Degree of sedimentation/erosion	Suspended sediment levels in the water body are naturally variable, but some change due to land development in catchment.	4	
	Nutrient levels	Some increase from catchment land development. Occasional algal blooms.	3	
	Von Post index	Not assessed.		
Change in ecosystem intactness	Loss in area of original wetland	Original hapua area essentially intact. Reduction of adjoining palustrine and estuarine wetlands	4	4.5
	Connectivity barriers	All natural connections retained	5	
Change in browsing, predation & harvesting regimes	Damage by domestic or feral animals	No damage	5	3.3
	Introduced predator impacts on wildlife	Usual suite of mammalian predators likely to be present. No known predator control.	2	
	Harvesting levels	Eel, flounder, whitebait fishing; duck and goose shooting.	3	
Change in dominance of native plants	Introduced plant canopy cover	Mostly unvegetated. Where present, > 50% wetland vegetation canopy exotic species.	2	2
	Introduced plant understorey cover	Mostly unvegetated. Where present, >50% exotic species cover in understorey.	2	
Total wetland condition index /25				17.5

¹ Assign degree of modification as follows: 5=v. low/ none, 4=low, 3=medium, 2=high, 1=v. high, 0=extreme

Main wetland vegetation types:

	Area
• Crack willow forest*	1.2 ha
• Marsh ribbonwood shrubland	1.1 ha
• Wet pasture*	0.4 ha
• Open willow shrubland with oioi and flax	0.4ha
 Total wetland vegetation	 3.7 ha
Total wetland area	28 ha

Most of wetland area is un-vegetated shallow water or bare ground, as hapua extent and water levels are constantly changing.

Native fauna:

Rangitata River mouth hapua is a regionally-significant habitat for native water birds. It supports a diversity of species: coromorants, waders, waterfowl, gulls and terns. It is feeding and roosting habitat for threatened wrybill, banded dotterel and black-fronted tern (O'Donnell 2000).

Hapua is habitat for diverse range of native fish: eels, inanga, bullies, smelt, torrentfish, lamprey, black flounder (Daly 2004).

Pressure	Score²	Specify and Comment
Modifications to catchment hydrology	3	Clearance of native vegetation, drains, surface and groundwater abstraction.
Water quality within the catchment	2	Possible mild pollution.
Animal access	2	Moderate impediment to animal access. Control of some undesirable species occurring in catchment.
Key undesirable species	2	18/43 listed species thought to be present.
% catchment in introduced vegetation	2	Most of catchment headwaters in native albeit modified vegetation.
Other pressures	3	Increased irrigation and intensification of farming within catchment threatens water quality.
Total wetland pressure index /30	14	

²Assign pressure scores as follows: 5=extreme, 4=very high, 3=high, 2=moderate, 1=low, 0=none

Part B: Ecological significance assessment

The site is assessed against criteria developed for the Proposed Canterbury Regional Policy Statement (Wildland Consultants Limited, 2011)

Criteria	Rank	Notes
Representativeness	High	Example of large river hapua; wetland hydrology and hapua processes largely intact. Naturally sparsely vegetated. Representative range of wildlife present.
Rarity / Distinctiveness	Moderate	No locally rare or distinctive native wetland vegetation, but habitat for several threatened species such as long-finned eel, wrybill, banded dotterel, black-fronted tern.
Diversity and pattern	Moderate	Moderate diversity of wetland habitats and wildlife.
Naturalness	Moderate	Naturalness reduced by spread of exotic plants in parts of area.
Ecological Context	High	Link in chain of coastal wetlands. Seasonally important habitat for migratory fish and birds, including threatened species. Direct link to river and marine ecosystems.

Rangitata River mouth hapua is assigned an overall ecological significance ranking of **High**.

References:

- Clarkson BR, Sorrell BK, Reeves PN, Champion PD, Partridge TR, Clarkson BD (2004) *Handbook for monitoring wetland condition. Coordinated Monitoring of New Zealand Wetlands*. A Ministry for the Environment Sustainable Management Fund Project (5105)
(Describes the assessment method generally. In particular, Table 5 was used to determine the indicator scores and Table 6 for the pressure scores)
- Daly, A 2004. Inventory of instream values for rivers and lakes of Canterbury New Zealand. A desktop review. Environment Canterbury Report U04/13.
- O'Donnell CFJ. 2000. The significance of river and open water habitats for indigenous birds in Canterbury, New Zealand. Environment Canterbury Unpublished Report U00/37.
- Wildland Consultants 2011. Guidelines for the application of ecological significance criteria for indigenous vegetation and habitats of indigenous fauna and wetlands in Canterbury. Contract Report No. 2289c prepared for Environment Canterbury.