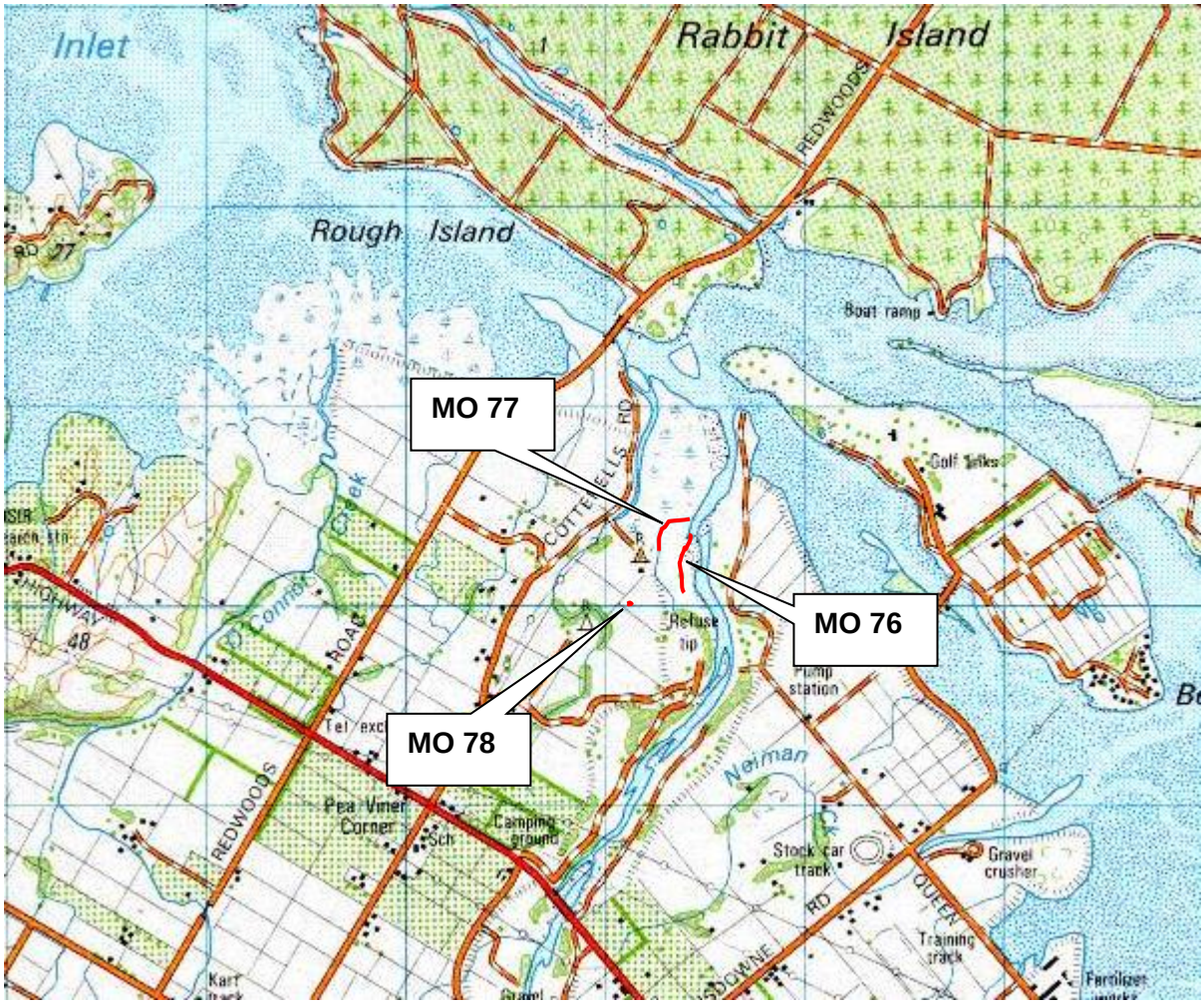
Native Habitats Tasman
Ecological Assessment Report

Site:	MO 76, 77, 78
Landowners/Occupiers:	Gabriel O'Connor

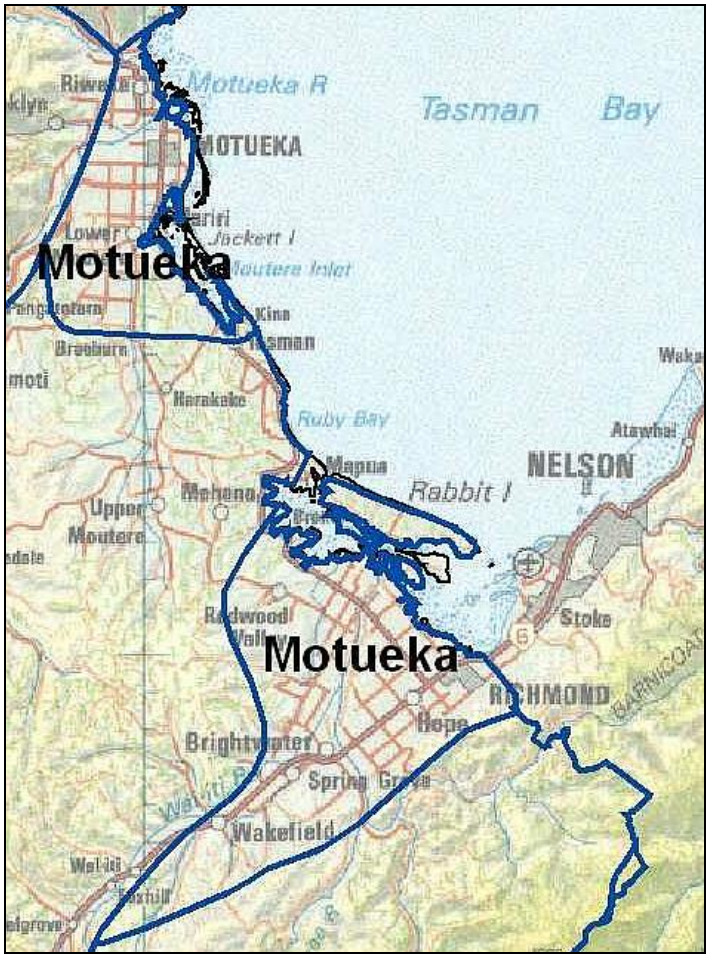
Ecological District:	Motueka
Grid Ref:	E2521304 N5990274
Surveyed By:	Michael North
Date:	17 June 2010
Survey Time:	2 hrs



THE SETTING –
MOTUEKA ECOLOGICAL DISTRICT (ED)

Location and Physical Description

The Motueka Ecological District is small and in two parts; the western one where the Motueka River flows into Tasman Bay and the eastern where the Wairoa and Wai-iti rivers come together to form the Waimea River before entering the bay. It comprises lowland and coastal alluvial plains and remnants of the Moutere Gravels. It has a coast of fertile deltas, large estuaries, sand islands and bluffs. Soils from the Moutere Gravels are clayey and not very fertile, those on stony terraces and sand are shallow and prone to drought, and alluvial soils are generally well drained and fertile. The climate is sunny and sheltered, with very warm summers and mild winters. The land is mostly in private ownership and is used for pastoral farming, forestry, horticulture, residential and commercial settlement. Tasman District Council has considerable landholdings in this District.



Ecosystem Types Originally Present

Formerly, the Ecological District, apart from the waterways, would have been almost entirely covered in forest. The alluvial plains and terraces supported towering podocarp forests of totara, matai and kahikatea. On the low hills was mixed forest of black beech, hard beech, rimu, totara, kamahi, titoki and tawa. Along the coastal bluffs and fringing the estuaries, ngaio, cabbage tree, kowhai and totara would have been common. The estuaries were alive with wetland birds, fish and invertebrates. They had vegetation sequences grading from eelgrass and saline turf into rushes, sedges, harakeke (lowland flax) and shrubs (mainly saltmarsh ribbonwood, mingimingi and

manuka), and finally into forest. Freshwater wetlands would have included fertile lowland swamps with kahikatea, harakeke, cabbage tree, tussock sedge (*Carex secta*) and raupo. Rivers and streams, including riparian ecosystems (trees, shrubs, flaxes, toetoe, etc) and some braided river beds, would have made up a significant portion of the District. The table below gives estimates of the extent of these original ecosystems.

Existing Ecosystems

Most of the natural terrestrial ecosystems have been lost. What remains is mostly in small fragments of forest and freshwater wetland. The estuaries are still surprisingly intact, although their fringing vegetation sequences have largely gone. The table below gives estimates of the proportions of the original ecosystems that remain.

Degree of Protection

There is little protected land within the Ecological District. However, there are significant remnants protected in reserves and covenants. These include important tall forest remnants at Motueka, Brightwater and Wakefield, kanuka forest on alluvial flats at Brightwater, estuarine shores and sand islands. It also includes some small freshwater wetlands and hillslope forest patches. The table below gives estimates of how much of the original and remaining ecosystems have formal protection.

Indigenous Ecosystems – Motueka Ecological District				
Ecosystem type	**Original extent (% of ED)**	**Proportion of original extent remaining (%)**	**Proportion of original extent / remaining area protected (%)**	
			Original	**Remaining**
Coastal sand dune and flat	10	<5	<5	100
Estuarine wetland	10	30	12?	40?
Fertile lowland swamp and pond	3	<1	<1	40?
Infertile peat bog	—	—	—	—
Upland tarn	—	—	—	—
Lake	—	—	—	—
River, stream and riparian	3	50	5?	10?
Lowland podocarp forest	50	<1	<1	90
Lowland broadleaved forest	5	<1	<1	90
Lowland mixed forest	12	<1	<1	90
Lowland beech forest	5	<1	<1	90
Upland beech forest	—	—	—	—
Subalpine forest	—	—	—	—
Lowland shrubland	2	<1	<1	50
Upland/subalpine shrubland	—	—	—	—
Frost flat communities	—	—	—	—
Tussock grassland	—	—	—	—
Alpine herbfield and fellfield	—	—	—	—

SITE DESCRIPTION MO 76

Location, Geology, Hydrology

This <1ha site lies at sea level, forming part of a backwater and flood-channel of the Waimea River near to its mouth.

Vegetation

GENERAL

The site constitutes a narrow to very narrow band of lake clubrush/kuawa along the margins of the channel in its lower reaches, and within the channel in its mid to upper reaches. A small area of turf occurs in one area.

COMMUNITIES

1 Kuawa sedgeland

Pure stands of kuawa or lake clubrush occur up to 6-8m deep in the lower reaches, with plants standing in the water channel up to the bank. Creeping bent and common spike rush occur locally. Farther up where the channel narrows and shallow, it forms a very narrow (1-2m wide) band with a mix of associates that include jointed rush, common spike rush, narrow-leaved dock, and at the upper-most end, tall fescue.

2 Creeping bent-marsh arrowgrass grass/herbfield

A short section of the site largely lacks kuawa, with instead a low turf of these two species.

Botanical Values

COMMUNITIES

Stands of kuawa are extremely rare in the Motueka Ecological District (ED), with this site and Pearl Creek constituting two of the three large stands (Nieman Creek is the third) in the ED.

SPECIES

Kuawa and marsh arrowgrass are both rare in the Motueka ED.

Fauna

No birds were noted, but the site is likely to favour Australasian bittern, and possibly marsh and spotless crake (banded rail is supposedly confined to saltmarsh in Tasman Bay). The site may be of note as spawning habitat for inanga.

Weed and Animal Pests

Creeping bent and tall fescue are competitive with native plant species at the site.

Other Threats

None were noted. The site has recently been fenced off by the landowner, to the benefit of the native ecology.

General Condition

The site is in good condition.

Landscape/Historic Values

The site is only readily visible at close range.

ASSESSMENT OF ECOLOGICAL SIGNIFICANCE

The following criteria are assessed:

Representativeness: *How representative is the site of the original vegetation?*

Rarity*: Are there rare species or communities?*

Diversity and pattern*: Is there a notable range of species and habitats?*

Distinctiveness/special features*: Are there any features that make the site stand out locally, regionally or nationally for reasons not addressed by the above criteria?*

Size/shape*: How large and compact is the site?*

Ecological context*: How well connected is the site to other natural areas, to what extent does the site buffer and is buffered by adjoining areas, and what hydrological services to the catchment and critical resources to mobile species does it provide?*

Sustainability*: How well is the site able to sustain itself without intervention?*

Site Significance

The technical assessment of significance is tabled in the Appendix.
This site is significant for the following reasons:
All freshwater wetlands are deemed significant in the Motueka ED under this assessment process due to their extreme levels of depletion. This site is of particular note for being dominated by a community that is very rare in the region.

PHOTO GALLERY

View across to the kuawa beds where the backwater meets the Waimea River

The kuawa beds are bound by crack willow, tamarisk and tall fescue

A view of the site looking up the channel where it has narrowed considerably

SITE DESCRIPTION MO 77

Location, Geology, Hydrology

This <1ha site lies at and around sea level, in the Waimea River delta and constitutes a narrow spring-fed flood channel in its mid to lower reaches down to where it enters the Waimea River.

Vegetation

COMMUNITIES

1 Raupo reedland

Raupo forms fairly discrete stands along the length of the site with four areas recorded, separated by areas of incised stream bed and herb turfs.

2 Mixed herbfield turfs

Tight low turfs in at least three discrete areas, dominated by the native plants - marsh arrowgrass, slender clubrush, shore cotula, and the weedy creeping bent. Batchelor's buttons and the sedge *Isolepis prolifera* are more occasional.

3 Tall fescue +-purua grass

The lowest end of the site is dominated by tall fescue, with some purua grass scattered through in places.

Botanical Values

COMMUNITIES

The site is a mix of freshwater and brackish water communities with associated stream margin vegetation. The brackish turfs are an extremely rare community in the Motueka Ecological District (ED), being known elsewhere only from a few sites (including the Pearl Creek delta margins), all covering small areas. Raupo reedlands are also very rare in the ED. Vegetation reflecting the transition from freshwater to saltwater are now extremely depleted in the ED, highlighting the importance of all such areas as this.

SPECIES

Marsh arrowgrass and slender clubrush are considered rare species within the Motueka ED.

Fauna

No native birds were noted

Weed and Animal Pests

Creeping bent and tall fescue are notably weedy species.

Other Threats

None were noted. The site is fenced from stock.

General Condition

The site is in good condition other than for weed issues in places.

Landscape/Historic Values

The site is only readily viewed at close range, but adds an attractive feature to the farm.

ASSESSMENT OF ECOLOGICAL SIGNIFICANCE

The following criteria are assessed:

Representativeness: *How representative is the site of the original vegetation?*

Rarity*: Are there rare species or communities?*

Diversity and pattern*: Is there a notable range of species and habitats?*

Distinctiveness/special features*: Are there any features that make the site stand out locally, regionally or nationally for reasons not addressed by the above criteria?*

Size/shape*: How large and compact is the site?*

Ecological context*: How well connected is the site to other natural areas, to what extent does the site buffer and is buffered by adjoining areas, and what hydrological services to the catchment and critical resources to mobile species does it provide?*

Sustainability*: How well is the site able to sustain itself without intervention?*

Site Significance

The technical assessment of significance is tabled in the Appendix.
This site is significant for the following reasons:
All freshwater/brackish wetlands are deemed significant in Motueka ED by this assessment process due to their extreme levels of depletion. This site is of particular note for its brackish turfs that are very rare in the ED.

PHOTO GALLERY

Pockets of raupo are scattered along the channel (top and bottom)

Herb turfs are also scattered along the site in discrete areas

SITE DESCRIPTION MO 78

Location, Geology, Hydrology

This <0.1ha site lies on delta alluvium deposited by the Waimea River. It lies just above sea level.

Vegetation

COMMUNITIES

1 South Island kowhai treeland

Four mature trees comprise the site, with one recently dead tree still standing.

Botanical Values

COMMUNITIES

Delta forest has all but gone from the Motueka Ecological District (ED), and these four trees represent all that is left. They are therefore of considerable value, despite their relic nature. This assessment assumes that the trees are naturallly-occurring rather than planted.

SPECIES

South Island kowhai is considered a rare species in the Motueka ED.

Fauna

None noted.

Weed and Animal Pests

None noted.

Other Threats

Atleast two of the trees show signs of dieback, one with considerable rot up one side.

General Condition

As a remnant of delta forest the site is obviously in very poor condition, having been reduced to just four living trees. As a treeland relic, the site is in decline due to senescence.

Landscape/Historic Values

These remaining trees are an attractive feature of the farmed landscape.

ASSESSMENT OF ECOLOGICAL SIGNIFICANCE

The following criteria are assessed:

Representativeness: *How representative is the site of the original vegetation?*

Rarity*: Are there rare species or communities?*

Diversity and pattern*: Is there a notable range of species and habitats?*

Distinctiveness/special features*: Are there any features that make the site stand out locally, regionally or nationally for reasons not addressed by the above criteria?*

Size/shape*: How large and compact is the site?*

Ecological context*: How well connected is the site to other natural areas, to what extent does the site buffer and is buffered by adjoining areas, and what hydrological services to the catchment and critical resources to mobile species does it provide?*

Sustainability*: How well is the site able to sustain itself without intervention?*

Site Significance

The technical assessment of significance is tabled in the Appendix.
This site is significant for the following reasons:
As the last representatives of delta forest in the Motueka ED the site has high representativeness and rarity values.

PHOTO GALLERY

Management Issues and Suggestions

The two backwater/flood channels are well managed, having been fenced off by the landowner. This is a very positive development for their ecological health. The sites would be more secure if they were fenced more robustly – with at present only one electric tape/wire along some sections. It is appreciated however that floodwaters run through fenced sections on occasion and that anything more robust may be problematic. TDC offer half the cost of fencing off riparian and wetland areas (effectively the cost of materials) – contact Andrew Burton (03) 543 8446 if interested. Let him know that this report has been prepared to support your application.
The kowhai treeland stands in open pasture, and is noticeably aging – with no long term future without restoration plantings of kowhai (ideally from the parent seed) and other species (the delta forest at Paremata Flats, Delaware Inlet gives a good indication of the tree species that would have occurred here). These trees are the only known specimens on the Waimea Plain north of Brightwater, and none survive on the Motueka River floodplain (one old tree hung on at the Motueka delta until fairly recently). It is important that seed is propogated from these trees if this has not already been done, as they represent a unique genetic resource.

APPENDIX
Site Significance

Each site is ranked according to the highest ranking vegetation community or habitat that occurs within it. However, a site will be divided into more than one area for assessment purposes if they vary markedly in character, size or condition. Some examples are:

(a) a core area of vegetation (say, a podocarp gully remnant) is surrounded by/adjoins a much larger area of markedly different vegetation (say, kanuka scrub);

(b) a core area of vegetation has *markedly* different ecological values to the surrounding/adjacent vegetation;

(c) where artificially abrupt ecological boundaries occur between an area of primary vegetation and a surrounding/adjacent area of secondary vegetation.

Where such division of a site into two or more separately assessed areas occurs, such adjoining areas will also be considered in their buffering/connectivity roles to one another.

Each of the sites were assessed as one unit as the above considerations did not indicate the need to assess communities within them separately.

Significance Evaluation MO 76 Kuawa sedgeland		
	Score	**Example/Explanation**
Primary Criteria		
Representativeness		
The site contains one of the better examples, but not the best, of the characteristic ecosystem types in the ecological district	MH	
Rarity and Distinctiveness		
The site includes a primary community depleted to 5% or less of original pre-human cover in the Ecological District, unless in poor condition	H	
The site includes a community that is nationally threatened under DoC/MfE National Priority 2 (dunes and wetlands) and retains functional indigenous components	H	
Diversity and Pattern		
Indigenous plant communities species or habitats are present with typical diversity for such sites in the Ecological District	ML	
Secondary Criteria		
Ecological Context (highest score)		
Connectivity		

Significance Evaluation MO 76 Kuawa sedgeland		
	Score	**Example/Explanation**
The site is separated from other areas of indigenous vegetation but within the Ecological District context provides an important part of a network of closely lying sites	H	A critical part of the wetland network in the Pearl Creek area
Buffering to		
The site is moderately buffered by vegetation	M	Vegetation buffers the site effectively around at least ½ of its boundary
Provision of critical resources to mobile fauna		
The site provides seasonally important resources for indigenous mobile animal species and these species are present in the locality even though they may not have been observed at the site.	?	? Spawning site for inanga?
Hydrological services to the catchment		
The site provides hydrological services to the catchment.	L	
Size and Shape		
The site is of moderately large size for its plant community and Ecological District but is not compact	M	
Other Criterion		
Sustainability (average score)	**ML**	
Physical and proximal characteristics		
Size, shape, buffering and connectivity provide for a moderately low overall degree of ecological resilience.	ML	Size L Shape L Buffering M Connectivity H
Inherent fragility/robustness		
Indigenous communities are inherently fragile.	L	.
Threats *(low score = high threat; lowest score taken)*		
Ecological impacts of grazing, surrounding land management, weeds and pests*	M	Grazing H Surroundings H Weeds M Pests H

* observed pest impacts only

NB where scores are averaged, the score must reach or exceed a particular score for it to apply

Summary of Scores	Criterion	Ecological District Ranking
Primary Criteria	Representativeness Rarity Diversity and Pattern	MH H ML
Secondary Criteria	Ecological Context Size/Shape	H M
Additional Criteria	Sustainability	ML

H = High MH = Medium-High M = Medium ML = Medium-Low L = Low

Summation of Scores to Determine Significance

If a site scores at least as highly as the combinations of primary and secondary scores set out below, it is deemed significant for the purposes of this assessment.

Primary Criteria		Secondary Criteria	
Any of the three primary criteria with a score at least as high as listed		Any of the two secondary criteria with a score at least as high as listed	
		Plus	
	H		—
	MH x 2		—
	MH + M		—
	MH	+	MH
	M x 2	+	H
	M x 2	+	MH x 2
	M	+	H + MH

H = High MH = Medium-High M = Medium

Is this site significant under the TDC assessment criteria? **YES**

Significance Evaluation MO 77 Raupo-herbfield		
	Score	**Example/Explanation**
Primary Criteria		
Representativeness		
The site contains a good example of the characteristic ecosystem types in the ecological district	M	Brackish herbfield turfs
Rarity and Distinctiveness		
The site includes a primary community depleted to 5% or less of original pre-human cover in the Ecological District, unless in poor condition	H	Raupo reedlands and brackish turfs are both likely to have been depleted to <5% of original cover
The site includes a community that is nationally threatened under DoC/MfE National Priority 2 (dunes and wetlands) and retains functional indigenous components	H	
Diversity and Pattern		
Indigenous plant communities species or habitats are present with typical diversity for such sites in the Ecological District	ML	
Secondary Criteria		
Ecological Context (highest score)		
Connectivity		
The site is separated from other areas of indigenous vegetation but within the Ecological District context provides an important part of a network of closely lying sites	H	A critical part of the wetland network in the Pearl Creek area
Buffering to		
The site is poorly buffered	L	
Provision of critical resources to mobile fauna		
The site provides seasonally important resources for indigenous mobile animal species and these species are present in the locality even though they may not have been observed at the site.	?	?Inanga spawning site?
Hydrological services to the catchment		
The site provides hydrological services to the catchment.	L	
Size and Shape		
The site is of moderate size for its vegetation community and Ecological District but is not compact	ML	
Other Criterion		
Sustainability (average score)	**ML**	
Physical and proximal characteristics		

Significance Evaluation MO 77 Raupo-herbfield		
	Score	**Example/Explanation**
Size, shape, buffering and connectivity provide for a moderately low overall degree of ecological resilience.	ML	Size L Shape L Buffering L Connectivity H
Inherent fragility/robustness		
Indigenous communities are inherently fragile.	L	
Threats *(low score = high threat; lowest score taken)*		
Ecological impacts of grazing, surrounding land management, weeds and pests*	M	Grazing H Surroundings M Weeds M Pests H

* observed pest impacts only

NB where scores are averaged, the score must reach or exceed a particular score for it to apply

Summary of Scores	Criterion	Ecological District Ranking
Primary Criteria	Representativeness Rarity Diversity and Pattern	M H ML
Secondary Criteria	Ecological Context Size/Shape	H ML
Additional Criteria	Sustainability	ML

H = High MH = Medium-High M = Medium ML = Medium-Low L = Low

Summation of Scores to Determine Significance

If a site scores at least as highly as the combinations of primary and secondary scores set out below, it is deemed significant for the purposes of this assessment.

Primary Criteria		Secondary Criteria	
Any of the three primary criteria with a score at least as high as listed		Any of the two secondary criteria with a score at least as high as listed	
		Plus	
→	H		—
	MH x 2		—
	MH + M		—
	MH	+	MH
	M x 2	+	H
	M x 2	+	MH x 2
	M	+	H + MH

H = High MH = Medium-High M = Medium

Is this site significant under the TDC assessment criteria? **YES**

Significance Evaluation MO 78 Kowhai treeland		
	Score	**Example/Explanation**
Primary Criteria		
Representativeness		
The site consists of mature primary forest canopy species over pasture	M	Eg. Mature alluvial treelands of podocarp or beech species, pukatea, titoki
The site contains one of the best examples of the characteristic ecosystem types in the ecological district	H	Sole example
Rarity and Distinctiveness		
The site includes a primary community that is naturally rare in the ecological district	H	Delta forest
The site includes a community depleted 5% or less of original pre-human cover in the Ecological District but in poor condition that may be of either primary or mature secondary climax canopy species	MH	Eg. A stand of alluvial podocarp or pukatea trees over pasture. This definition includes secondary forest/treeland where canopy species are those of the original/primary canopy
The site supports a species rare in the Ecological District (ED)	M	Kowhai
Diversity and Pattern		
	L	Reduced to one native plant species
Secondary Criteria		
Ecological Context (highest score)		
Connectivity		
	L	Although within the Pearl Creek network of wetland sites, as a corridor/stepping stone for species it has low values
Buffering to		
The site is poorly buffered	L	
Provision of critical resources to mobile fauna		
The site provides seasonally important resources for indigenous mobile animal species and these species are present in the locality even though they may not have been observed at the site.	L	Unusually important stands of podocarp, tawa or kowhai trees that provide seasonally important benefits for forest birds.
Hydrological services to the catchment		
The site provides hydrological services to the catchment.	L	
Size and Shape		
The site is of moderate size for its vegetation community and Ecological District and is at least reasonably compact in shape	M	Size is moderate ie typical, only in so far as it is the sole remaining representative
Other Criterion		
Sustainability (average score)	**ML**	
Physical and proximal characteristics		

Significance Evaluation MO 78 Kowhai treeland		
	Score	**Example/Explanation**
Size, shape, buffering and connectivity provide for a low overall degree of ecological resilience.	L	Size L Shape MH Buffering L Connectivity L
Inherent fragility/robustness		
Indigenous communities are inherently resilient.	H	
Threats *(low score = high threat; lowest score taken)*		
Ecological impacts of grazing, surrounding land management, weeds and pests*	L	Grazing L Surroundings H Weeds H Pests H

* observed pest impacts only

NB where scores are averaged, the score must reach or exceed a particular score for it to apply

Summary of Scores	Criterion	Ecological District Ranking
Primary Criteria	Representativeness Rarity Diversity and Pattern	H H L
Secondary Criteria	Ecological Context Size/Shape	L M
Additional Criteria	Sustainability	ML

H = High MH = Medium-High M = Medium ML = Medium-Low L = Low

Summation of Scores to Determine Significance

If a site scores at least as highly as the combinations of primary and secondary scores set out below, it is deemed significant for the purposes of this assessment.

Primary Criteria		Secondary Criteria	
Any of the three primary criteria with a score at least as high as listed		Any of the two secondary criteria with a score at least as high as listed	
		Plus	
→	H		—
	MH x 2		—
	MH + M		—
	MH	+	MH
	M x 2	+	H
	M x 2	+	MH x 2
	M	+	H + MH

H = High MH = Medium-High M = Medium

Is this site significant under the TDC assessment criteria? **YES**

Species List

r = Rare o = Occasional m = Moderate Numbers ml = Moderate Numbers Locally c = Common
lc= Locally Common f = Frequent lf = Locally Frequent x = Present But Abundance Not Noted
P = Planted R = Reported

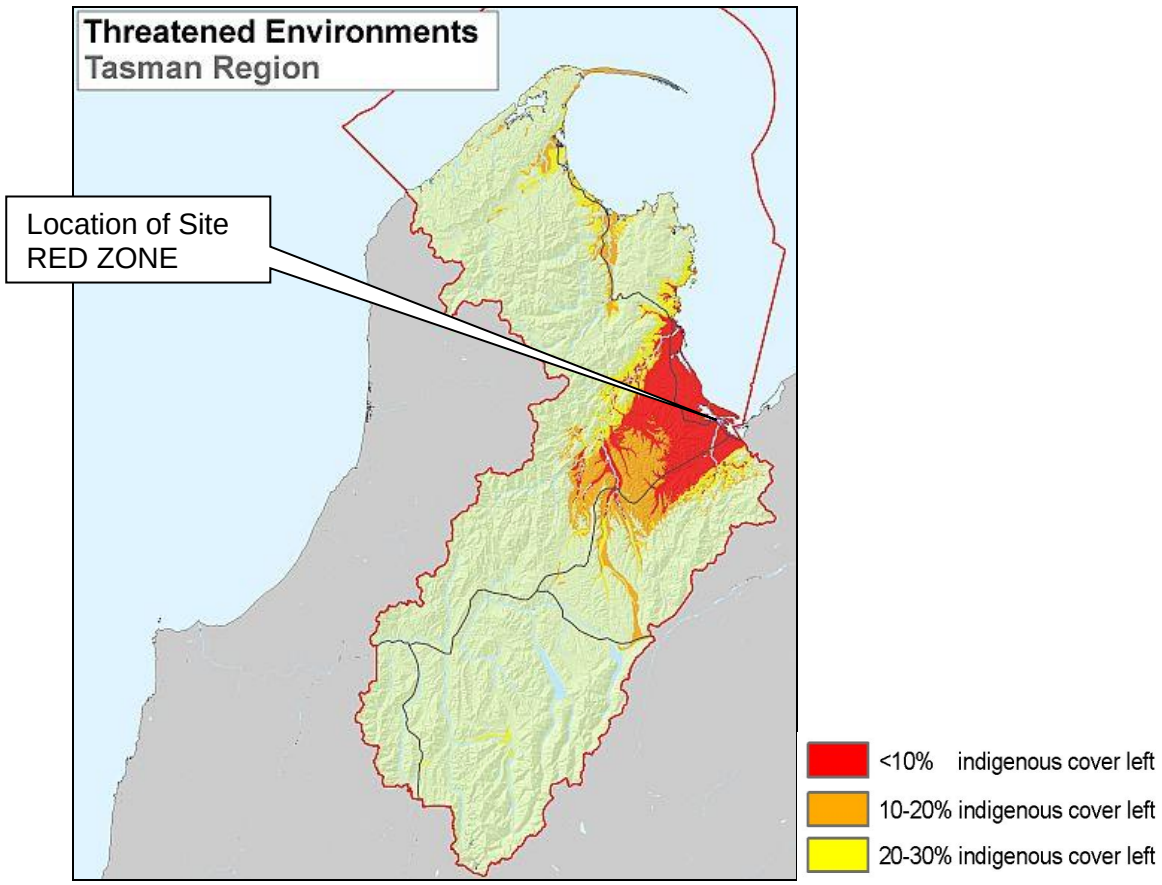
MO 76		
Species Name	***Common Name***	***Status***
Trees Shrubs		
Lianes		
Dicot Herbs		
Triglochin striata	marsh arrowgrass	ml
Monocot Herbs		
Grasses Sedges Rushes		
Eleocharis acuta	common spike rush	ml
Schoenoplectus tabernaemontani	lake clubrush, kuawa	f
Ferns		
Weeds		
Agrostis stolonifera	creeping bent	ml
Juncus articulatus	jointed rush	ml
Rumex crispus	narrow leaved dock	o
Schedonerus phoenix	tall fescue	lc
Birds		

MO 77		
Species Name	***Common Name***	***Status***
Trees Shrubs		
Lianes		
Dicot Herbs		
Cotula coronopifolia	batchelor's buttons	o
Selliera radicans	remuremu	ml
Triglochin striata	marsh arrowgrass	lc
Monocot Herbs		
Grasses Sedges Rushes		
Bolboschoenus caldwellii	purua grass	o
Isolepis cernua	slender clubrush	lc
Isolepis prolifera		o
Typha australis	raupo	lc
Ferns		
Weeds		
Agrostis stolonifera	creeping bent	lc
Schedonerus phoenix	tall fescue	lc
Birds		

MO 78		
Species Name	***Common Name***	Status
Trees Shrubs		
Sophora microphylla	South Island kowhai	x
Lianes		
Dicot Herbs		
Monocot Herbs		
Grasses Sedges Rushes		
Ferns		
Weeds		
Birds		

Land Environments of New Zealand (LENZ)

LENZ is a national classification system based on combinations of soil characteristics, climate and landform. These three factors combined are correlated to the distribution of native ecosystems and species.
When LENZ is coupled with vegetation cover information it is possible to identify those parts of the country (and those Land Environments) which have lost most of their indigenous cover. These tend to be fertile, flatter areas in coastal and lowland zones as shown in the map below for Tasman District.
Further information on the LENZ framework can be found at-
www.landcareresearch.co.nz/databases/lenz



National Priorities for Protecting Biodiversity on Private Land

Four national priorities for biodiversity protection were set in 2007 by the Ministry for the Environment and Department of Conservation.

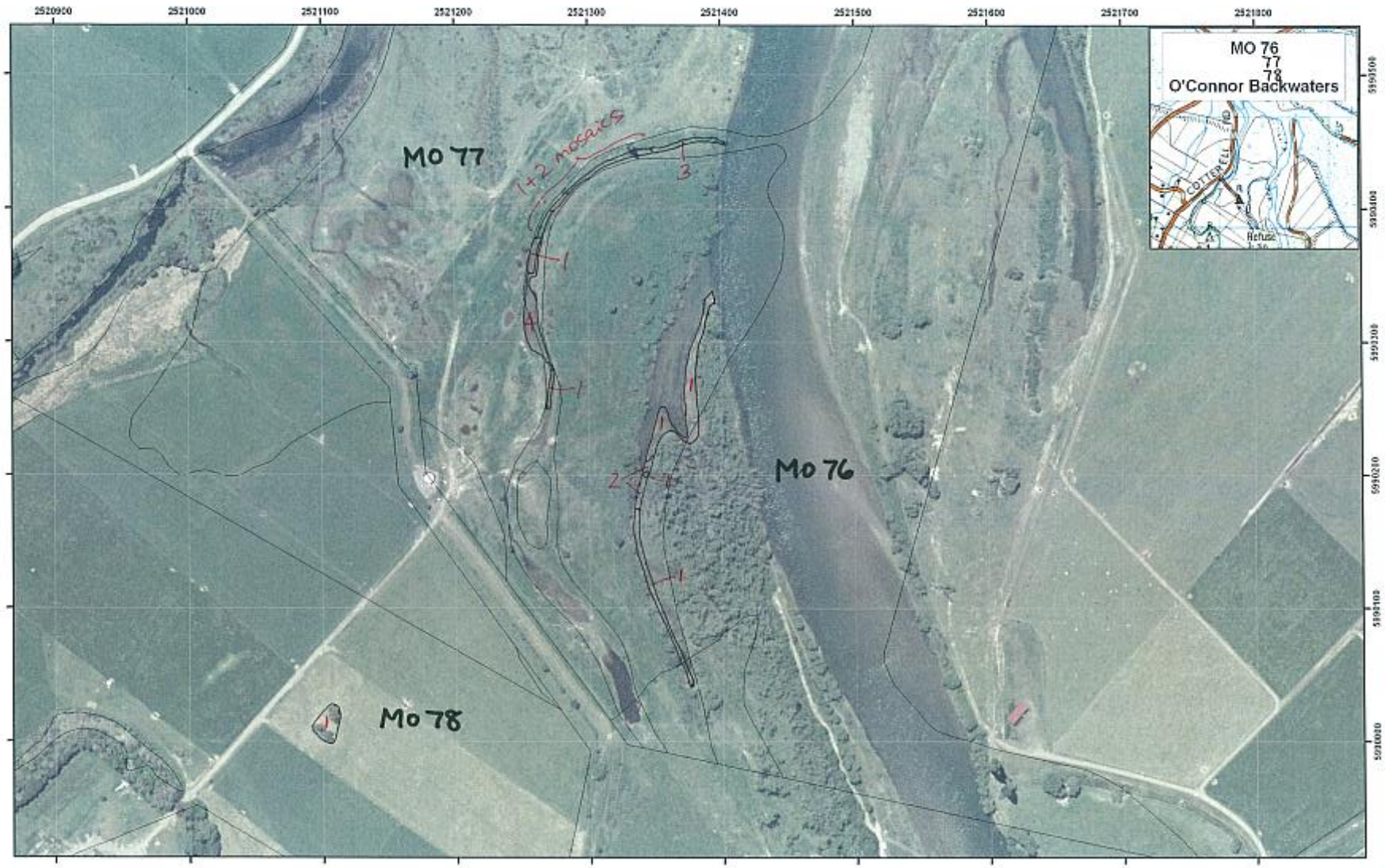
National Priorities	***Does this Site Qualify?***
1 Indigenous vegetation associated with land environments (ie LENZ) that have 20 percent or less remaining in indigenous cover. This includes those areas colored in red and orange on the map above.	Yes
2 Indigenous vegetation associated with sand dunes and wetlands; ecosystem types that have become uncommon due to human activity	Yes (MO 76 & 77)

3 Indigenous vegetation associated with 'naturally rare' terrestrial ecosystem types not already covered by priorities 1 and 2 (eg limestone scree, coastal rock stacks)	No
4 Habitats of threatened indigenous species	Yes (MO 76 & 77)

Further information can be found at -
www.biodiversity.govt.nz/pdfs/protecting-our-places-brochure.pdf

Significance of LENZ and National Priorities

What does it mean if your site falls within the highly depleted LENZ environments, or falls within one or more of the four National Priorities?
These frameworks have been included in this report to put deeper ecological context to the site. They are simply another means of gauging ecological value. This information is useful in assessing the relative value of sites within Tasman District when prioritising funding assistance. They otherwise have no immediate consequence for the landowner unless the area of indigeneous vegetation is intended to be cleared, in which case this information would be part of the bigger picture of value that the consenting authority would have to take into account if a consent was required.


MO 76
77
78
O'Connor Backwaters
MO 77
1+2 mosaics
MO 76
MO 78
MO 76
1 Lake clubrush sedgeland
2 Creeping bent-marsh arrow grass herbfield/grassland
MO 77
1 Raupo reedland
2 Mixed herbfield turfs
3 Tall fescue [purua grass] grassland
4 Open water
MO78
1 Kowhai treeland
1:2,500 A3 Scale
0 50 100 m