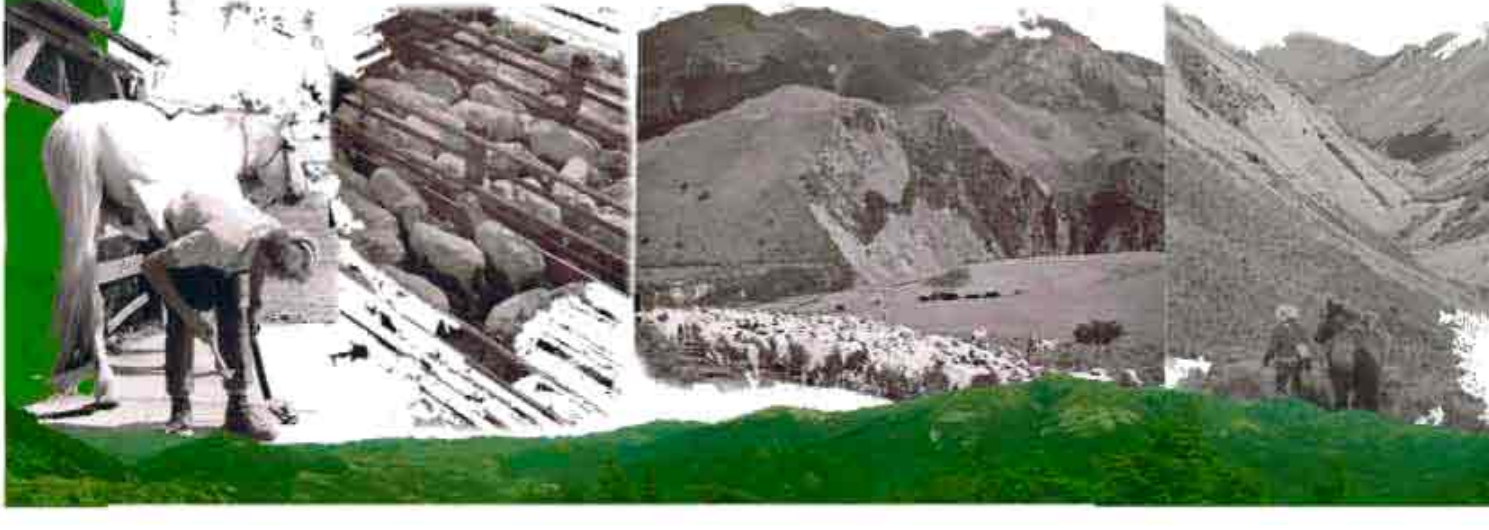
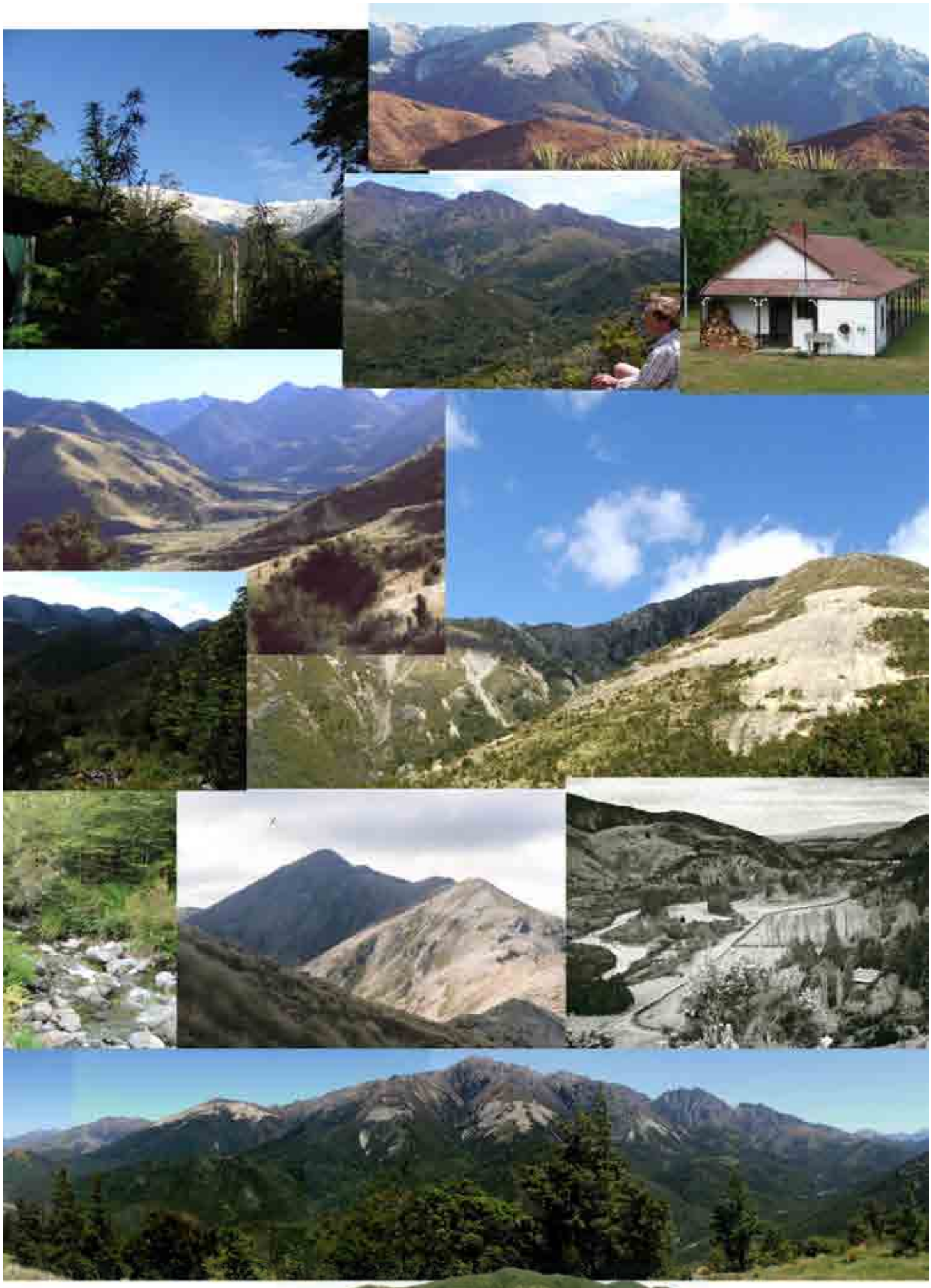
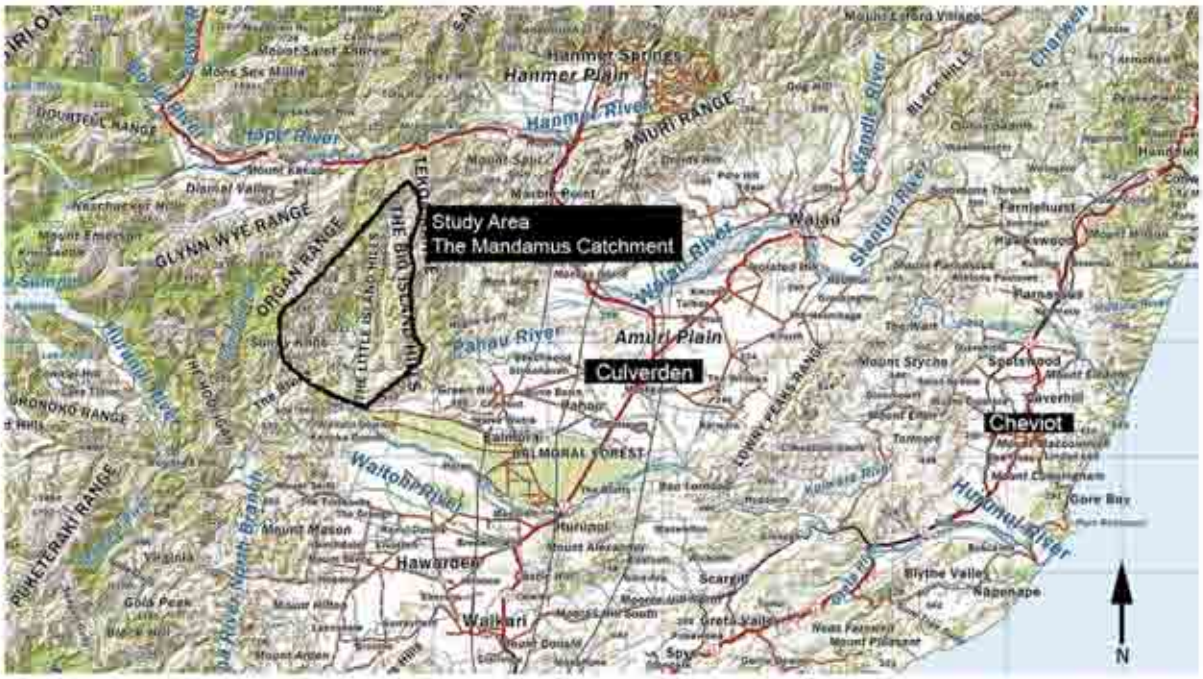
The Mandamus Landscape Study

Exploring the natural, historic, cultural and social values of the Mandamus Catchment in the Hurunui, North Canterbury





Contents



Location

The Mandamus Catchment is located in North Canterbury inland from Culverden and about 80 km north of Christchurch, between the Waiau and Hurunui Rivers. The study area is situated on the north bank of the Hurunui River north-west of the Balmoral Forest. It is situated in the hills flanking the South Island's alpine spine.

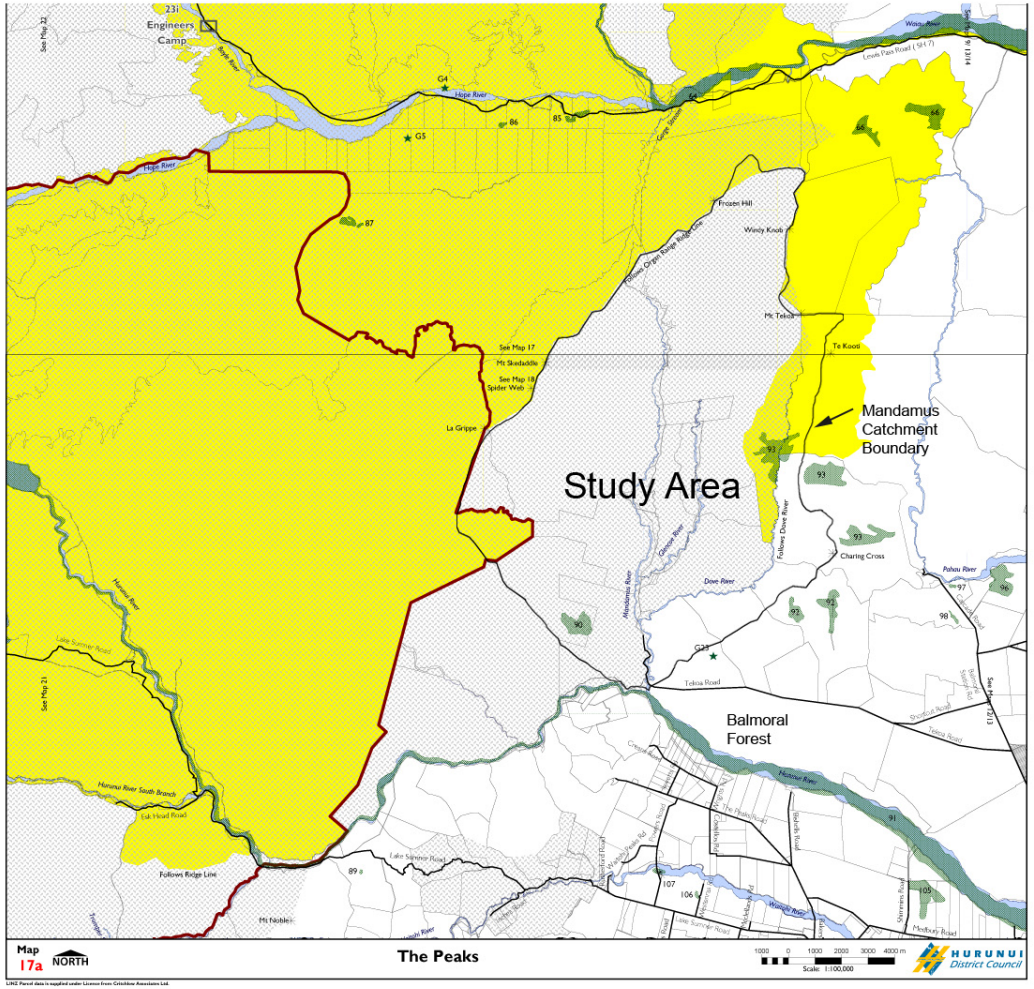
Catchment

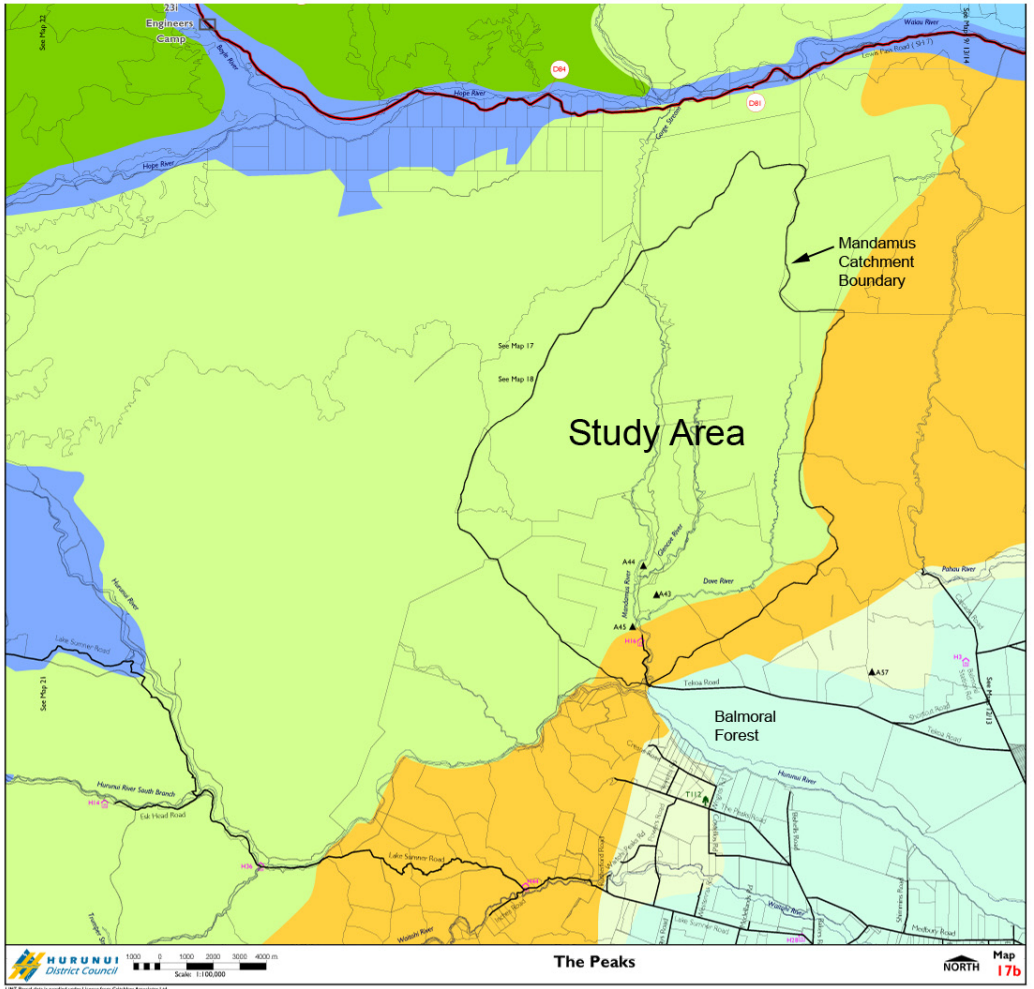
The Catchment covers the valley floors and mountainous country between the Waiau and Hurunui Rivers in North Canterbury. The Mandamus Catchment drains into the Upper Hurunui River. The Catchment gathers the Glencoe, Dove and Silver Brook Rivers and headwater tributaries of the Mandamus River. The western flank of the Tekoa Range and Mt Tekoa and the eastern side of the Organ Range bound the area. The Catchment extends from 390m asl in the valley floors, up to 1600m asl on the Tekoa and Organ Ranges.

To the north and west the study area is surrounded by high altitude, often snow-capped, mountains. To the west and north are the Organ Range, Mt Skedaddle, Nicholsons Knob, Clay Knob, and La Grippe. The Hurunui and Tekoa Ranges border the east. The ridge of the Hurunui Range in the east separates the Catchment from the Amuri/Culverden Basin.

A 3D simulation looking north-west up the Catchment

Mandamus Catchment





Hurunui District Plan 2007
General Planning Maps

Rural Management Areas (maps 'a')

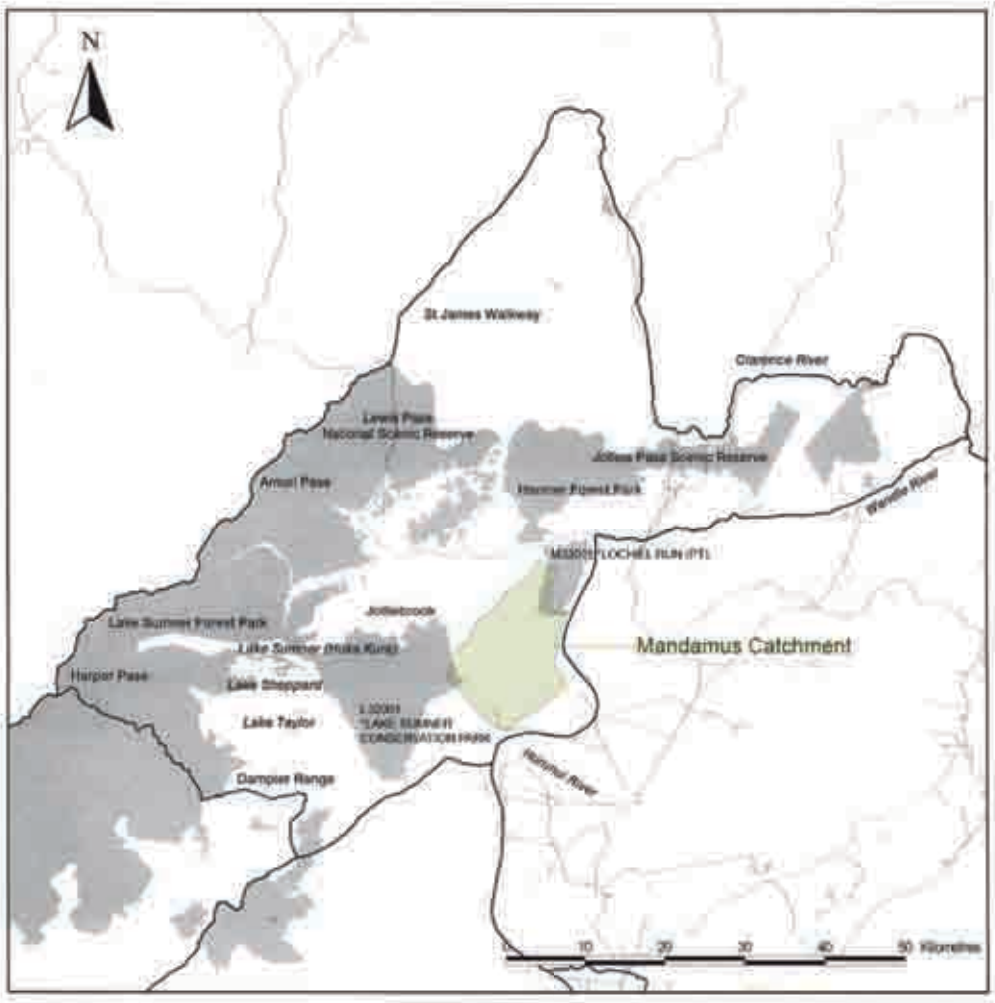
- Outstanding Landscape
- Significant/ Potentially Significant Natural Area ★ or
- Forestry Management Area
- Hurunui Lakes Management Area
- Definite Active Fault Trace
- Definite Fault Trace
- Possible Minor or Propagating Fault Trace
- Coastal Environment Management Area

Landscape Types (maps 'b')

- Coastal Hills
- Coastal Plains
- Hanmer Basin Floor
- Hardrock Hills
- Inland Basin Floor
- Main Divide
- Major River Valleys
- Mountain Ranges
- Plains
- Soft Rock Downlands

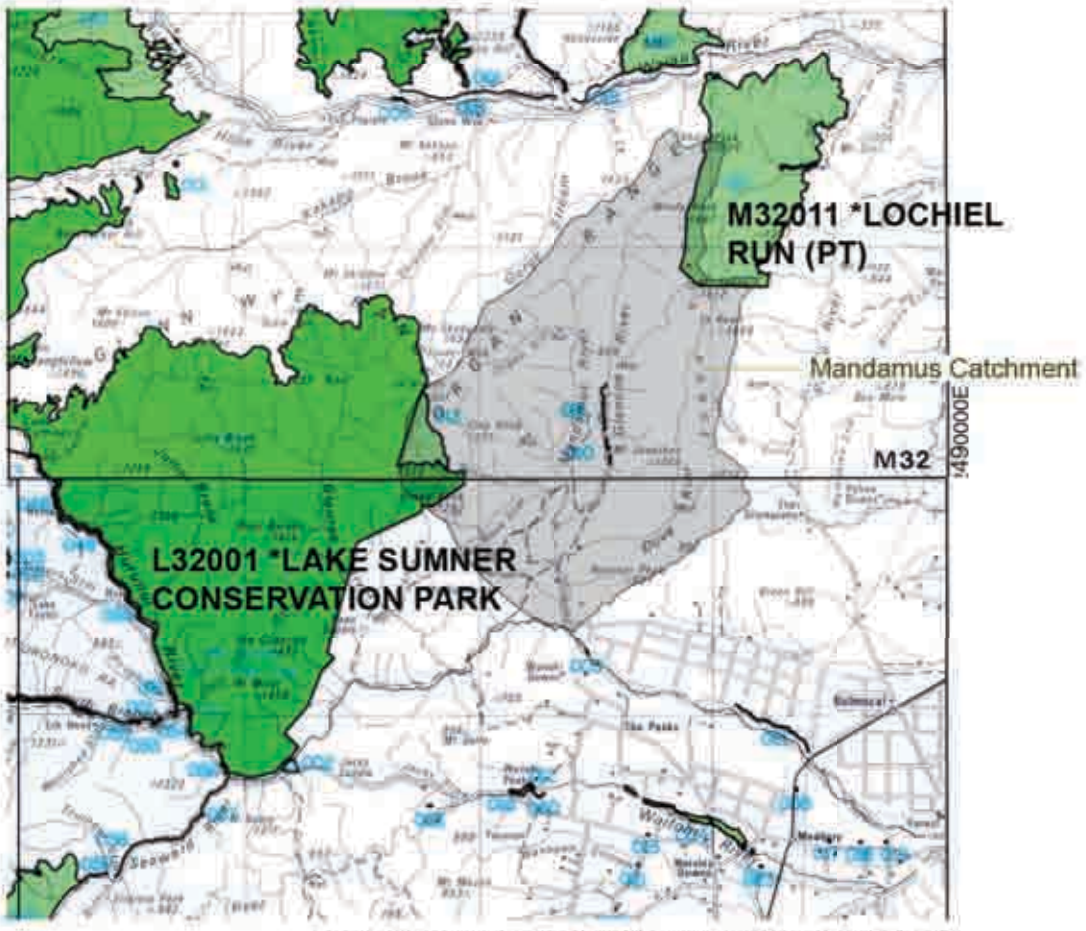
Scheduled Sites

- Designated Site DI
- Notable Tree or
- Heritage Feature
- Archaeological Site



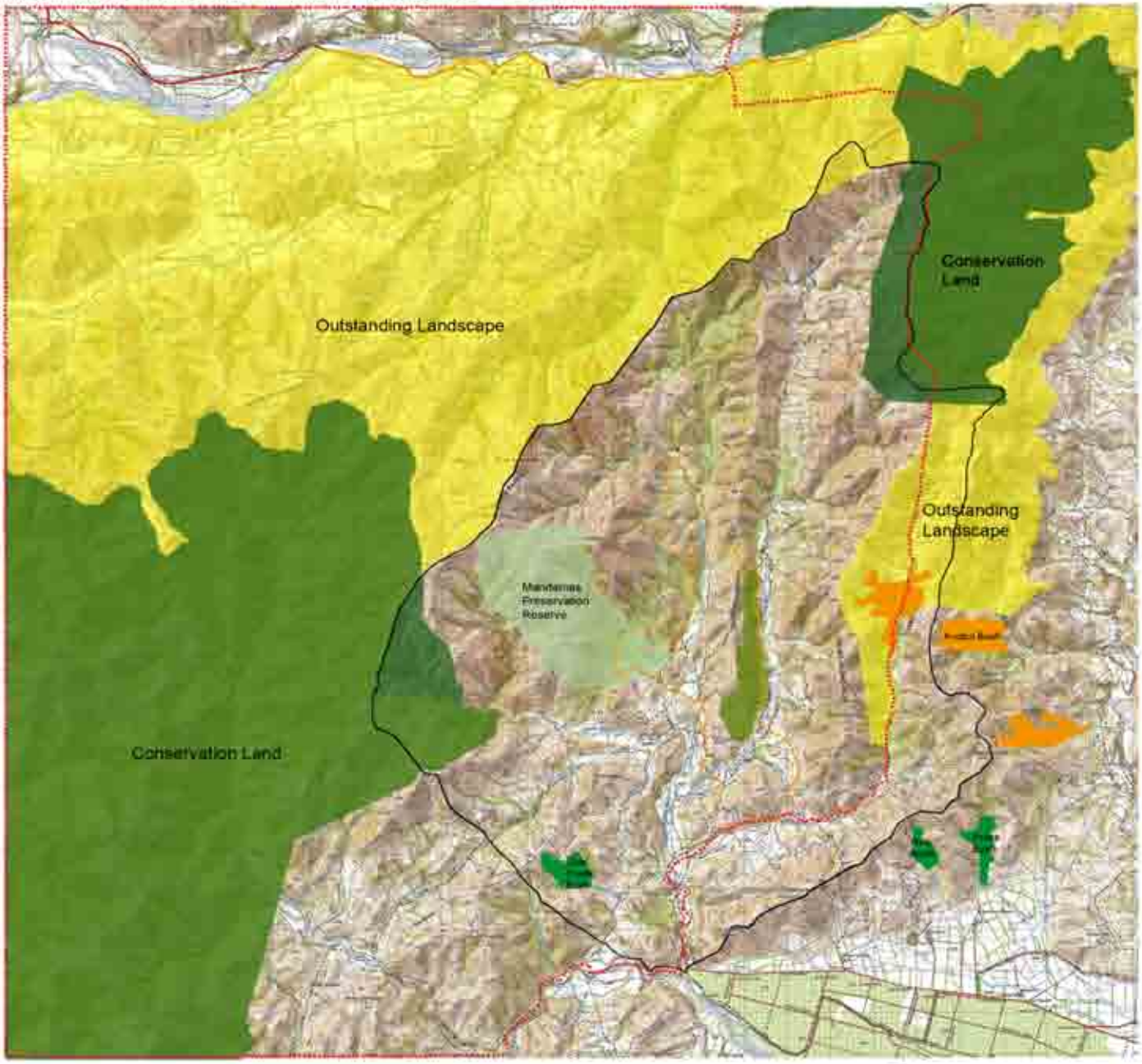
Canterbury Conservation Management Strategy 2000
Map 3 Hurunui

CMS Place Unit Boundaries
Main roads
Land managed by the Department



Canterbury Conservation Management Strategy 2000
Sheet 1 Lewis and Sheet 4 Mount Thomas

Identified areas within the Mandamus Catchment



Hurunui District Plan 2007

Outstanding Landscape

Significant Natural Areas

Coal Creek Bush
Smallish patch of upper-lowland beech forest on steep hillslopes and along a narrow gully.

Gills Bush and Home Bush
Two smallish patches of beech forest on steep, eroding hillslopes along 2 narrow gullies.

Potentially Significant Natural Areas

Awatui Bush
3 moderate patches of upper lowland to montane mixed beech forest on steep hillslopes and along steep narrow gullies.

Forestry Management Area

Conservation Land (Department of Conservation)

Queen Elizabeth II National Trust Mandamus Preservation Reserve

Douglas Fir forestry block owned by a syndicate

Hurunui High Country Walking Track

Land Status

The study area encompasses areas of land which have particular values and levels of importance. The map opposite shows these areas and their physical connection with the study area.

Department of Conservation:

Department of Conservation (DOC) Land is seen to the left of the area which is Lake Sumner Conservation Park. This land has natural significance, some of which is within the Mandamus Catchment. In the top of the Catchment is Lochiel Run also owned by DOC. Some of this land is also within the Catchment.

Queen Elizabeth National Trust:

The QE II National Trust has a registered open space covenant known as the Mandamus Preservation Reserve owned by Island Hills Station Limited. The size of the covenant is 600.9470 hectares and was registered on 2 November 1992.

Hurunui District Plan:

There are areas which the Hurunui District Council in its Plan outlines as being either outstanding landscape (OL) or significant natural areas. These significant natural areas are Awatui Bush, Home Bush, Gills Bush and Coal Creek Bush. They are within or near the Catchment.

The area in the upper region of the Dove River is within the Outstanding Landscape as defined in the Hurunui District Plan, the rest of the Mandamus Catchment has not received this classification.

Mandamus River in the foreground, Nicholsons Knob (1430m) and Mt Skeddadle (1704) against the skyline

A visit to the Mandamus

Today the Mandamus Catchment is a diverse and beautiful area of high country. Upon leaving state highway 7, Tekoa Road leads up past the Balmoral Block, forestry works and other farms and stations until the tarseal peters out and the gravel continues, winding up the valley. Once over the first bridge you squeeze through the gorge with its striking rocky vertical sides. The rocky formations above the incised Mandamus River reveal past geological movements of rock landslides and tectonic uplift which has occurred. The Mandamus River sits below the road; a farmer on horseback moves a small herd of cattle up the braided river bed. Old buildings and old farm equipment relics, large barns, men working and barking dogs greet you, providing a snippet into a long tradition of a rural farming life on the Glens of Tekoa Station. Over another bridge spanning the Mandamus River and you continue through to the Island Hills Station.

Once you venture past the dwellings and core farming activity of Island Hills, the landscape opens up and the sky dominates, creating a feeling of smallness amongst a huge majestic landscape. The gently sloping land in the lower areas is farmed with sheep and cattle grazing alongside patches of scrub and matagouri. Broom blooms yellow on the Tekoa hillsides in the lower Catchment. The Hurunui Range rises to the right with greywacke and argillite bursting through the hillsides. The distant ranges of the Southern Alps and the Organ Range frame the valley on the skyline. The smooth grassed paddocks divide the lower sections of the Catchment and provide a spectacular contrast with the craggy tops, and dense forested areas along the flanks of the ranges.

The Dove and Glencoe Rivers are incised with terraces on either side, the braided river beds snake through the landscape and continue into the upper valleys as the sides get steeper and more densely forested. In the lower areas of the Catchment the rivers are grazed right up to the edge with exotic species and weeds bordering the rippling waters. On the Mandamus River deep pools of clear water form, in contrast to the moving channels of the braided bed. As you venture deeper into the Catchment the grassed paddocks are invaded and inhabited by matagouri and kanuka scrub. Deeper still and the beech thickly dominates the stream edges and valley sides.

The horizon constantly provides views towards the Organ Range and other peaks, which form a stunning expressive ridgeline bare of forest vegetation; instead scree and alpine species appear. Rocky ridges of greywacke rock are exposed on the tops of the mountain ranges due to the severity of the erosion. In the far distance snowcapped mountains and rocky ranges add to the growing feeling of being within an isolated and beautiful place.

Jessica Liddle

From Island Hills looking over the Dove River (left middle) above its confluence with the Mandamus. Middle distance the Mandamus River winds past Glens of Tekoa Station through its gorge to join the Hurunui River. 1950's.

Geomorphology

The Mandamus Catchment has some of the most diverse and interesting geology in the region, predominately greywacke and argillite with volcanics and limestone. Much of the upper area is steep and erosion-prone country with gentle sloping country down in the valleys. The Tekoa and Organ Ranges are very prominent with steep shattered mountains, comprising extensive screes, and gully and sheet erosion (Harding.M No.98/107 1998). Many rivers and streams cut through the landscape, tributary streams are steep and incised up in the upper study area. Rivers and streams in the main valleys are more gentle and broad, with river terraces and movement of the river channel evident.

To the north runs the Hope Fault (Waiau Valley) and in the bottom of the study area there are four faults, the Esk, Island Hills, Hurunui and Waitohi Downs Faults. From the top to the bottom of the study area there are significant changes from higher-rainfall forested valleys in the west and north, down to depleted lower-rainfall valleys and small ranges in the south and east.

The rocks in the Island Hills area comprise conglomerates, sandstones, mudstones, limestones and volcanogenic deposits of late Cretaceous to Pleistocene age. These overlie the basement rocks greywacke and argillite of the Triassic to early Cretaceous period. With the pressure from tectonic movement and folding and faulting the rock sequence is complexly deformed. This is seen in many of the rocks shape and structure which are found in the Mandamus Catchment. The mid Cretaceous Mandamus Intrusive rocks (of synite and gabbro) containing sedimentary rocks form the Hurunui Peak ridge (R.J.Mould 1992). Spectacular outcrops of finely-bedded greywacke and argillite are seen in the Glencoe Valley and on the western flanks of Mt Tekoa, and the aptly named Organ Range (Harding.M No.98/107 1998).

During the late Cretaceous to late Tertiary period the Catchment was submerged under the sea. The fossiliforous sediments deposited in this marine environment represent some of the most westerly deposits of Cretaceous - Tertiary rocks. The area is used by second year geology students from Canterbury University for field studies.

The Organ Range is made up of Torlesse (greywacke) rock. It got its name due to the severity of the erosion making the range look like organ flutes.

Mt Hurunui and the Hurunui Range (Glens of Tekoa).

There is much exposed rock on the sides of the hills which is a result of the uplift by the faults below.

Mandamus River
These photos show the incising of the Mandamus River into the resistant bedrock.

Geology Map

New Zealand Geological Survey, Department of Scientific and Industrial Research 1964 Sheet 18. Hununui.

Syenite (Hununui Peak) and gabbro (Dove River). MANDAMUS INTRUSIVES

Glacial outwash gravel, kame terrace deposits; local fan and river aggradation gravels

White muddy limestone, basal coal measures overlain by glauconitic siltstone and sandstone

Predominately limestone

Limestone

Strongly indurated, mostly graded-bedded greywacke and argillite, with beds of basic volcanics

Moderately indurated, mostly graded-bedded greywacke and argillite, with beds of basic volcanics

Mandamus catchment

Kakapo Fault

A photograph of the landslide debris on the terrace surface above the Mandamus River.
(R.J.Mould 1992)

Landslides

Within the Mandamus area there have been two large landslides in the Torlesse Supergroup sandstone and syenite basement rocks. The landslides involved sliding and rolling of large blocks of rock, because of the large size and proximity (20km) to the major faults of the area they are assumed to be seismically triggered. This event happened sometime in the late Holocene age and it appears the debris from the landslide dammed the Mandamus River forcing the river to incise into the toe of the debris. A distinct meander is seen in the river's present channel upstream from the landslide site. It is possible to see the landslide debris which overlays the Culverden Terrace surface on the Mandamus River.

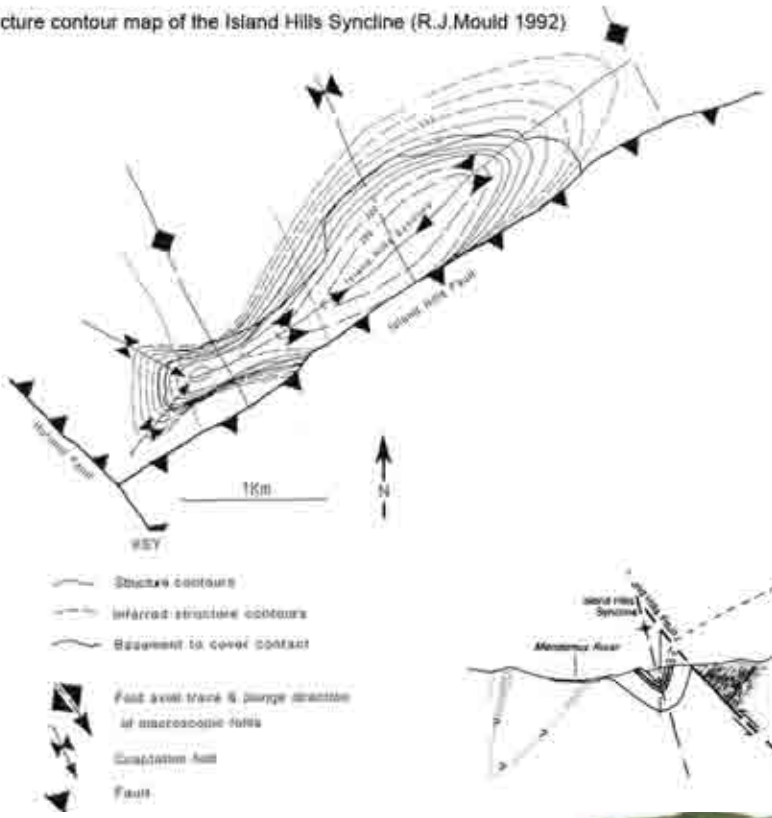
Another major landslide at Korari Downs also occured in the late Holocene age. It would have taken a large earthquake, possibly greater than 6.5 on the richter scale, to create these massive landslides (R.J.Mould 1992).

Due to the tectonic nature of the area and the level of seismic activity there is a risk to the inhabitants in the Culverden Basin. Landslides and possible damming of rivers which may lead to flooding are the greatest risks (R.J.Mould 1992).

Island Hills Syncline

A plunging syncline called the Island Hills Syncline (on Glens Of Tekoa). This is often referred to as 'the crater' but it is actually a syncline or fold in the earth's plates. The syncline is ringed by a cap of resistant limestone which forms the crest of an isolated trough-like hill.

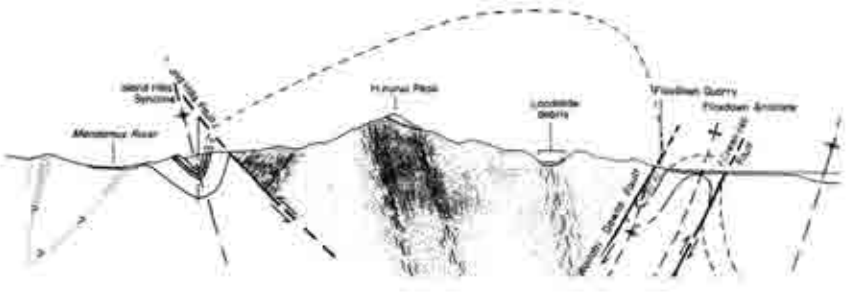
Structure contour map of the Island Hills Syncline (R.J.Mould 1992)



The Island Hills Syncline with the prominent ridge of limestone ringing the edge, soft sands lie beneath.
The Hurunui Range and Island Hills Fault are to the left. (R.J.Mould 1992)

Land Types are keyed (see map p.16)

Island Hills - Green Hill Cross Section (R.J.Mould 1992)

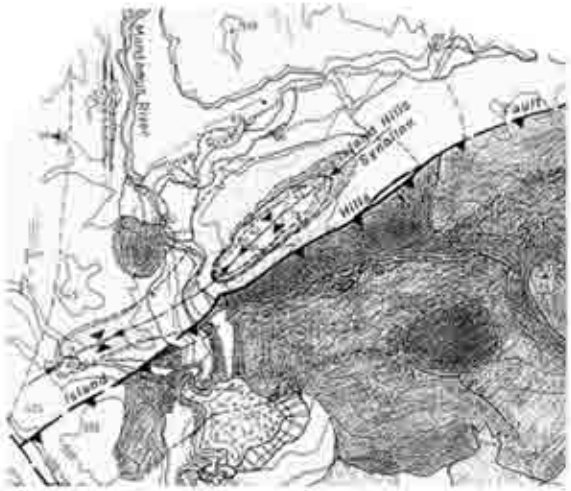


Faults

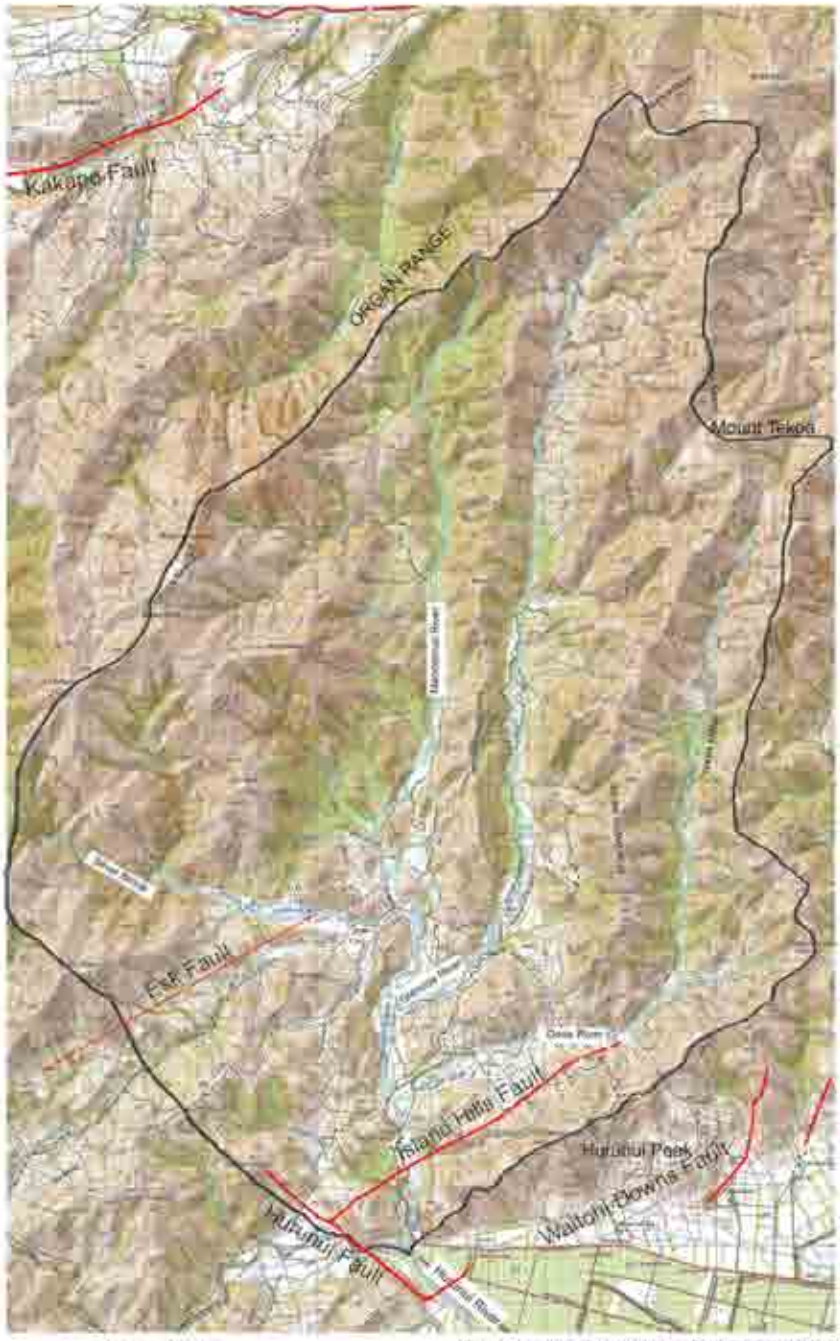
The Island Hills Fault is atypical of the faulting in this Catchment because it dips to the south east. The fault thrusts basement rocks of the Mandamus Igneous Complex and Torlesse Supergroup over the steepened limb of a syncline developed in the cover rocks.

Other faults in the area are the Esk, Waitohi Downs and Hurunui Faults. These have created the landforms seen in the Mandamus Catchment. The exposed rocks, tilted planes of bedrock, and steep mountains are all formed by the uplift and movement of the faults below the basement rock (R.J.Mould 1992).

Photograph of orthogonal joints in the limestone on the Island Hills Syncline (R.J.Mould 1992).



A diagram of the Island Hills Fault and Syncline (R.J.Mould 1992).

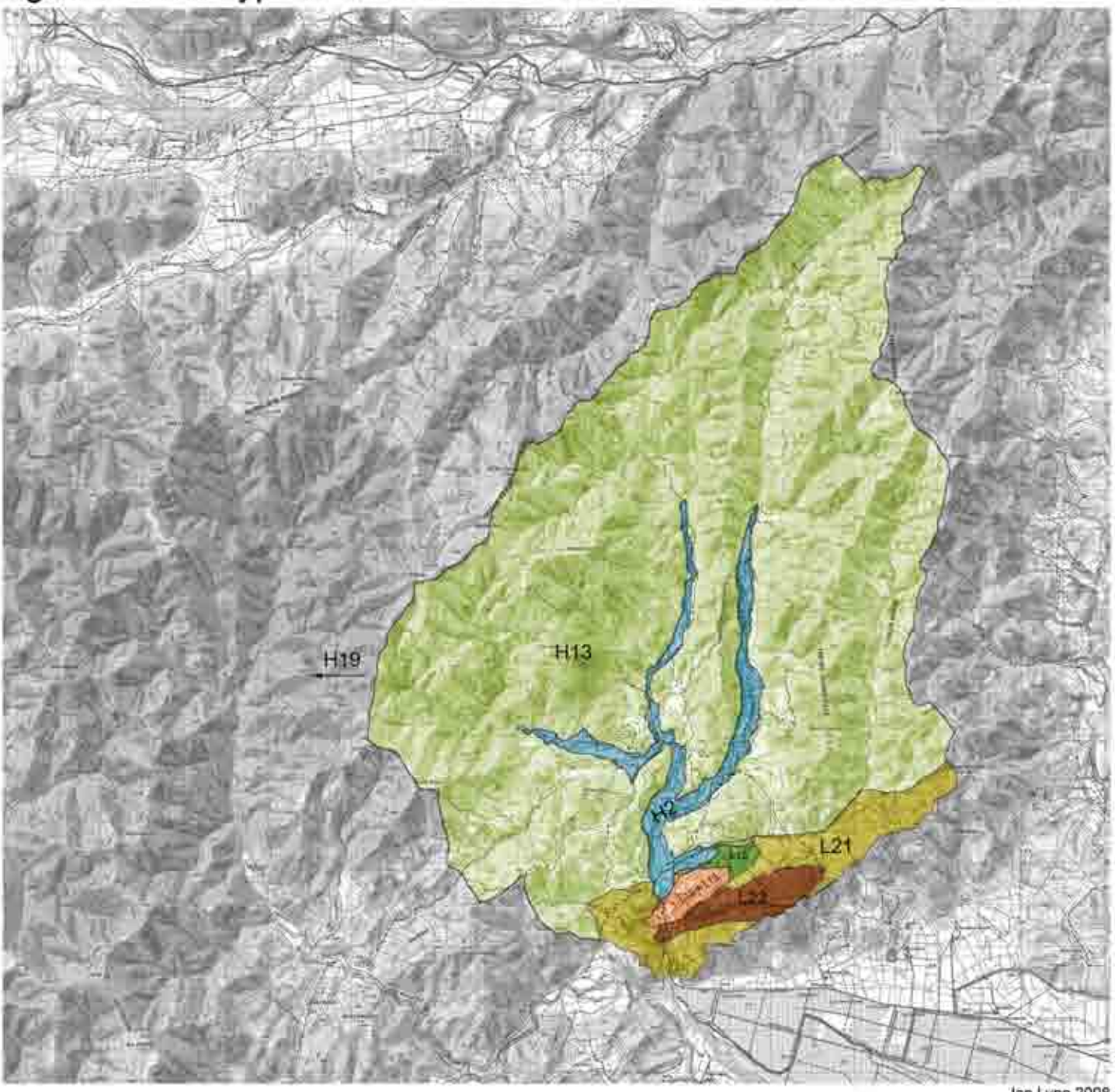


Inferred fault
Definate fault
Approximate fault

(Environment Canterbury. Ref PL5C/0021)

	Canterbury Landscape Types	Canterbury Land Types	Hurunui Landscape Types	Mandamus Catchment Land Types
Low Land	A Low altitude Plains	L2 Lower plains		
		L4 Plains-recent floodplains and low terraces	1 Plains	
		L1 Plains-coastal fringe	2 Coastal plains	
		L5 Raised coastal plains		
		L24 Inland plains and major valleys	3 Inland basin floor	
	C Foothills and downlands	L11 Northern loess mantled soft rock hills and downs		
		L12 Northern structural soft rock hills	4 Soft rock downlands	L12 Northern soft rock downlands
		L13 Northern soft rock hills and downs		L13 Northern structural soft rock hills
		L21 Northern hard rock hills	5 Hard rock hills	L21 Hard rock hills
			6 Coastal hills	L23 Igneous hill country
High Country	I Intermontane ranges and basins	H5 Small intermontane basins and valleys	7 Hanmer basin floor	
		H1 Major river, valley fill	8 Major river valleys	H2 Major river valley
		H2 Glacial and fluvial valley floor		
		H7 Isolated mountain		
		H13 Northern subhumid to humid mountain range	9 Mountain ranges	H13 Mountain ranges
	J High rainfall divide	H19 Northern main divide and associated ranges	10 Main divide	

Regional Land Types: The Nature of the Mandamus Lands



Ian Lynn 2008

Land Types of the Catchment

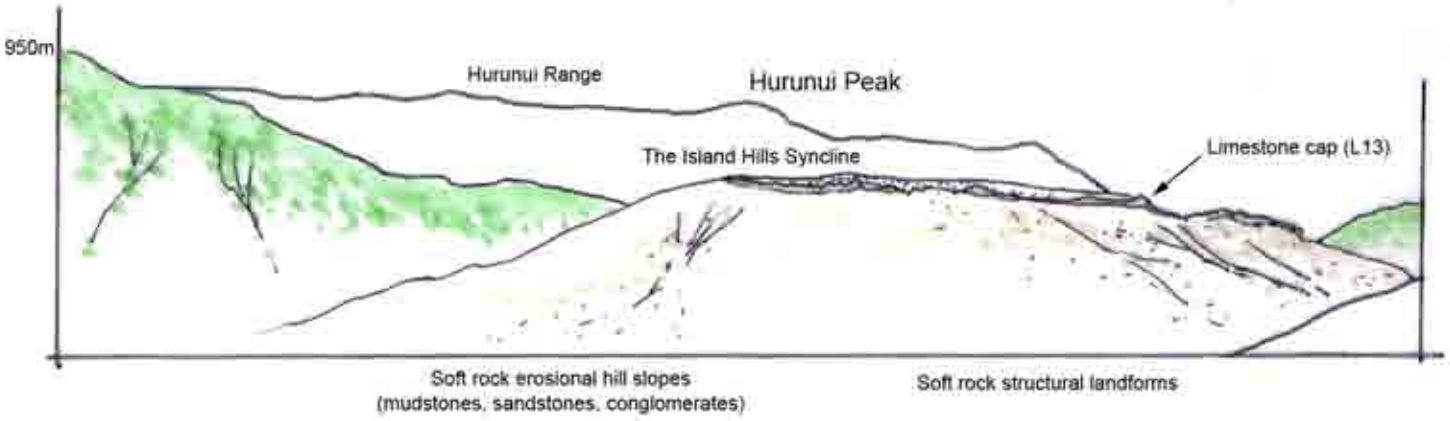
- L12 & L13 Northern Structural Soft Rock Hills and Soft Rock Downlands
- L12 Soft Rock Downlands
- L21 Hard Rock Hills
- L23 Igneous Hills
- H2 Major River Valleys
- H13 Northern Subhumid to Humid Mountain Ranges

NORTHERN SOFT ROCK DOWNLANDS

LAND TYPE L12

Smooth, rounded hills and downlands on Tertiary rocks. Landscapes underlain by soft Cretaceous/Tertiary rocks. Rolling to strongly rolling, to moderately steep smooth rounded slopes with minor soil slip erosion and few rock outcrops. Marine fossils including sharks teeth frequently present in the Cretaceous/Tertiary sandstones underlying the limestone.

The Dove River indicates the legal boundary between Glens of Tekoa and Island Hills. Island Hills buildings in foreground.



landform component	geological formation	elevation	remnant native vegetation	present land use	agronomic potential	potential land use	potential impacts
soft rock erosional hill slopes	Cretaceous-Tertiary sandstones, mudstones, conglomerate, limestones and tuff	400-800	short tussock grassland, matagouri, kowhai, manuka and broadleaved scrub	semi intensive grazing, feed cropping, scrubland	low-medium	semi intensive grazing, feed cropping, exotic forestry	fencing, tracking, exotic forest, decrease in tussock and scrub
soft rock structural landforms eg.cuesta's	Cretaceous-Tertiary limestones, calcareous sandstones and mudstones	400-800	matagouri, kowhai, broadleaved scrub	semi intensive grazing, scrubland	low to medium	semi-intensive grazing, exotic forestry	fencing, tracking, exotic forest, decrease in tussock and scrub
hard rock erosional hillslopes	Torlesse Group sandstones and siltstones	400-800	tussock grassland, scrub, matagouri, kowhai, manuka and broadleaved scrub	extensive grazing, scrubland	low-medium	semi intensive grazing	fencing, tracking, exotic forest, decrease in tussock and scrub

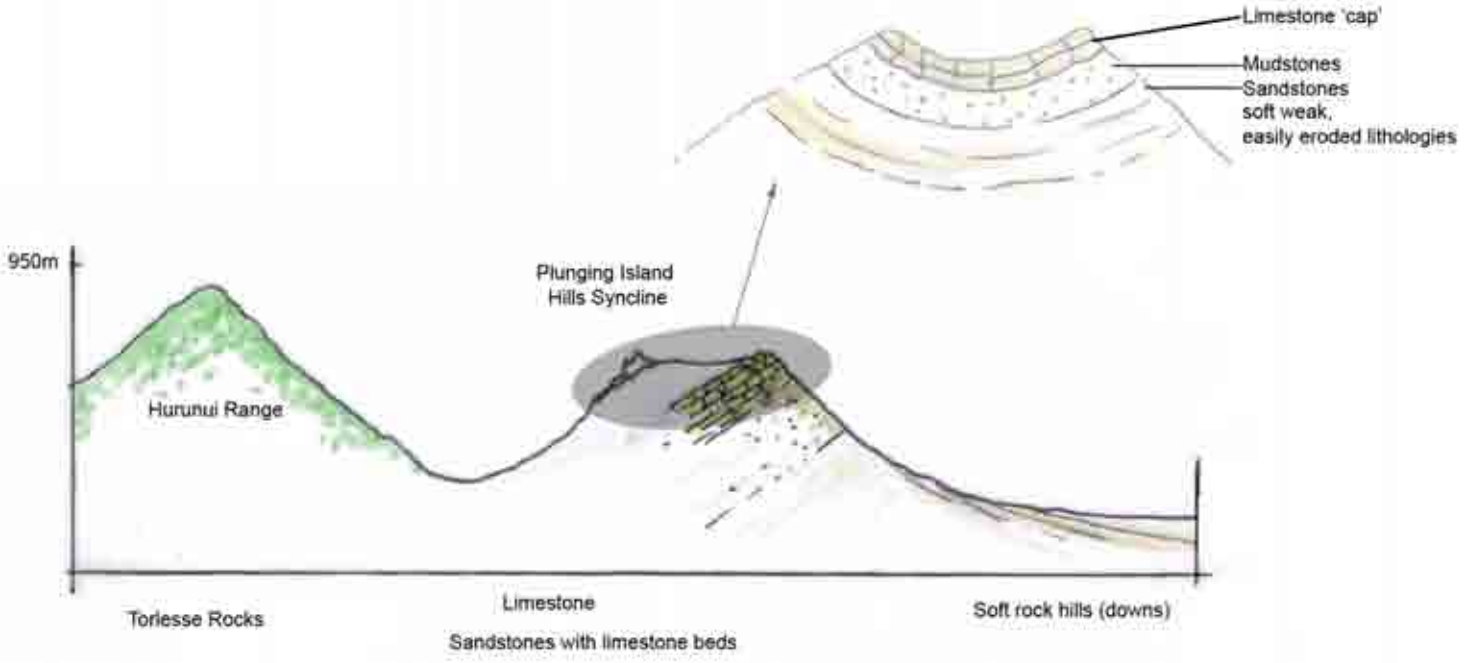
NORTHERN STRUCTURAL SOFT ROCK HILLS

LAND TYPE L13

Structurally controlled landscape underlain by Cretaceous/Tertiary rocks. Erosion resistant rock types form strong structural components of the landscape, e.g. limestone or volcanic lava cored ridgelines, protecting weaker more readily eroded mudstone and sandstone lithologies.

Limestone 'cap' which forms a rim around the syncline seen in the background

Limestone 'cap'



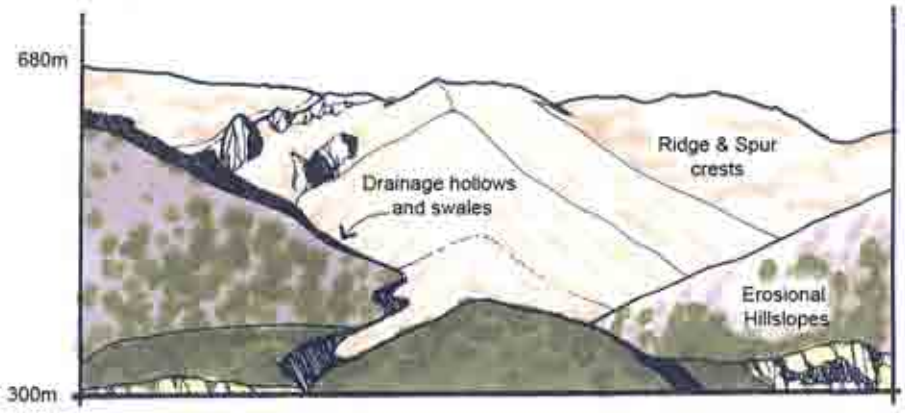
landform component	geological formation	elevation	remnant native vegetation	present land use	agronomic potential	potential land use	potential impacts
Structural 'soft' rock landforms eg cuesta's and hogsback	Cretaceous-Tertiary limestones, calcareous sandstones, igneous rocks and volcanogenic sediments	400-600	silver tussock grassland, scrub, matagouri	semi intensive grazing, scrubland	low to medium	semi intensive grazing, exotic forestry	fencing, tracking, exotic forest, decrease in tussock and scrub
'hard' rock erosional hillslopes	Torlesse Group sandstones and siltstones	400-600	Short tussock grassland, scrub, matagouri,	extensive grazing, scrubland	low-medium	semi intensive grazing	fencing, tracking, exotic forest, decrease in tussock and scrub

HARD ROCK HILLS

LAND TYPE L21

Strongly rolling to steep moderately dissected, stable, low elevation Torlesse hard rock hill country with rock outcrops on ridges and spurs,also some minor erosion scree. Lower slopes are predominantly oversown and top dressed with a high scrub component, matagouri and manuka, mixed native scrub in gullies and minor remnant native forest. Upper slopes are mostly undeveloped 'native' pasture with scrub. Shallow, stony, droughty soils with extensive grazing.

Korari Downs and Glens of Tekoa flats and the Hurunui Range to the true left of the Dove River



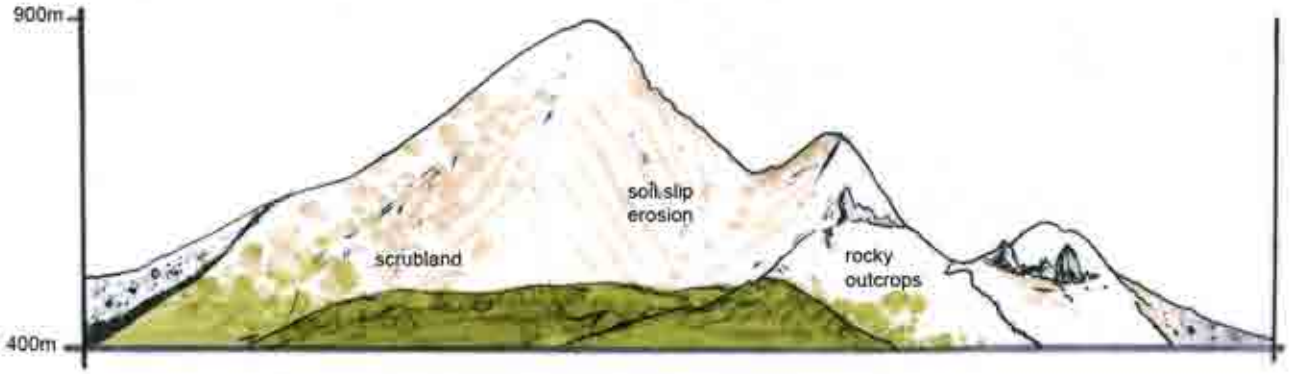
landform component	geological formation	elevation	remnant native vegetation	present land use	agronomic potential	potential land use	potential impacts
hard rock erosional hill slopes	Torlesse Group sandstones and siltstones	200-1400	tussock grassland with matagouri, manuka, kanuka, kowhai and broadleaved scrub, beech and mixed podocarp forest	semi intensive to extensive grazing, exotic forestry, reverted scrubland, conservation land, reserves	medium	semi intensive grazing, exotic forestry <1200m, reserves, recreation	increase in exotic pasture, fencing, tracking, scrub and exotic forestry, decrease in tussock, recreation impacts
ridge and spur summits and crests	Torlesse Group sandstones and siltstones	300-1400	tussock grassland with matagouri, manuka, kanuka, kowhai and broadleaved scrub, beech and mixed podocarp forest	semi intensive to extensive grazing, exotic forestry, reverted scrubland, conservation land, reserves	low to medium	semi intensive grazing, exotic forestry <1200m, reserves, recreation	increase in exotic pasture, fencing, tracking, scrub and exotic forestry, decrease in tussock, recreation impacts
drainage hollows and swales	Torlesse Group sandstones and siltstones	300-1400	tussock grassland with matagouri, manuka, kanuka, kowhai and broadleaved scrub, beech and mixed podocarp forest	semi intensive to extensive grazing, exotic forestry, reverted scrubland, conservation land, reserves	medium	semi intensive grazing, exotic forestry <1200m, reserves, recreation	increase in exotic pasture, fencing, tracking, scrub and exotic forestry, decrease in tussock, recreation impacts

IGNEOUS HILL COUNTRY

LAND TYPE L23

Igneous hard rock hill country, rolling to steep moderately dissected, stable, low elevation terrain with rock outcrops and minor sheet and soil and sip erosion. Vegetation is predominantly short tussock grassland, scrub with farmland pasture dominates.

Glencoe Valley



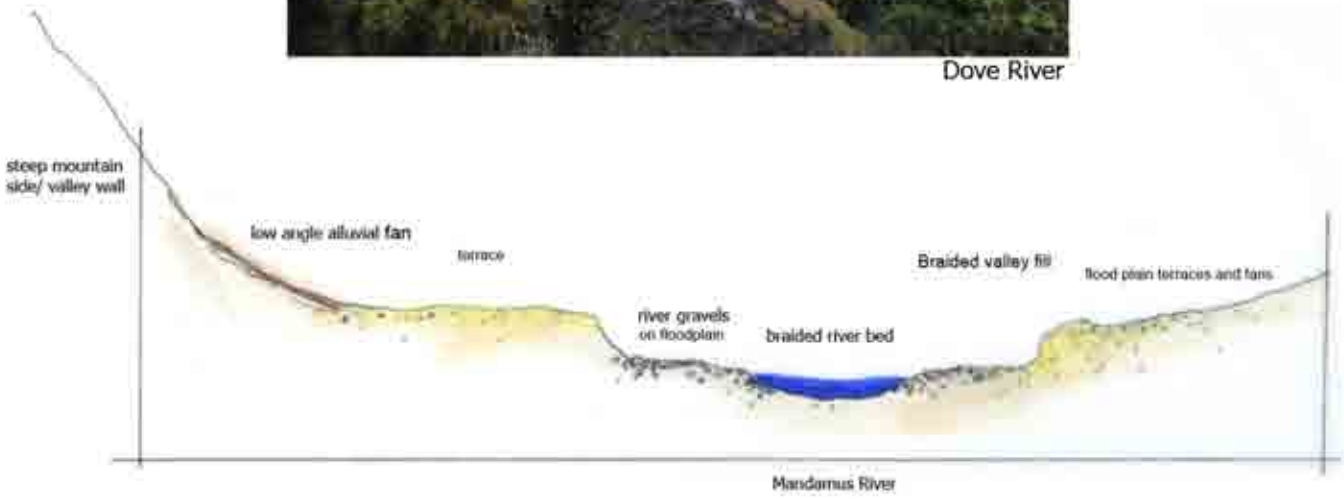
landform component	geological formation	elevation	remnant native vegetation	present land use	agronomic potential	potential land use	potential impacts
hard rock erosional slopes	Mt Misery volcanics, Round Top Andesites	400-1000	short tussock grassland with matagouri, manuka, kanuka and broadleaved scrub, mixed podocarp and beech forest	semi intensive and extensive grazing, exotic forestry, reserves	medium	semi intensive grazing, exotic forestry, recreation	increase in exotic pastture, fencing, tracking, exotic forestry, decrease in tussock and scrub, recreation impacts
ridge and spur summits and crests	Mt Misery Volcanics, Round Top Andesites	400-1000	short tussock grassland with matagouri, manuka, kanuka and broadleaved scrub, mixed podocarp and beech forest	semi intensive and extensive grazing, exotic forestry, reserves	medium to low	semi intensive grazing, exotic forestry, recreation	increase in exotic pasture fencing, tracking, exotic forestry, decrease in tussock and scrub, recreation impacts

MAJOR RIVER VALLEYS

LAND TYPE H2

Fluvial valley floor landforms, low angle gentle valleys with braided, active riverbeds, fringing marginal terraces and fans. Eg; Mandamus, Glencoe and Dove River valleys.

Dove River



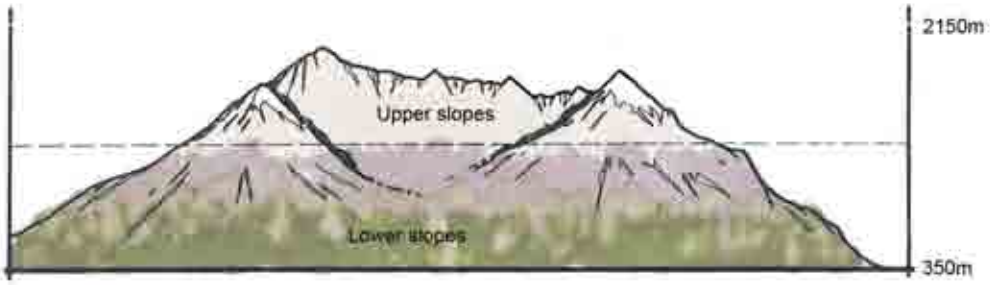
landform component	geological formation	elevation	remnant native vegetation	present land use	agronomic potential	potential land use	potential impacts
braided valley fill	Pleistocene/ Holocene fluvial deposits	300-1000	Raoulia cushion fields, moss tussock gravels	extensive opportunist grazing	low	extensive opportunist grazing	largely a 'natural' environment; exotic 'river control' trees
valley floor swamp	Pleistocene/ Holocene fluvial swamp deposits	300-900	sedge, turf, reed and rushlands, red tussock and raupo	extensive grazing	low	extensive grazing	wetland vegetation modified by grazing
floodplain terraces	Pleistocene/ Holocene fluvial deposits	300-900	short tussock and matagouri scrub	extensive and intensive grazing	high	intensive grazing, feed cropping, exotic forestry	increase in exotic pasture, limited cultivation, decrease in scrub, fencing
fans	Pleistocene/Holocene fluvial deposits	300-900	short tussock and matagouri scrub, moss tussocks, gravel fields	extensive grazing	high	intensive grazing, feed cropping, exotic forestry	increase in exotic pasture, limited cultivation, decrease in scrub, fencing

MOUNTAIN RANGES

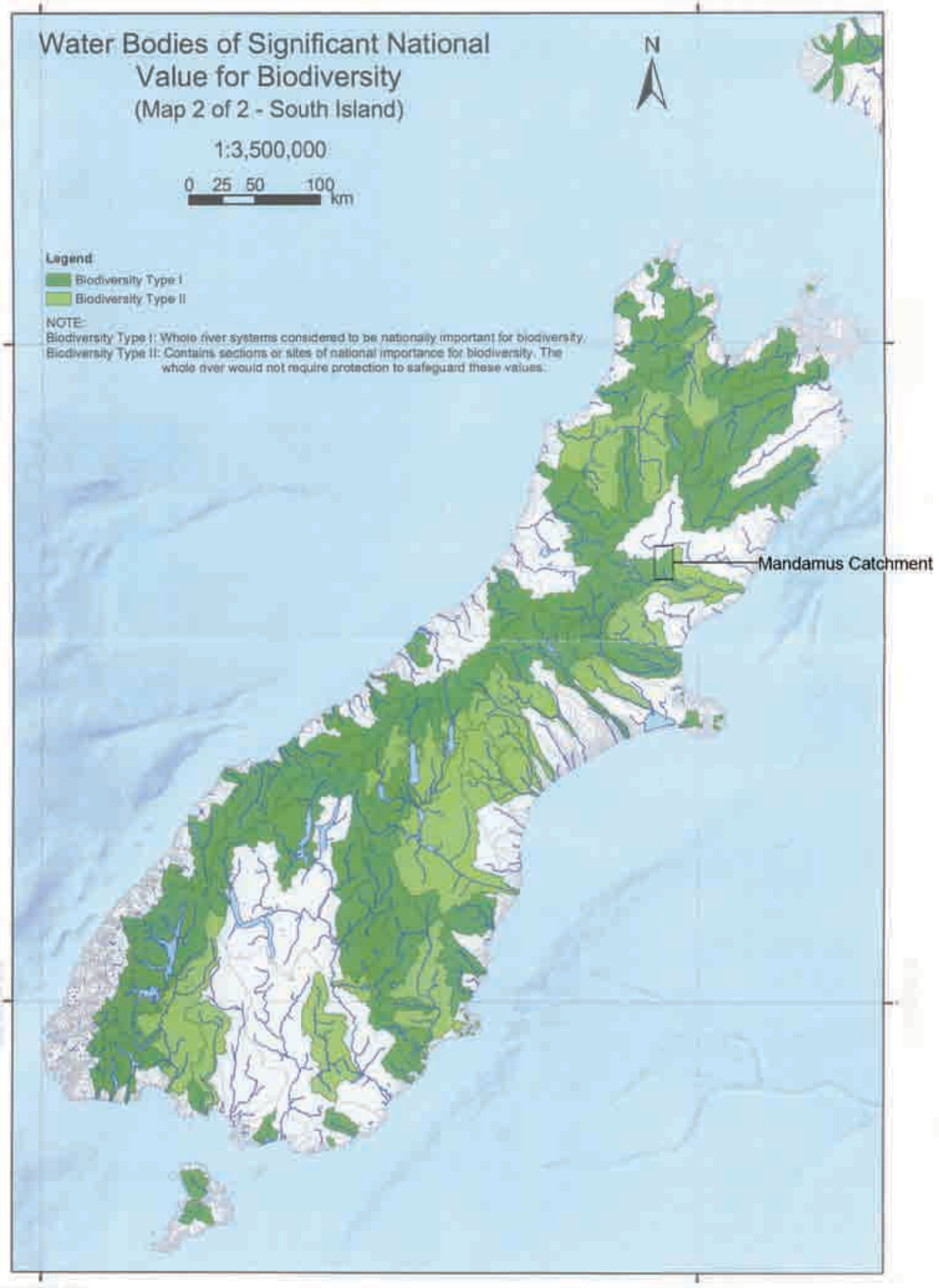
LAND TYPE H13

Steep to very steep, dissected, subhumid to humid mountain range with narrow rounded ridges, bedrock outcrops and extensive scree especially at higher elevation. Snow tussock, alpine, subalpine and rockfield vegetation occur on the upper slopes with short tussock grassland, matagouri and manuka scrubland with remnant beech forest on the lower slopes.
Eg: The Organ Range and Tekoa Range

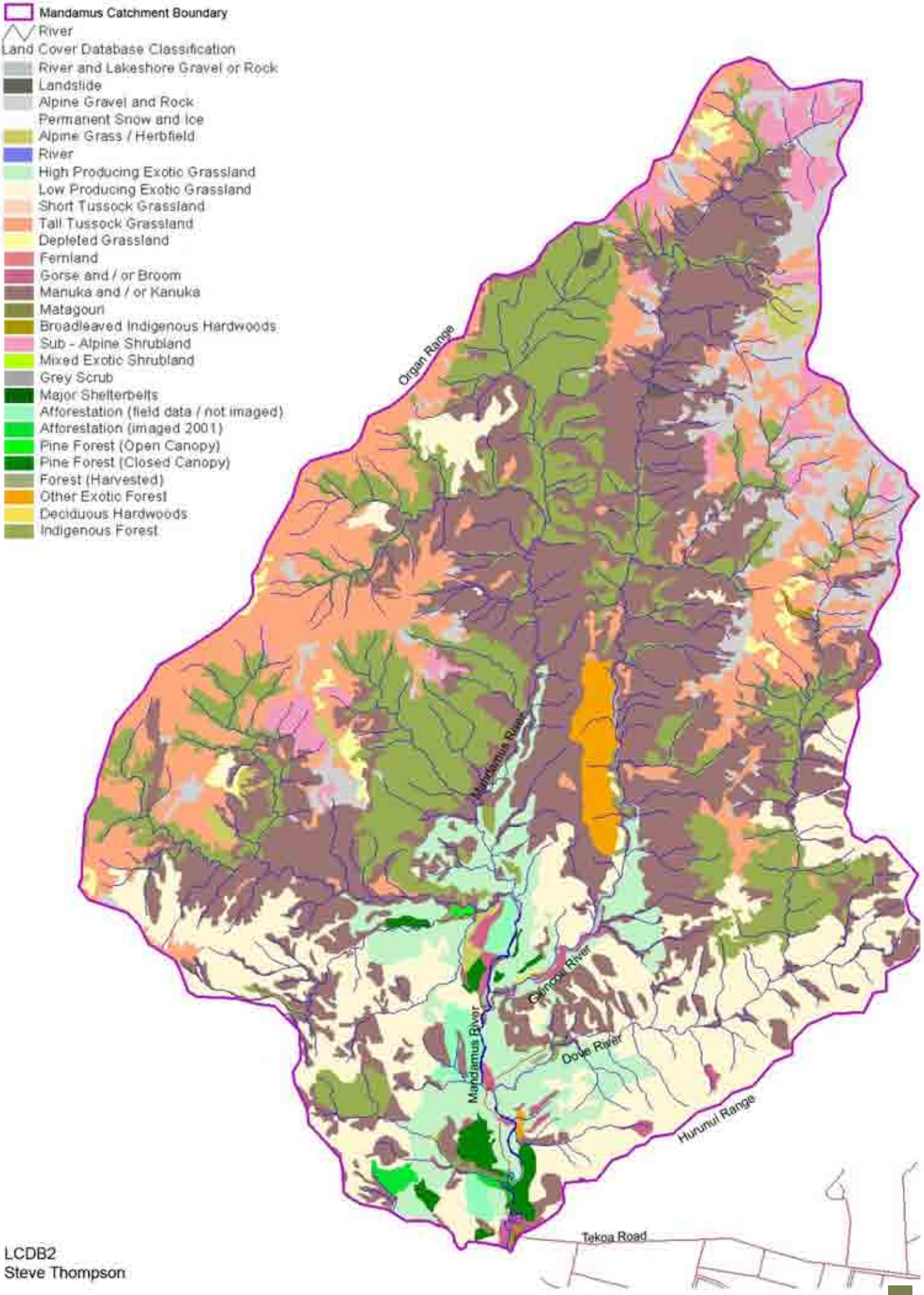
Big Organ and Little Organ in the Upper Mandamus Catchment



landform component	geological formation	elevation	remnant native vegetation	present land use	agronomic potential	potential land use	potential impacts
upper mountain slopes, summits and cirques (>1200m)	Torlesse Group: sandstones and siltstones	1200-2150	snow and alpine tussock grassland and herbfield, subalpine and alpine scrub, fellfield and scree vegetation	recreation, conservation land, limited 'wild' animal grazing	very low to nil	conservation land, recreation, 'wild' animal grazing	recreation impacts, tracking, buildings, tow lines etc
Lower mountain slopes (<1200m)	Torlesse Group: sandstones, siltstones and colluvium	350-1200	short and snow tussock grassland with matagouri, manuka-kanuka, broadleaved and subalpine scrub, herbs and beech forest	extensive grazing, exotic forestry, conservation land, recreation	low	extensive grazing, exotic forestry, conservation land, recreation	increases in scrub cover with reduced grazing pressure, fencing, tracks, exotic trees, recreation impacts
Inter-valley floors and colluvial side slopes	alluvium, colluvium from Torlesse Group sandstones and siltstones	350-1000	short and snow tussock grassland with matagouri, manuka-kanuka, broadleaved, red tussock and wetlands, beech forest	extensive grazing, conservation land, recreation	medium to low	semi intensive grazing, exotic forestry	increases in exotic species, fencing, shelter trees, exotic forest


Water Bodies of Significant National Value for Biodiversity
(Map 2 of 2 - South Island)
1:3,500,000
0 25 50 100 km
N
Legend
Biodiversity Type I
Biodiversity Type II
NOTE:
Biodiversity Type I: Whole river systems considered to be nationally important for biodiversity.
Biodiversity Type II: Contains sections or sites of national importance for biodiversity. The whole river would not require protection to safeguard these values.
Mandamus Catchment

Mandamus Catchment



LCDB2
Steve Thompson

Flora

The landscape has a diverse range of flora and fauna, from alpine to sub-alpine, mountain beech forests, kanuka and broom scrublands and grasslands. The Catchment would once have contained an extensive area of montane beech forests, alpine grasslands and herbfields. Presently the ecosystem is severely depleted in the south of the Catchment and lower valley floors due to landuse. There are still alpine communities present above 1200m asl, plant communities in the area have been modified by fire and grazing which has occurred over time. In the lower slopes of the mountain ranges there is still remnant beech along with regenerating beech and under-storey species. The valley floors and lower slopes are infested with broom, kanuka and gorse. Douglas Fir and wilding pines are very visible in the Catchment, Douglas Fir was planted as a forestry trial but is now a potential wilding threat.

In the Hurunui District Plan areas are noted as being potentially significant natural areas. Awatui Bush on the Hurunui Range is an area of montane mixed beech forest and is potentially significant. Significant natural areas are highlighted in Coal Creek Bush, Gills Bush and Home Bush (Map p.7). The Mandamus Preservation Reserve to the west of the Mandamus River is an area under The Queen Elizabeth National Trust II.

Beech forest

There are some extensive areas of beech forest in the head of the Mandamus River within the H13 mountain range land type, also along the western flank of the Organ Range and within the Mandamus Preservation Reserve. Some of this forest is intact and is representative of the original forests in the area. Beech forest remnants are found in the Glencoe and Dove catchments of the L21 hard rock hills and L23 igneous hill country land types. A wide range of species both common and rare are found within these beautiful forests including red, silver and mountain beech, coprosma, totara, mountain ribbon wood, lancewood, kanuka, three-finger mosses and prickly shield fern.

Kanuka shrubland

These occupy extensive areas of mid-altitude country within the H13 mountain range land type. They are important areas for regenerating beech forests. Kanuka is a nurse crop, the beech establishes underneath and outgrows the kanuka. Kanuka is also often seen competing with the gorse and broom in the lower areas which once would have supported forest.

Mixed riparian shrublands

These mixed shrublands are formed along many of the gullies and particularly in the upper reaches of the rivers within the H2 river valley land type. Beech forests and kanuka scrubland along with fuchsia, native broom and mountain wineberry form these diverse mixed shrublands. Where grazing occurs at lower altitudes this riparian shrubland is lost and replaced by pasture with broom and gorse.

Pasture

There are areas of extensive pasture which are grazed. The vegetation on these areas are dotted with matagouri and regenerating kanuka. Exotic weed species dominate in the open conditions, these areas occur in the lower H13 mountain range, L21 hard rock hill, L23 igneous hill country land types.

(Harding M. No.98/107 1998)

Mt Skedaddle and the Big and Little Organ, with the head of the Mandamus River visible weaving through the kanuka and beech

Flora

High-mid altitude tussock grasslands

These are present on the gentler mountain slopes and on slopes of the upper Dove and lower Glencoe valleys. The tussock grasslands, are often colonized by shrubby species, and are often severly browsed by sheep and reduced to stumps. The grasslands merge with open rock, scree or herbfields.

Snow-bank

This is a plant community which is confined to a sheltered depression on high altitude ridges on the Organ and Tekoa Ranges. Often seen in these areas is cotton daisy, snow and blue tussock, and mosses

Rock bluff and scree

Many steep slopes and high altitude areas are dominated by open rock and scree. Sparse and scattered plant communities are found in these areas which are typical of the North Canterbury mountain ranges (Harding.M. No.98/107 1998).

Rare and interesting species

Presence of rare plants, *Swainsona novae-zelandie* and *Helichrysum intermedium* var. *acutum* in high-altitude plant communities on the Tekoa Range. In alpine plant communities *Raoulia bryoides* is also seen and is at its southern limit, and *Raoulia eximia* near its northern limit. *Hebe rupicola* is also seen in stream side shrublands at its southern limit.

Hebe venustula

Aseroe rubra-stinkhorn

Pterostylis montana-orchid

Cyathodes colensoi

Senecio bellidioides

Gaultheria antipoda-snowberry

Wahlenbergia albomarginata

Celmisia spectabilis-cotton daisy

Pests

In the valley floors and lower parts of the Catchment there are significant areas of plant pests, where varying land management systems are demonstrated. Extensive areas are dominated by broom and gorse on both Glens of Tekoa and Summerdale properties. Both broom and gorse are diligently sprayed by Island Hills, controlling the weeds as they come over the boundary fence. Broom (Cytisus scoparius) and gorse (Ulex europaeus) are major threats as they repress the establishment of other species, particularly species shorter than the canopy cover. Douglas Fir plantation on land owned by the Syndicate on the Little Island Hills east of the Glencoe River is a major threat. It was planted as an experiment by the NZ Forest Service in the late 1960's to find new ways to prevent the need for pruning timber trees. It was sold by the government and is now privately owned. Douglas Fir is particularly invasive as the seedlings thrive in shade and can be seen invading established patches of native vegetation including beech forest. Also in these areas of Douglas fir are Pinus nigra, and Pinus contorta which were interplanted by the NZ Forest Service between the rows of Douglas Fir. (Harding.M. No.98/107 1998)

Red deer were hunted and captured on the property by helicopters in the 1960-1980's. Red deer are hunted by recreational hunters all year round. They are a pest and commonly seen in the bush and forested areas. Wild pigs, weasels, stoats, wild cats and ferrets are also common in the area. Possums are found in forested and open areas.

Glencoe Valley in the lower and middle catchment

The confluence of the Silver Brook and Mandamus River.

These photos show extensive gorse, douglas fir and broom in the valleys.

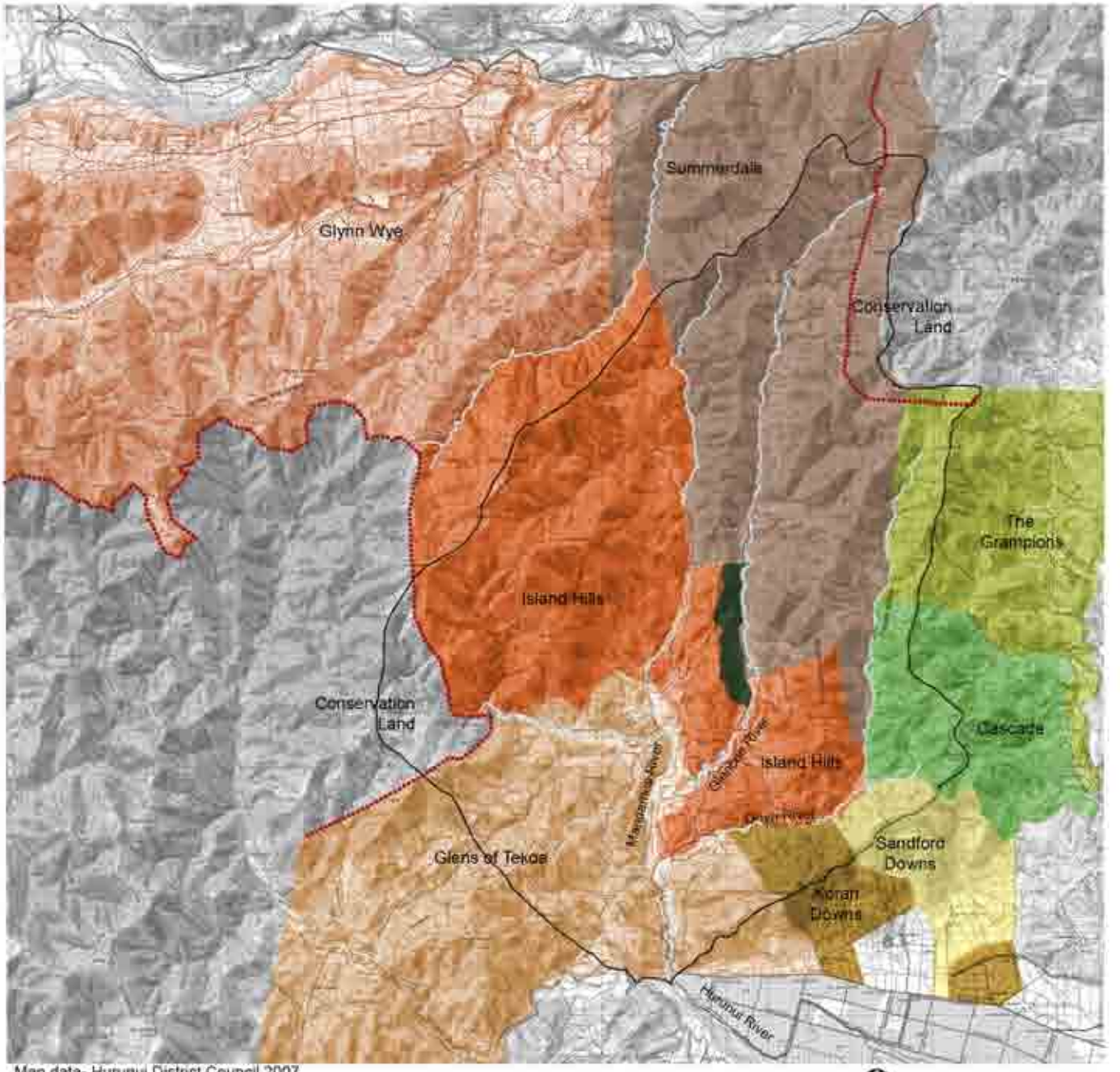
Fauna

A survey of fauna has not been undertaken, however species were observed on a trip to the area and from other reports. The following species have been observed: paradise duck, kea, black fronted tern, banded dotterill, kereru, oyster catchers, yellow-breasted tit, fantail, bellbird, falcon, silvereye, pipit, tomtit, brown creeper, rifleman, tui, and kakariki. Introduced observed birds included magpie, mallard duck, skylark, redpoll goldfinch and chaffinch. (Harding.M. No.98/107 1998)

Pest control is carried out on the Island Hills Station against possums, cats, ferrets and pigs. It has been noted by landowners that bird numbers have increased as a result of the strict pest control on Island Hills.

Island Hills farm halfbreed sheep (English Leicester and Merino) and Glens of Tekoa farm Merino sheep. Cattle (Hereford and Angus) are also farmed. A few llamas are kept on the Island Hills Station and horses for mustering.

Salmon and trout have been found in the rivers since the 1890's.



Map data- Hurunui District Council 2007

- Glynn Wye Station
- Summerdale
- Cascade Station
- Island Hills Station
- Sanford Downs
- Glens of Tekoa
- Korari Downs
- The Grampions
- Syndicate of Douglas Fir forestry block

Note: The Glens of Tekoa encompasses all the north bank of the Hurunui River up to Lake Sumner and the Island Hills block which was still part of Glens of Tekoa.

From Amuri to L. S. C. Macfarlane

Historic map of the Amuri Station in 1867. (McRae,S Glens of Tekoa,1968)

Settlement of the Mandamus Catchment

William Heaphy was in 1844 employed in Otago as a surveyors assistant. On being recalled to Wellington he decided to walk overland to Nelson while the rest of the party went by ship to Wellington. It is understood that he used the Mandamus River as part of his route between the Hurunui and Waiau River. Very bruised and battered from a serious fall above the Waiau River, he gave up his overland walk. On the Waiau River he built and rafted on a 'mogi' (mokihi) made of flax and claddy sticks and managed to reach the coast near Motunau Island. He almost drowned, exhausted bodily and having run out of provisions he lay down to die with his chart and note book visible beside him. Pinning a note to his chest he was suprised to wake up alive and after resting he wearily returned to the Deans at Riccarton. (Gardner. W.J. *The Amuri: A County History*.1983)

The original settlers of Glens of Tekoa, or Mandamus as it was first known, came from Scotland. In 1842 George McRae sailed with his family bound for the Nelson settlement. His brother William McRae decided to join George and later in 1849 sailed with his family to Nelson. Upon arrival in New Zealand he bought land in Richmond not far from Nelson (McRae.S. *The Glens of Tekoa* 1968).

On 13 December 1856 in Nelson, William Morrison applied for a sheeprun of his own. The key part of it was the tussock grazing land now included in the Glens of Tekoa and Island Hills Stations. But the Hurunui Run never came into William Morrisons hands at all. He forfeited his claim when he failed to deposit a survey plan within the time required. The Commissioner then declared the run open for new applications (Locke. E. *Discovering the Morrisons*.1976).

Christopher Edward Dampier had arrived in New Zealand on 8 November 1850. In 1857 he applied for a run between the North and South Branches of the Hurunui. A dispute between Dampier and the Commissioner of Crown Lands, Alfred Domett, ran from 1857-1863. Dampier had taken his case to the Supreme Court in Wellington and had been granted a writ of Mandamus against the Commissioner (Stay of Proceedings). Domett was able to prove to the Court that Dampier had not described his land correctly, and thus had to forfeit it (Gardner W.J. 1983).

William McRae along with his two sons, Roderick and George, had done an exploratory trip the length of the Mandamus River in 1856, approaching the Mandamus Catchment at its source from the Waiau River end. William McRae applied for the run on 8 June 1858 and was granted it on 14 November 1858. William McRae stocked his land by bringing sheep from Nelson, bringing them across the Amuri plains to the junction of the Mandamus River and Hurunui River and then up the Mandamus Gorge. The run was first called Mandamus, afterwards it became known as Glens of Tekoa as the tributaries of the Mandamus River drain Mt Tekoa. The Tekoa run was bounded by the Hurunui River and reached as far as Lake Sumner. The River became named the "Mandamus" after that bitter legal case.

Dampier, after losing his case for the run at Glens of Tekoa, had ridden via Lake Sumner and Lake Marion into the Hurunui River South Branch and took up land which is now known as Esk Head. Even though Dampier lost the claim all was repaired when in 1900 there was a double marriage between the McRae and Dampier families. (Gardner W.J. 1983)

sod house
The second Glens of Tekoa homestead built in 1859

Journey looking for land undertaken by William McRae and his two sons in 1856. (McRae S. Gone for Good. 1985)

The Glens of Tekoa run was originally known as Mandamus. A free translation from the Maori would be the Glens of the Happy.

Glens of Tekoa

William McRae's run was originally known as Mandamus but by 1864 it was established as the Glens of Tekoa Station. William McRae spent his time both on this run and another property in Richmond, near Nelson, where they had first settled (Gardner W.J. 1983).

The first house was built in Home Gully near the Blue Rock and Silver Brook Streams, this was occupied for 2 years before the sod homestead was built.

William McRae along with his sons George Wilsden and Roderick built the second house of sod in 1859. It is a registered historic building with Historic Places Trust. The third homestead built in 1865 which is still lived in today, is also a registered historic building. In William McRae's diary which is lodged in the Canterbury Museum, is written on the 31st August 1865 "*New house, had a fine day to move all things".*

After their father's death in 1868, George. W. McRae and Roderick shared the run for seven years before George became the sole owner. (Gardner W.J. 1983).

In 1900 William Wilsden McRae married Mary Dampier Crossley a granddaughter of Christopher Dampier. In 1910 W. W. McRae went to live at Waituna Waikari leaving the management between 1910-1920 to Jack Bunting. Roy McRae a son of Roderick McRae managed from 1920 to 1930. Then from 1930 onwards William Dampier (Bill) McRae, William Wilson's son managed Tekoa on behalf of the McRae family.

In 1911 the Island Hills block was split off from the Glens of Tekoa by William McRae's son Budge (George. R. McRae) as his share of the McRae estate.

Glens of Tekoa purchased the Balmoral Block in 1911 when the Balmoral Estate was split up. This was a great asset to the station providing readily available paddocks near the central buildings.

In 1938 the upper Glenrae River and all the Jollie Brook catchments up to Mt Longfellow and Lake Sumner were retired from the Glens of Tekoa lease. (Gardner W.J. 1983 and McRae.S. 1968)

The second homestead, Glens of Tekoa.
Built in 1859 from sod.
The first was built up Home Gully.

A tea party in 1890 by the third homestead built in 1865.

Looking over the Tekoa farm buildings towards the Syncline. Old shepherds sod cottage in foreground.

Station diaries have been kept at both Glens of Tekoa and Island Hills and between them there is an almost continuous record documenting the station's histories, from 1863 to the present day.

Blessing the Ambulance at the St Johns Ambulance Garden Party held at Glens of Tekoa. 1993

"...over behind Dick's hut is the Glens of Tekoa cattle and sheep station. The two prettiest stations in New Zealand to my mind are the Glens of Tekoa and Shand's place, Island Hills."

(A Sock in my Stew. Dick Morris, Robin. S. Patterson 1991)

Island Hills

The Island Hills Station was originally part of the Glens of Tekoa Station until in 1911 Budge, (George) R. McRae, brought the 18,225 acres from the rest of the family. On the 15th of April 1914 Budge married Miss Kathleen Russell who was the daughter of John Russell who lived at the Lakes Station, Lake Sumner (his sister Sarah (Mrs O'Connell) lived at Mt Grey Station) (G.R.MacDonald Canterbury Museum). Budge McRae and his wife Kathleen brought up a family of five boys and two girls at the Island Hills Station. The station was sold by Budge McRae to Yeo Tresillian Shand in 1928. His son Arthur Charles Shand farmed Island Hills Station for more than four decades and it still remains in the Shand family.

The two parts of Island Hills homestead, the brick core out to the right and the added wooden section on the left. Photo by Dr Brian Mason. 2000

In 1963 Arthur Shand exchanged with the NZ Forest Service a block of Island Hills high country land for 500 acres alongside the Hururui River. The purchase of this piece of land provided Island Hills with winter country safe from the snow. The block was known as the Joseph or Forestry Block, it is where the railway line crossed the north bank of the Hururui River.

The four-wheeled buggy which Arthur Shand used to bring all his belongings to the Island Hills Station in 1928.

On the 8 June 1877 William Blyth spent 27 days building the brick core of the Island Hills homestead. (Tekoa Diary and 1877 Account Book). It was made out of bricks baked in a kiln which is still existing and used clay out of a bank at the Glens of Tekoa.

The Tekoa Account Book (1886-1887) records that Stanley Fowler commenced as head shepherd in 1886 with a salary of 80 pounds per year to be found in flour and mutton only. The 1890-91 Account Book states that Stanley Fowler received a rise as head shepherd in the cottage with firewood also provided. Stanley Fowler's father Walter Longhey 1830-1919 between 1866 and 1892 held the remote run Stanley Vale which lies beyond St James Station behind Hamner Springs. To this remote outpost, to which he was 'obliged to pack everything' on packhorses, he took his family. This poor run with minimal resources required the resourcefulness and skills demonstrated by the Fowler family. Stanley Fowlers' brother William broke his leg at remote Stanley Vale (with its homestead on the shores of Lake Guyon). Reaching a doctor involved travel by horse both ways so Fowler used a fencing standard as a splint and his leg set crooked. 'No good for walking but alright for riding.' The Fowler family were made of stern material.

About 1972 a gale force wind lifted the wooden veranda and roof iron exposing the original shingle roof.

Angus McLeod followed Stanley Fowler as head shepherd at the Island Hills Cottage. The Tekoa Account Book 1890-91 records Angus McLeod commenced in 1891 at 80 pounds per year as head shepherd to be found in cottage with firewood, flour and mutton.

In 1911 Budge McRae built and added the wooden part of the 5 bedroom homestead to the brick core and a year later also built the woolshed and stables. The oak tree in front of the homestead marks the spot where two children of the head shepherd Angus McLeod were buried.

Arthur Shand on the Hururui Range, behind him the ranges to the north-west.

The Glencoe River was originally named the George River and had its name changed after Edgar Jones of Summerdale agreed with his neighbouring runholders to slaughter his whole mob of six thousand sheep after ten scab infected sheep infiltrated Jones' mob. These were brutal efforts to eradicate scab sheep mite from the Amuri County. Some sheep were slaughted into the Waiau River, and some into the then named George River which ran red all the way to the Hururui River. This reminded the McRaes of a similar slaughter in the Glencoe Glen, Scotland. Scab was eventually eradicated from New Zealand (Maps in Canterbury Museum).

Shand family gathering under the oak tree. 1992

The homestead lies at 400m asl with the mountains at the back rising to 1704m asl. Island Hills is divided by rivers, the Dove, Glencoe, Mandamus and Silverbrook and many streams, hence the name Island Hills, an island of hills amongst the rivers.

'....As I look out through the little wooden frames across a snow covered lawn towards the graves of Mrs Angus McLeods little children who lie buried beneath a 100 year old Oak, I reflect what this lonely little woman must have endured 100 years ago. The anguished mother must have looked out through exactly the same window saying 'come home my man, our children are sick, come home I need your help so desperately...our little ones are in extreme isolation from medical help.' There was no telephone and two rivers to negotiate in the deep Mandamus Gorge...'

In a letter of reflection written by Arthur Charles Shand
13th June 1996

One day we came round the shingly face of a mountain.
Tekoa, our maps have told us.
And there before us lay the glens of home,
Misty and steep waiting to enfold us.

The second Glens of Tekoa Homestead 1859

Crossing the Mandamus to get mail about 1890

Mr. Edgar Jones at St Leonards, the first car in the district

Swimming in the Mandamus River Gorge 1930's

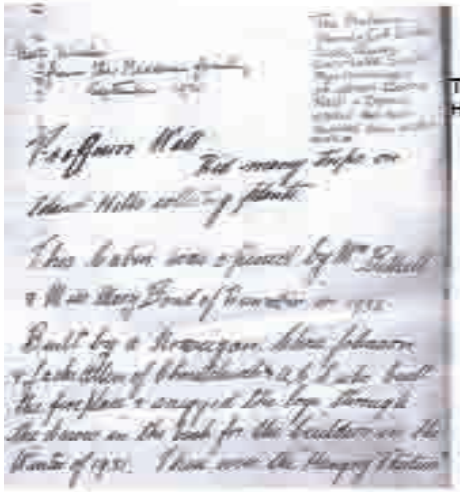
1840	William Heaphy (a surveyor) tried to walk from Dunedin to Nelson instead of going by ship. He clambered his way through the Mandamus River catchment to the Waiau River. (Gardiner. The Amuri)
1842	George McRae, his wife and family of four boys and five girls left Scottland and sailed on the Mary Anne bound for Nelson
1849	William McRae decided to join his brother in New Zealand along with his family, they sailed aboard the Lady Nugent and arrived at Port Lyttleton before continuing to Nelson where he was reunited with his brother George
1851	In March Isabell Hersus (6th settlement ship) arrived in Lyttleton Harbour with widower John Shand and 2 sons Charles & Thomas J.W. (Shands Cresent in Riccarton was named after John)
1856	William McRae and his two sons left Nelson on an exploratory trip to the Mandamus area approaching from the Waiau River end
1857	The first McRae home of beech poles, thatched with tussocks was built in Home Gully near the Blue Rock and Silver Brook Streams and it was occupied for two years.
1858	William Morrison failed to secure the Hununui Run as his own, it included the current Glens of Tekoa and Island Hills Stations
1858	14th November William McRae was granted the first freehold section in the Glens Of Tekoa
1859	The next Glens of Tekoa homestead was built from sod by William McRae and his two sons, George Wilsden and Roderick. It is still standing and in good condition and is used as a family museum. This was occupied until the brick homestead replaced it as the family home in 1865
1859	John Rochford surveyor made the first map of his journey up the Hununui River and down the Teremakau River. He marked Mt Tekoa (a Maori name) on his map
1865	August 31. "New house had a fine day to move all things". Quote from William McRae, this was the move by William and his two sons to the present McRae brick homestead. Bricks baked on site in a kiln.
1867	George Wilsden McRae married Mary Moore
1877	Yeo Tresillian Shand is born son of Thomas.J.W. Shand and his wife to be Lucy Hosykyns b. in 1876
1877	The brick core of the present Island Hills Homestead was built in 27 days by bricklayer William Blythe. Bricks were baked at the Tekoa kiln from Tekoa clay as a cottage for Glens of Tekoa
1880	Edgar Jones of the Upper Waiau Run slaughtered his 5000 scab infested sheep, some into the Waiau River and the rest into the Glencoe River (then called the George River) which ran red with blood
1880	Ayers spent 15 days building the dipping boilers and a brick oven for the mens place at Glens of Tekoa
1888	Roderick John McRae and cousin Wallace Gordon Moore buried in little white pailing fence graveyard behind Tekoa Homestead Two crosses mark their graves. Due to flooding the Mandamus River was too high for them to be taken and buried in a consecrated graveyard
1888	Stanley Fowler is recorded as commencing as head shepherd at the Island Hills cottage
1887	Two huts were put up on Glens of Tekoa on the Jollie Brook Stream and Hununui River (Woolshed Hut)
1891	Angus McLeod commenced as head shepherd in the brick two room cottage. A lean-to kitchen had been added on to the cottage which is on the Island Hills block
1893	Alice McLeod (Angus McLeod's wife), George.W.McRae, Mary (George's wife) and daughter Sarah voted in the first election that women were allowed to vote. (1893 Electoral Roll & Tekoa diary 1893)
1893	Glens of Tekoa woolshed burnt to the ground and was replaced by the still existing woolshed built by James Stewart & Co
1894	Gill the sheep stealer was caught with his stolen sheep up the Mandamus River. More than once he'd driven sheep from Sandford Downs through the Mandamus Catchment to the West Coast to sell
1897	The first settler William McRae's death (b.1802)

Leutenant Edwyn Shand killed in action on 15 July 1942 under Captain Charles Upham

John Heurtly killed in action on the 29.6.1942. John like Edwyn Shand left for the war from Island Hills

Summit of Mt Cook, 1930. Ken Parker, Arthur Shand and Mick (Bowie N. Mick Nowie The Hermitage Years)

Arthur Shand guided by Mick Bowie



The cover of the Bush Hut visitor book 1971

Georgy and Beau McRae.

Arthur and Diana Shand meeting up with Robyne McRae.

1900	William Wilsden McRae married Mary Dampier Crossley at Amberley and they lived until 1910 at Glens of Tekoa
1904	Arthur Shand was born in November, a year later in November 1905 Olga Buscke was born (Gisborne).
1910	William Wilsden McRae and his family left Glens of Tekoa to live at his wife Mary's property, Waituna, Waikari
1910-1920	Jack Bunting managed Glens of Tekoa
1911	The Island Hills block was split off from the Glens of Tekoa Station when Budge McRae, grandson of William McRae purchased the block from the rest of the family a total of 18, 225 acres
1911	Wooden section of the Island Hills Homestead was added on to the original brick core.
1921	Shona McFarlane born, she married William Dampier McRae, their children Robyne, William and Katrine
1928	Island Hills Station sold to Yeo Tresillian Shand. His son A.C Shand came up from North Otago to manage Island Hills.
1920 -1930	Roy McRae, a son of Roderick McRae, managed Glens of Tekoa
1929	Valley Camp Hut built on the Organ Stream for mustering, Island Hills
1930	Arthur Shand climbed Mt Cook
1932	Bush Hut was built from red beech logs on Island Hills Station
1932	First bridge built below the Glens of Tekoa on the lower Mandamus River. For the first time there was car access inside the Mandamus River Gorge. This eliminated all river crossings to get to Tekoa Homestead
1932	Removal of the tin shed which had been vital in the early days of Tekoa (before a bridge). It was used for storing and keeping delivered goods dry outside the gorge and was no longer needed.
1930-1968	Bill McRae managed Glens of Tekoa except for the war years 1940-44 when he served in the Pacific
1936-39	Amuri County had a small population and no vet so Dr William Guildford Todd, a Rotherham based medical doctor, received from England and administered at Island Hills the first distemper vaccine brought into NZ. Distemper virus swept through dogs and killed many. The vaccine administered on Arthur Shand's initiative was the first step in controlling this scourge
1939	World War II started, and ended in 1945
1938	The upper Glenrae River and the Jollie Brook catchments up to Mt Longfellow & Lake Sumner were retired from the Glens of Tekoa Lease
1940	Arthur Charles Shand married Olga Marie Buscke in July.
1942	World War II, Edwyn, brother of A.C.Shand, was killed at Ruweisat Bridge. He had served under Captain Charles Upham
1940's	Lesley, Diana and Edwyn Shand born. In the 1940's-50's Olga Shand was supervisor for the Correspondence School, schooling her children for their primary education
1946	William (Bill) Dampier McRae married Shona MacFarlane of Kaiwara
1947	Robyne Mary McRae born

Arthur Charles Shand leading Peter, shepherding 1970

Horse trekking in the summer. 1971 (Photo: Gladys Goodall)

Shona and Katy McRae at Katy's wedding.

Old Valley Camp with Toughie waiting outside. 1970.

1950's	Shona McRae educated her children by correspondence for part of their primary education
1951	William Walter Dampier (Beau) McRae born
1952	Second road bridge built by the engineering students of Canterbury University gave access to the Island Hills Homestead. It was designed by Arthur Lush and opened by Charles Upham, V.C and Bar. The garage on the Christchurch side of the Mandamus River was moved 1 1/2km up to Island Hills Homestead
1953	Island Hills started receiving main grid electricty
1958	Yeo Tressillian Shand died - 'an old world gentleman'
1959	Lucy Florence Shand died, wife of Yeo.T. Shand
1964	Katrine Mary (Katy) McRae born
1965	A 1500 acre block of Island Hills land was sold to the New Zealand Forest Service in exchange for a 500 acre plus block of land further down the Hurunui River. This provided Island Hills with country safe from snow
1968	William (Bill) Dampier McRae died
1968-1974	Ray Marshall managed Glens of Tekoa
1968	1968-1972: Island Hills Station horse treks began,run by Lesley Shand and known as the Island Hills Safaris.
1970	Edwyn Arthur Shand married Janet Green, their children are Nicola, Caroline and Daniel. They moved into the married couples cottage at Island Hills, adding to it over the years
1974	William Dampier (Beau) married Georgie Mannering. They have three children Lucy, Alice and Sarah
1974	A two bedroom house was built at Glens of Tekoa and widow Shona moved into this after Beau and Georgie were married
1974	Alan John Shand's share in Island Hills was transferred to Edwyn Arthur.D.T.Shand
1974	Beau (William Dampier) McRae took over the management of Glens of Tekoa. He is the great, great grandson of the first settler William McRae
1980's	Edwyn A.D.T. Shand climbed Mt Cook, and also Mt Tasman
1994	Shona Mary McRae dies
1996	Olga Shand died at Island Hills aged 91 years
1999	Arthur Charles Shand died aged 94
2000	Nicola Shand married Andrew Gardner at Island Hills
2000	Island Hills Station Limited is formed by Edwyn Shand
2002	Lucy McRae married at Glens of Tekoa
2003	Daniel Shand marries Mandy (nee Sullivan)
2003	Hurunui High Country Walking Track opened, run by Daniel and Mandy Shand
2003	Beau McRae is President of Amuri Agriculture and Pastoral Show, Rotherham
2005	Alice McRae married at Glens of Tekoa
2006	Edwyn Arthur.D.T.Shand is President of Amuri Agriculture and Pastoral Show, Rotherham
2007	Daniel and Mandy Shands first child born, Amalyia

Historic buildings and places

From the Inventory of Historic Places on North Canterbury High Country Runs. Compiled by J.Kearvell for Historic Resources Unit, Department of Conservation

The second Glens of Tekoa Homestead

Built in 1859 by William, George and Roderick McRae. It is the oldest surviving example of the homes erected by the first settlers in this area of North Canterbury. The first homestead was built on arrival at Home Gully which runs into the Silver Brook in 1858. The second homestead, in style and construction is typical of the houses early pioneers were able to build from materials at hand. Wet clay, tusssock and rushes were placed in a hole (which can still be seen) then consolidated into sod by the hooves of a bullock. Handtools moulding the sod for the house. (McRae.S. The *Glens of Tekoa*.1968). The steeply pitched roof and sheltering verandah were formed with rafters of beech cut from the nearby bush which were then covered with shingles. Broad cob chimneys at each end added stability. Partitions are wattle and daub construction. It is the family interest which has ensured the cottage's survival as a fine reminder of pioneer building and an important link in the history of Amuri.
(Historic Places Trust)

Glens of Tekoa the second Homestead

Two plaques in the sod homestead at Glens of Tekoa. The first church service in the Amuri was held. (see bottom plaque)

The Glens of Tekoa Homestead

The second homestead built in 1865. The bricks were made from clay in a kiln, the remains of which can still be seen near the homestead. The slates were imported from Wales, cedar doors and window-sashes were imported from Scotland, and carted overland by bullocks from Saltwater Creek at the mouth of the Ashley River (Historic Places Trust).

Glens of Tekoa Woolshed

1893 James Stewart and Co built the present woolshed complete with the loading shute for wool for 502 pounds. Earlier that year a disasterous fire had burnt the previous woolshed to the ground. (Account Book 1893-94 and 1893 Glens of Tekoa Diary)

Glens of Tekoa Homestead. 2000

Island Hills Homestead

The Tekoa Diary and 1877 Accounts Book records William Blyth a brick layer (from Chester Street East) spent 27 days building the brick core of the Island Hills Homestead and the roof was shingled. It was made out of brick baked in the Tekoa kiln which is still visible. The clay for the bricks came from a bank at the Glens of Tekoa.Tekoa Account Books 1886-87 & 1890-91 record Stanley Fowler was head shepherd based at the Island Hills brick cottage.
In 1891 Angus McLeod (wife Alice) commenced as head shepherd in the cottage of two rooms and a kitchen. In 1911 the building was added to by George McRae with the wooden extension. In the early 1940's Edwyn Shand, A.C.Shand's brother, built on one more bedroom.

Glens of Tekoa Homestead

Island Hills Woolshed

Built in 1912 for George McRae when Island Hills Station was broken off from Glens of Tekoa. Weatherboard and corrugated iron materials are painted a red ochre, all the timber is heart rimu and is in good condition.

Mocketts Motors Truck leaving the Island Hills Woolshed 1932

Island Hills Cookhouse

This is a large building 20 metres long built in 1912 for Budge McRae, for shepherds and shearers accommodation. It has four main rooms, a bunk-room, cooks room, kitchen, dining room and a washroom. The connection between all rooms was along an outside veranda, typical of early stations. Heart rimu was again used for the timber work along with a corrugated iron roof. It is well maintained and still used by students, shearers and trampers.

Cook house 2007

Bush Hut

Arthur Shand oversaw the building of mustering huts. The original Valley Camp was built in 1929 beneath the Organs and the Bush Hut was built by the Norwegian Chris Johansen. During the depression the government paid the unemployed to work in the back country. Johansen worked with Arthur Shand to build the Bush Hut for musterers in 1932. It is built in the Scandinavian style of the time made entirely of hand adzed red beech logs which were sniggered into place during the winter of 1931. Moss was used to fill the gaps between the logs and a corrugated iron roof to finish. It is now used by trampers and walkers. The Silver Brook hut was built about 1972.

Barry Smith outside the Bush Hut 1970's

Island Hills Stables

The stables were built in 1912 for Budge (George) McRae. Corrugated iron roof, and iron clad walls along with heart rimu for the timber work. It is a very good example of a well-designed high country stable. It is a 3 stall stable with two loose box rooms, harness room, chaff room and a place for storing buggys.

Bush Hut 2007

Glens of Tekoa Graves

The graves are marked with white painted crosses in a cemetery surrounded by a paling fence, just behind the homestead. The young infants, Roderick John McRae and his cousin Wallace Gordon Moore were buried here, the swollen Mandamus River was too high to transport them out to a consecrated graveyard.

Island Hills grave site

The grave site is under the oak tree at the Island Hills cottage where Head Shepherd of Tekoa, Angus McLeod and his wife Alice lived. In the cottage they brought up their family, two of their children drowned in the river and were buried in the homestead garden with an oak tree placed as a marker. This was because the dangerous Mandamus River was in flood they could not reach a consecrated cemetery. The site is cared for by the Shand family and Arthur Shand fixed a sign to the oak tree, "*spare a thought for the head shepherd Angus McLeod and his wife who buried their children here at this outpost*".

Looking from the Island Hills Homestead to the Oak tree with the graves beneath. 2000

Summerdale Hut

The eight bunk Summerdale hut was built in the late 1800's. It was probably originally built for the fencers building the Summerdale-Island Hills block boundary. It has also served as a musterers and boundary keepers hut.

Summerdale Hut in 1952

Mei Mei Hut

This very old hut in the upper Glencoe River (Summerdale) still stands and was built for musterers and boundary keepers.

Mei Mei Hut in the upper Glencoe catchment Arthur Shand with Ada and Sly Grogg waiting patiently about 1978

Dove Hut

This is the oldest hut (Cascade Hut) in the district built sometime in 1890. This photo was taken in January 1987 and the hut was burnt down one month later. A man named Briggs who was camping out at the Dove Hut drowned in the Dove River in 1922. Sid Holland before he was Prime Minister stayed at this hut.

Dove Hut in 1987

Bridges

The first bridge to span the Mandamus River was built in 1932 constructed by Williamson & Co. This was an important step in providing better vehicle access to Glens of Tekoa and Island Hills Stations. The second bridge built in 1952 was a suspension bridge. This was designed and built by Arthur Lush and Canterbury University students.

The site of Gills Yards

Gill in 1894 was caught sheep stealing in the area. He would collect a small mob of sheep and take them over to the West Coast where he would sell them before coming back to repeat the operation. All that remains is a rough clearing with a few pieces of wire on the western side of the Hurunui Range. In August 1894 '*Father (George McRae) went to Culverden on the Gills Case*'. In 26 September 1894, Angus McLeod and his brother (Alex) went up the Mandamus to collect Gills sheep and to bring his hut down from the bush. (Tekoa Diary 1894)

Physical connections

For many years Island Hills and Glens of Tekoa Stations were isolated from many necessities because of the two often dangerous river crossings which were needed in order to reach the outside world.

The first lower steel bridge

The gorge of the Mandamus River was very steep, either horse or pony power was used to transport goods over this tricky crossing. In earlier years Roderick John McRae and his cousin Wallace Gordon Moore died and unable to be buried in a consecrated graveyard were instead buried behind the Glens of Tekoa Homestead. Two of Angus McLeods children drowned in the river and were unable to be buried in a consecrated graveyard due to the swollen rivers and inaccessibility. They were buried near Island Hills Homestead with an oak planted to mark the spot.

The McRae families at Glens of Tekoa appeared to have given up hope of getting either of the two bridges built which were needed to provide safe and easy access to the stations. Mr Marmaduke Bethell of Pahau Pastures suggested that they approach Mr George Forbes of Cheviot County who had just been elected Prime Minister.

After subsequent meetings with Mr Forbes questions were asked, the final question directed at Y.T.Shand was "*what relation are you to G.E.T. Shand of the 'Blue Duck' property in Kaikoura?"* He answered, *"he is my brother!!" "Well"* replied Mr Forbes, "*I better give a subsidy for bridging the Mandamus right away".* G.E.T Shand had received some publicity by threatening to shoot Mr Jimmy Boyd, Chairman of the Kaikoura County Council if medical and other essential services could not be given better access to his family in the event of sickness or urgency.

Hon George Forbes advised that when the first lower bridge had been built they should meet with him to make arrangements for a subsidy for the second bridge.
After much arranging the construction for the first bridge was underway, it was constructed by Williamson & Co and completed in 1932 and officially opened by Marmaduke Bethell, Chairman of the Council. (Arthur Shand in Canterbury University Chronicle. Vol23.No9.1990)

Location of the two bridges crossing the Mandamus River


1990's photo looking down on the first bridge as it straddles the previously often uncrossable Mandamus River


1932 bridge with struts still in place


1932 bridge over Mandamus River photo taken about 1933. Sheep and musterers seen on the bridge


The first bridge 2007.

The second bridge - Arthur Lush

Once the first bridge had been completed in 1932, they approached Mr George Forbes to discuss the subsidy for the second bridge. He declared, "*I cannot grant the loan I promised, our country is bankrupt.*" The Amuri County Council also couldn't help, replying that they had no funds available to assist. Bob Semple, Minister of Works was not happy with the councils decision, "Well", said the Minister of Works, *"if you (the Council) cannot help, I will. We'll put up a bridge that will still be there when you and I are pushing up daises!*" A Callender-Hamilton steel bridge was decided upon. At the time the price of steel was reasonable and tenders were called, however the Korean War had just started and the price of steel doubled. There was now no hope of building the bridge.

Photos of the second Mandamus bridge, 2008

Finally Arthur Lush, a lecturer at Canterbury University, came to the rescue and offered to bring a group of engineering students from the University to build the suspension bridge as their practical project in the summer holidays. It was designed, constructed and completed by 1952 and offically opened by Charles Upham, V.C and Bar. (Arthur.C.Shand in Canterbury University Chronicle.Vol23.No9.1990)

MANDAMUS RIVER BRIDGE

OPENING CEREMONY HELD

The fixed suspension bridge built over the Mandamus river during last summer by engineering students of Canterbery University College was opened on Saturday by Mr C. H. Upham, a former head shepherd at the nearby "Island Hill" station. About people attended.

Lesley, Diana and Edwyn Shand cross the wobbly old swing bridge with their pet sheep. The bridge was replaced by a vehicle bridge in 1952.

Olga Shand, the first crossing of the Mandamus River on the new bridge. The Press 1952.

Charles Upham cutting the ribbon and officially opening the bridge.

Fencing

Around the 1880's major fencing projects were undertaken. Circumstances in the 1880's meant run holders had more money available. Fencing became a priority, partly driven by the fear of the sheep getting scab, and to stop the spread of rabbits. Up until then the run holders had relied on natural boundaries to keep the sheep on their property, such as rivers, beech forest and the territorial nature of merino. Men act as boundary keepers. Also lonely barking dogs were placed strategically with their kennels discouraging merino sheep from straying.

Tekoa was no exception. The Tekoa 1883-85 Account Book records Edgar Jones of the Upper Waiau Station (Summerdale) had to contribute half the cost of fencing materials, and erecting the boundary fence into position. The fence ran from the Mandamus River to the Dove River. 1326 iron standards were used and the fence contract was for 16 pounds per mile and required the fencers to pack fencing materials onto the fence line.

There were other new fences erected during this period on Tekoa to contain blocks of country in order to curtail wandering stock.

A.C Shand counting out after tailing. 1969. Tim Cullwick, Ray Marshall, Warren Grimwood in the background

Cultural

On the Balmoral Block and the Dampier there are signs of early Maori habitation, such as small pieces of green stone and two large greenstone adzes, what would appear to be a stone anchor, large and defined grooves for the flax ropes. (McRae.S *The Glens of Tekoa*)

Stands of kowhai and ti kouka (cabbage tree) through the Mandamus are associated with old sites special to the Waitaha. For this place is an old pathway between what we know as Nelson and Canterbury

Census data from April 1891, shows that the stations within the Pahau Riding Area were: Balmoral, Culverden, Culverden Estate(part), Glens of Tekoa, Kaiwarra, Pahau, River Dove, Sanford Downs and St Leonards. A total population of 216, with 146 men and 70 females.

At the Glens of Tekoa there were 12 men and 10 females. At the River Dove - 5 Men.

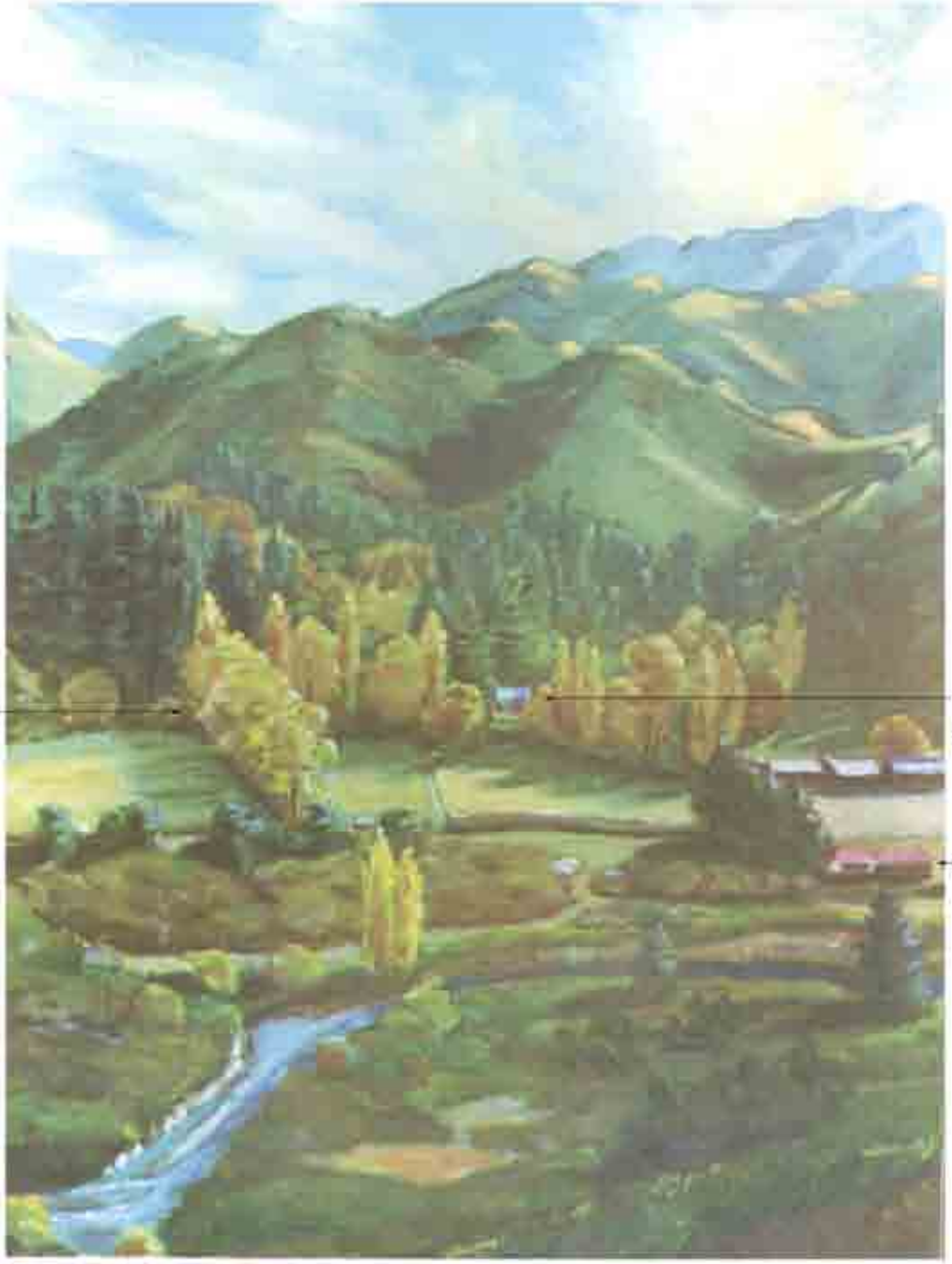
Prow of Island Hills Syncline, Makare and Peter Ruka with Diana Shand in the middle, 2000.

The 1882 map was a tracing by Craig Mason of a map on the North Canterbury Catchment Board Files (the map possibly no longer exists).

Island Hills Station
David Thomas 1948
Oil on paper

Island Hills Homestead
A.M Darling 1938

The oak tree where head shepherd Angus McLeod's two children were buried, over 100 years ago.



Glens of Tekoa 1963
Brownie Davidson

Oh, the bold hills, and the brave hills,
And the hills of a thousand songs.
Oh, the cruel hills, and the tough hills,
And the hills where my heart belongs.
Where the sheep find feed and contentment,
And the keas fly free and wild,
Where the cattle browse in the gullies,
And the air is soft and mild.
Let my children know the mountains,
And learn to love them true.
Let my children know the valleys,
And trust and love them too.

-Shona McRae (*Glens of Tekoa* 1968)

Austin.A.Deans 1950.
He painted the Mandamus River when it was slightly discoloured. A large Mandamus flood reached bank to bank across the river bed.

Ruby Stratton 1949.
The painter was the local stock agent's wife.
Looking up stream to Mt Nicholson, the larger than life garage was 1 1/2km from the Island Hills Homestead, sited on the bank of the Mandamus River. No other garage was closer to the homestead. The visible two plank bridge was the Island Hills lifeline when the river flooded (Note: the road goes to the river ford, not to cross the bridge).

Island Hills Station next to the Dove River
Water colour by David Thomas. 1948

This is considered to be at the junction of the Mandamus and Hurunui Rivers. James Preston working for Reid and Bryant whose homestead was at the junction of the Pahau River with the Hurunui River.

The Gorge of the Hurunui
James Preston 1854
Watercolour 9x11 1/4 inches

The inscription reads, *"Staid in this bush near the gorge of the Hooroonoey for 39 days by myself cutting posts. Bryant came occasionally with the bullocks for a load. Bryant and myself at dinner. 1854."*

The Mandamus River

The same as always

The river glistening in the sun,
The pool a deeper blue, set by
Where curves the water. Children run
Race along beneath blue sky
Straight into the waiting cool.
Cries of joy and sweet delight
Come floating now around the pool
Summer sounds of youth and might,
Happy sounds that tell us tales
Of days gone by when they were young.
Before the time of power and mails.
When life was quiet, and songs were sung
Around camp fires at end of day,
On summer nights when all was still.
Oh, happy years so long away;
Be yours to comfort and fulfill
The longing in my heart oft-times
That children now may sometimes feel
The music as the river rhymes
The goodness as the waters heal.

-Shona McRae

Dove River confluence

The Mandamus River looking downstream and at the Arthur Lush bridge. (1990's)

The Mandamus River with part of the Little Organ in the background.

The Mandamus River (2007)

Looking upsteam with beech forest edging the river and kanuka forest regenerating back to beech forest. The spurs of Nicholsons Knob in the background

Connections with place

Over the years and decades there are many people who have, visited, seen, worked, horse trekked, tramped and traversed the beautiful landscape around Glens of Tekoa and Island Hills. Many many memories have been created and shared by the people ordinary and famous, groups and individuals who have been and spent time in this Catchment.

Captain Charles Hazlitt Upham

Captain Charles Hazlett Upham VC and Bar. Island Hills head shepherd for 3 years prior to WWII, he later remarked that it was hard to believe he had been paid for those years which he had worked, he felt as if he was on a perpetual holiday. The work was, however, often arduous, requiring stickability as this account illustrates. Yearly Arthur Shand worried the Island Hills sale ewes would get trapped behind an unbridged, flooded Mandamus River preventing them reaching the annual Culverden sale. Upham therefore was required to start early for that sale, to which buyers from all over Canterbury came. For a week or so with his horse and dogs he would drive sheep very slowly over the 23 miles. Sleeping beside the mob to keep them together, thus eliminating the risk of the Island Hills sheep missing reaching the Culverden sale yards in time.

When WWII broke out the younger Shand brothers Alan, Maurice and Edwyn served under Charles Upham in the same regiment. Captain Upham was present with Lieutenant Edwyn Shand when he died at Ruweisat Ridge, El Alamein, Egypt. After the war Charles Upham officially opened the 1952 bridge over the Mandamus River.

Richard Ormond and friend in front, Mollie and Charlie Upham rear left, Dick Ormond, Olga and Arthur Shand at the old Valley Camp 8 April 1973. The men stayed there for a week cooking on the open fire and yarning about old times while the boys went shooting.

Brian Mason

Dr Brian Mason in January 2000 on a visit to NZ brought his wife to show her Island Hills. This was 51 years after he had as a University of Canterbury lecturer brought up the first of the student geology field trips in 1949. Based at the Island Hills Cookhouse the field trips have returned in May ever since. They come to look at the complex geology within the Mandamus Catchment and surrounding area. Dr Brian Mason as a student made Island Hills the centre of his geological studies. In 2003 Canterbury University gave him a Honorary doctorate some years after he had retired as head of Geology with the Smithsonian Institute.

Island Hills Station Homestead
February 2000
Taken by Brian Mason

John Pascoe

John Pascoe in the early 1930's would lead members of the Christchurch Mountaineering Club on tramps from the end of the formed car road which stopped at the confluence of the Mandamus River with the Hurunui River. From there they would tramp at the head of the Mandamus Catchment. This had to be done after work finished on Saturdays, there was no 40 hour week then. The tramps by necessity started from the tin (goods) shed on the outside of the gorge. This was because no car was able to access Tekoa or Island Hills with the multiple Mandamus River crossings and minimalistic dray road. On reaching Island Hills the cook at the cookhouse gave them an early evening meal. On they would tramp to the newly built Valley Camp Hut about 9 miles upstream. There they would sleep in relays at the 7 bunk hut before climbing in the head of the Catchment which included Skiddadle, the Organ Range and Nicholson's Knob before making their way down the Mandamus River to the waiting bus and would head home ready for Monday's working week.

Professor Arnold Wall

Professor Arnold Wall (1869-1966) carried out a number of botanical collecting trips to Island Hills. Chair of English Languages and literature, he was both passionate and an advocate for distinctive plant heritage.

Shona McRae

Shona McRae was the wife of William Dampier (Bill) McRae of Glens of Tekoa. She always said she had a close association with three major stations along the Hurunui River. She was the eldest daughter of Leslie (LRC) and Mina McFarlane of Kaiwara. Her father gave his wife Mina the Lakes Station which Shona grew to know intimately. Later when Mina McFarlane died, the Lakes Station in the Catchment of the North Branch of the Hurunui River was left to her 18 grandchildren including Shona's three children Robyn, Beau and Katy. Furthermore, Tekoa until 1938 had included all land draining the Catchment on the North side of the Hurunui River to Lake Sumner. Shona wrote a number of books including 1968 '*Glens of Tekoa*', then '*Gone for Good*' 1985, then in 1993 she wrote '*Source to the Sea*' about the Hurunui River. In 1969 she also wrote '*Katy One Summer*'.

Leslie C McFarlane

Leslie (LRC) McFarlane owned Kaiwara Station on the Hurunui River and also Lakes Station in the North Branch of the Hurunui River. He was the father of Shona McRae and author of many books including '*Amuri*'.

Guy Mannering

Guy Mannering a professional photographer was an uncle of Georgie, Beau McRae's wife. Guy illustrated with photographs Shona McRae's book '*Katy One Summer*' which was set at Glens of Tekoa.

Tom Shand

Thomas (Tom) Shand, a cousin of Arthur Shand visited Island Hills a number of times before and after becoming cabinet minister in Keith Holyoak's National Government.

Summerdale Hut, Betsy Blunden and Fred Parson about 1931.She is recognised as the first professional alpine woman guide in the world. She guided in the Mount Cook region.

Tim Wallis

Sir Tim Wallis' mother Janice and Aunt Betsy, nee Blunden, were also cousins of Arthur Shand and Tom Shand. Tim and his sister Josephine were friends as well as relations. When deer were thick in the Mandamus Catchment, Tim used his helicopter for shooting and later for capturing deer.

Lance McCaskill

Lance McCaskill was passionate in his crusades for better protection of New Zealand's indigenous flora and fauna and was a pioneer in soil conservation. He considered that flooding in the lower reaches of rivers was linked to erosion in the mountains. He came to Island Hills and Summerdale (Glynn Wye) a number of times in the 1950's and 1960's looking at eroded mountains in the upper catchment and to see the work being done for pasture management. He was also the author of '*Molesworth*' and other books and pamphlets.
Professor Walker as a Lincoln College lecturer on soil science, came also to see the soil husbandry being undertaken.

Lance McCaskill, Arthur Shand and others beside the Monk. (Korari Downs) The view looks across the Dove River to Nicholson Knob in the background.

Elsie Locke

Elsie Locke (1912-2001) was a woman whose drive turned her dreams into reality. She was an impressive amateur historical researcher and author of numerous books including "*Runaway Settlers*". She also wrote '*Discovering the Morrisons*' pioneer history of William Morrison and his family, Elsie's ancestors. The family in the story makes their way up the Hurunui River then down the West Coast. Elsie was still tramping in her 80's including a tramp with the Christchurch Tramping Club to the hills in the Mandamus River headwaters. To give her daughter, Alison, a backcountry holiday she took the job as a temporary shepherd and shearers' cook at Glens of Tekoa in January 1961.

Penny Goddard

Penny Goddard in 2007 became the second New Zealand woman to climb Everest. As a friend of the family, from childhood she visited Island Hills with her grandmother and other members of her family.

Culverden Cubs

Culverden Cubs visited and explored at Island Hills in March 1992.

Cubs under the oak tree

Cubs at Island Hills

St Johns Ambulance Gala and Garden Party

'Saturday 20th Febuary 1993, the Order of St John held its annual Garden Party Gala at the property of Glens of Tekoa. The annual garden party gala is the St Johns main fundraising event and provides the bulk of their funds to operate their ambulance which is based in Culverden. Georgy McRae says she is *extremely pleased to offer the property as a venue….sees it as a token of appreciation for the help the community offered during the August snow storms.*'

St Johns Ambulance Garden Party at Glens of Tekoa

Kiwi Conservation Club

The Kiwi Conservation Club, junior Forest and Bird members walked out to the Bush Hut in 1992.

KCC at Bush Hut 1992

Yahoo Bike Race

Yahoo Bike Race holds a yearly bike race which started in 2002 and is limited to 600 participants. Photo showing all the cars parked at Island Hills Station then they took off racing to the hills.

Canterbury University

Since 1949 second-year Geology students have had an annual field trip to Island Hills Station. The students spend two weeks studying the geology and formations in the area. Since about 2000 some students stay in the Glens of Tekoa Cookhouse.

2007 Canterbury geology students studying the rocks below the Arthur Lush bridge, Mandamus River

Other groups include

Balmoral Pony Club and other pony clubs

Numerous tramping clubs, eg. Christchurch, Catholic and Peninsula tramping clubs

Historic Places Society and other historical groups

Riccarton Primary and High school, Burnside High, Amuri Area School and Hawarden School groups, Marsden Girls College visited and went on a horse trek.

Womens Division of Federated Farmers

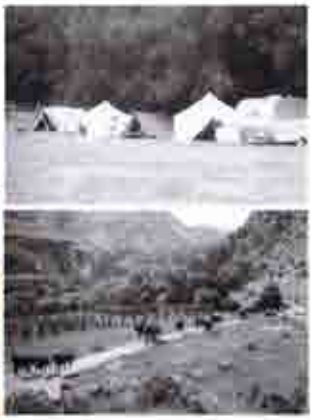
Numerous bus tours from Christchurch

Forest and Bird

Farm Forestry Association

Garden Clubs

Hawarden Area School student sketching the old Island Hills homestead. They were staying at Glens of Tekoa Cookhouse, 1992



The Balmoral Pony Club Camp in January 1960 at Glens of Tekoa

Commercial Ventures at Island Hills

Over the years, as well as being a sheep station Island Hills Station has supplemented its income by integrating tourism through horse treks and tramping ventures, tourism is now an important part of farm management.

Island Hills Safaris

During the years 1968-1972, Island Hills ran horse trekking tours and wild game hunting trips. As the trek guide, Lesley Shand led trekkers up the bushclad hills and into the isolated river valleys.

Ready to go. Outside the Bush Hut 1970

Trekkers near Clay Knob

Lesley Shand with Trooper initiated, managed and guided these horse treks

Hurunui High Country Walking Track

This high country walking track was created by Dan and Mandy Shand opening in Febuary 2003. They spent 2 ½ years clearing a track and preparing for the trampers to come and enjoy the beautiful surroundings. The Track covers 30km over three nights and takes you through many different types of vegetation and landscapes including farmland, beech forest and sub-alpine terrain.

Dan, Mandy and Amalyia

Photos of different parts of the walking track 2007

Bush Hut

New Valley Camp

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Tekoa Diaries and Account Books, Canterbury Museum

Appendices

From Bryony McMillan. Copy of: Lesley Shaud
Collected by Bryony & Island Hills
Liz Woods. Bryony was in Culverden.
charge of DSIR herbarium for many years.

Species collected at "Island Hills", Mandamus River, N.Canterbury.

Specimens filed at DSIR herbarium, Lincoln.

B : Bush Stream, S : Shingle Stream and lake, O : Organ Stream and ridge to The Organ

* naturalised

Ferns

Asplenium flabellifolium O
A. hookerianum var. colensoi O
A. richardii O
Blechnum minus O
B. chambersii O
B. fluviatile B, O
B. vulcanicum S
B. sp.2 mountain kiokio O
Botrychium millefolium B

* Dryopteris filix-mas B, O
Grammitis billardierei B
G. poeppigiana O
Histiopteris incisa S
Hypolepis ambigua S
H. millefolium O
Lycopodium fastigiatum B
L. volubile S
Ophioglossum coriaceum
Polystichum vestitum O

Gymnosperms

Podocarpus hallii B

Dicotyledons

* Acaena agnipila O
A. anserinifolia B, O
A. caesiiglauca B
A. glabra O
A. inermis B
A. juvenca B, S
A. novae-zelandiae B
Aristotelia serrata B
Brachycome sinclairii O
Carmichaelia angustata B, O
Carpodetus serratus O
Cassinia leptophylla B
Celmisia spectabilis B
Clematis forsteri B, O
Colobanthus acicularis O
Coprosma (page 2)

Coprosma linariifolia B, O
C. lucida B
C. microcarpa B, O
C. aff. parviflora sp.t. S
C. rhamnoides B, O
C. rugosa B. O
Corokia cotoneaster B, O
Craspedia uniflora O
Cyathodes colensoi O
C. juniperina O, S
Dracophyllum uniflorum O
Epilobium brunnescens ssp. brunnescens O
E. brunnescens ssp. minutiflorum B
E. chionanthum S
E. macropus O
E. melanocaulon O
E. pubens O
E. rotundifolium O
* Fragaria vesca O
Gaultheria antipoda B
G. depressa var. novae-zelandiae B
Gentiana ~~corymbifera~~ O believed to be an undescribed gentian
Geranium microphyllum S
Geum leiospermum B
Gingidia montana O
Gnaphalium audax S
G. limosum O, S
Gonocarpus montanus B
Griselinia littoralis O
Hebe brachysiphon O
H. raoulii B
H. salicifolia S
H. traversii B, O
Helichrysum intermedium O
Hoheria lyallii O
Hydrocotyle novae-zelandiae S
Kunzea ericoides B, O
Lagenifera cuneata B
L. strangulata B
Leptinella dioica S
Leptospermum scoparium B, O
* Mycelis muralis B
Myosotis petiolata B
Myrsine divaricata B
Nertera depressa B
Nothofagus fusca S
N. menziesii O
Olearia avicenniaefolia B, O
O. nummularifolia B, O
Oreomyrrhis ramosa S
Oxalis magellanica O
Parahebe lyallii B, O
Pimelea oreophila O
Pittosporum divaricatum B
Potentilla anserinoides S
Pseudopanax anomalus B
P. arboreus B
P. crassifolius O
Ranunculus glabrifolius B, S
R. membranifolius B
R. reflexus O
Raoulia glabra B
R. hookeri B

Ribes uva-crispa O
Rubus cissoides O
R. schmidelioides S
Scleranthus uniflorus O
Senecio bellidioides (=Brachyglottis) O
S. wairauensis S
Traversia baccharoides O
Urtica incisa B, O
Wahlenbergia albomarginata B, O

Monocotyledons

Carex dissita S
C. maorica S
C. secta S, B
C. solandri O
Chionochloa conspicua B
Dichelachne crinita O
Eleocharis acuta S
Elymus narduroides O
Hierochloe redolens O
Isolepis pottsii O
Lachnagrostis filiformis var. semiglabra O
Libertia ixioides O
Luzula picta var. pallida B
Potamogeton cheesemanii S
Pterostylis banksii O
Rytidosperma gracile O
Schoenus pauciflorus (pendant form of Moore & Edgar 1970,p.194) B
Thelymitra O
Trisetum "slender" O, S
Uncinia uncinata O

Collectors

21 February 1977	Bush Stream	B.H.Macmillan D.L.Bætham P.M.C.Douglass B.Douglass
11-16 March 1991	Bush Stream Shingle Stream Organ Stream and ridge to The Organ	B.H.Macmillan E.H.Woods

From Bryony McMillan.
Collected by Bryony and Liz Woods.

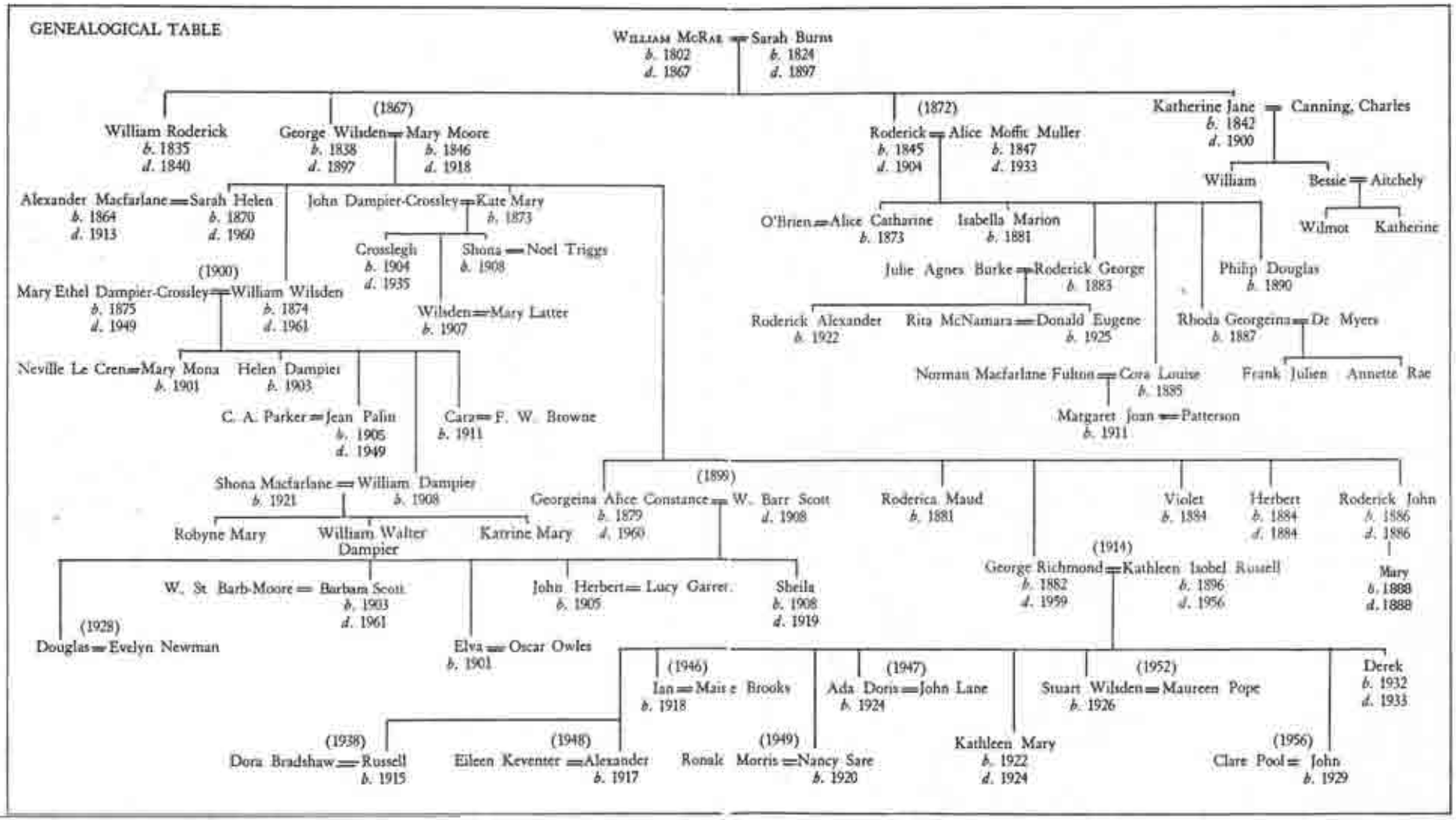
SCIENTIFIC NAMES OF SPECIES CITED IN TEXT

akiraho	*Olearia paniculata*
blue tussock	*Poa colensoi*
bracken	*Pteridium esculentum*
bristle tussock	*Rytidosperma setifolium*
broadleaf	*Griselinia littoralis*
broadleaved snow tussock	*Chionochloa flavescens*
broom	*Cytisus scoparius*
browntop	*Agrostis tenuis*
bush lawyer	*Rubus cissoides*
	Rubus schmidelioides
carpet grass	*Chionochloa australis*
coral broom	*Corallospartium crassicaule*
cotton daisy	*Celmisia spectabilis*
creeping pohuehue	*Muehlenbeckia axillaris*
edelweiss	*Leucogenes grandiceps*
fescue tussock	*Festuca* sp.
fuchsia	*Fuchsia excorticata*
golden speargrass	*Aciphylla aurea*
gorse	*Ulex europaeus*
harebell	*Wahlenbergia albomarginata*
kanuka	*Kunzea ericoides*
kohuhu	*Pittosporum tenuifolium*
koromiko	*Hebe salicifolia*
kowhai	*Sophora microphylla*
lancewood	*Pseudopanax crassifolius*
manuka	*Leptospermum scoparium*
matagouri	*Discaria toumatou*
midribbed snow tussock	*Chionochloa pallens*
mountain beech	*Nothofagus solandri* var. *cliffortioides*
mountain flax	*Phormium cookianum*
mountain inaka	*Dracophyllum uniflorum*
mountain ribbonwood	*Hoheria lyallii*
mountain wineberry	*Aristotelia fruticosa*
mouse-ear hawkweed	*Hieracium pilosella*
native broom	*Carmichaelia* sp.
penwiper	*Notothlaspi rosulatum*
prickly mingimingi	*Cyathodes juniperina*
prickly shield fern	*Polystichum vestitum*
putaputaweta	*Carpodetus serratus*
red beech	*Nothofagus fusca*
red-flowering mistletoe	*Peraxilla tetrapetala*
red woodrush	*Luzula rufa*
sheep's sorrel	*Rumex acetosella*
silver beech	*Nothofagus menziesii*
slim snow tussock	*Chionochloa macra*
snowberry	*Gaultheria depressa* var. *novae-zelandiae*
snow totara	*Podocarpus nivalis*
sweet vernal	*Anthoxanthum odoratum*
tauhinu	*Cassinia leptophylla*
three-finger	*Pseudopanax colensoi*
toe toe	*Cortaderia richardii*
tutu	*Coriaria sarmentosa*
wilding pines	*Pinus* sp.
woolly moss	*Racomitrium lanuginosum*
yellowwood	*Coprosma linariifolia*
Yorkshire fog	*Holcus lanatus*

Mandamus Study Area		
Land Cover Database Name	Polygon Count	Sum Hectares
Forest Harvested	1	2.2
River	1	3.4
Pine Forest - Open Canopy	1	4.9
Deciduous Hardwoods	3	5.4
Broadleaved Indigenous Hardwoods	3	10.1
Landslide	11	21.1
Afforestation (imaged, post LCDB 1)	2	36.6
River and Lakeshore Gravel and Rock	5	68.6
Gorse and Broom	13	90.7
Alpine Grass-/Herbfield	12	120.8
Pine Forest - Closed Canopy	10	130.0
Afforestation (not imaged)	3	131.1
Depleted Tussock Grassland	16	139.3
Other Exotic Forest	2	181.0
Sub Alpine Shrubland	25	427.2
Alpine Gravel and Rock	82	985.5
High Producing Exotic Grassland	13	1066.7
Tall Tussock Grassland	62	2510.1
Low Producing Grassland	25	2690.1
Indigenous Forest	62	3136.7
Manuka and or Kanuka	102	5215.0
Catchment Area		16976.4

(Table of map on page 24)

Source LCDBZ.
S. Thompson


GENEALOGICAL TABLE
William McRae b. 1802 d. 1867 = Sarah Burns b. 1824 d. 1897
William Roderick b. 1835 d. 1840
(1867)
George Wilsden b. 1838 d. 1897 = Mary Moore b. 1846 d. 1918
(1872)
Roderick b. 1845 d. 1904 = Alice Moffit Muller b. 1847 d. 1933
Katherine Jane b. 1842 d. 1900 = Canning, Charles
William
Bessie = Aitchely
Wilmot
Katherine
Alexander Macfarlane b. 1864 d. 1913 = Sarah Helen b. 1870 d. 1960
John Dampier-Crossley = Kate Mary b. 1873
Crosslegh b. 1904 d. 1935
Shona = Noel Triggs b. 1908
(1900)
Mary Ethel Dampier-Crossley b. 1875 d. 1949 = William Wilsden b. 1874 d. 1961
Wilsden = Mary Latter b. 1907
O'Brien = Alice Catharine b. 1873
Isabella Marion b. 1881
Julie Agnes Burke = Roderick George b. 1883
Philip Douglas b. 1890
Roderick Alexander b. 1922
Rita McNamara = Donald Eugene b. 1925
Rhoda Georgeina b. 1887 = De Myers
Frank
Julien
Annette Rae
Neville Le Cren = Mary Mona b. 1901
Helen Dampier b. 1903
Norman Macfarlane Fulton = Cora Louise b. 1885
Margaret Joan = Patterson b. 1911
C. A. Parker = Jean Palin b. 1905 d. 1949
Cara = F. W. Browne b. 1911
(1899)
Shona Macfarlane b. 1921 = William Dampier b. 1908
Georgeina Alice Constance b. 1879 d. 1960 = W. Barr Scott d. 1908
Roderica Maud b. 1881
Violet b. 1884
Herbert b. 1884 d. 1884
Roderick John b. 1886 d. 1886
Robyne Mary
William Walter Dampier
Katrine Mary
(1914)
George Richmond b. 1882 d. 1959 = Kathleen Isobel Russell b. 1896 d. 1956
Mary b. 1888 d. 1888
W. St Barb-Moore = Barbara Scott b. 1903 d. 1961
John Herbert b. 1905 = Lucy Garret
Sheila b. 1908 d. 1919
(1928)
Douglas = Evelyn Newman
Elva = Oscar Owles b. 1901
(1946)
Ian = Maisie Brooks b. 1918
(1947)
Ada Doris b. 1924 = John Lane
(1952)
Stuart Wilsden b. 1926 = Maureen Pope
Derek b. 1932 d. 1933
(1938)
Dora Bradshaw = Russell b. 1915
(1948)
Eileen Keventer = Alexander b. 1917
(1949)
Ronald Morris = Nancy Sare b. 1920
Kathleen Mary b. 1922 d. 1924
(1956)
Clare Pool = John b. 1929

By Lucas Associates
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Lucas Associates

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