



# West Melton Reserves Management Plan

# Contents

Introduction .....	3
Location .....	4
History .....	5
City & District Council Considerations .....	5
Regional Council Considerations .....	7
Groundwater .....	8
Heritage Sites Inventory .....	9
Indigenous biodiversity .....	11
Farming.....	12
Recreation .....	13
Issues.....	14
35 Year Vision.....	15
Policies.....	16
References.....	19

# Introduction

The West Melton Reserves, totalling approximately 2778 hectares, are located between the Christchurch International Airport and the NZ Army West Melton Range. They consist of 2697 hectares of fixed term leases and an 81 hectare recreation lease in perpetuity to the Canterbury Aero Club on Weedons Ross Road. They form part of a larger area on the south bank of the Waimakariri, from the airport westwards, totalling 3640 hectares. The reserve areas west of the West Melton Rifle Range are all farm leases with a perpetual right of renewal. These in turn are part of the wider Waimakariri River Reserves which lie on both sides of the Waimakariri River and include the riverbed between the sea and the Gorge Bridge.

The lands are held in trust by Environment Canterbury “for the improvement of the waterway of the Waimakariri River and the protection of certain land in Canterbury”. Some of it functions as endowment for the earning of revenue for the purpose of carrying out works as authorised by the Waimakariri River Improvement Act 1922. This plan is the outcome of the review of the Waimakariri Reserves – West Melton Resource Assessment and Management Plan completed in 1986 and covers the fixed term leased lands and the Canterbury Aero Club lease in perpetuity. The farm lands leased in perpetuity are covered by individual lease conditions which restrict Environment Canterbury’s ability to make land use changes.

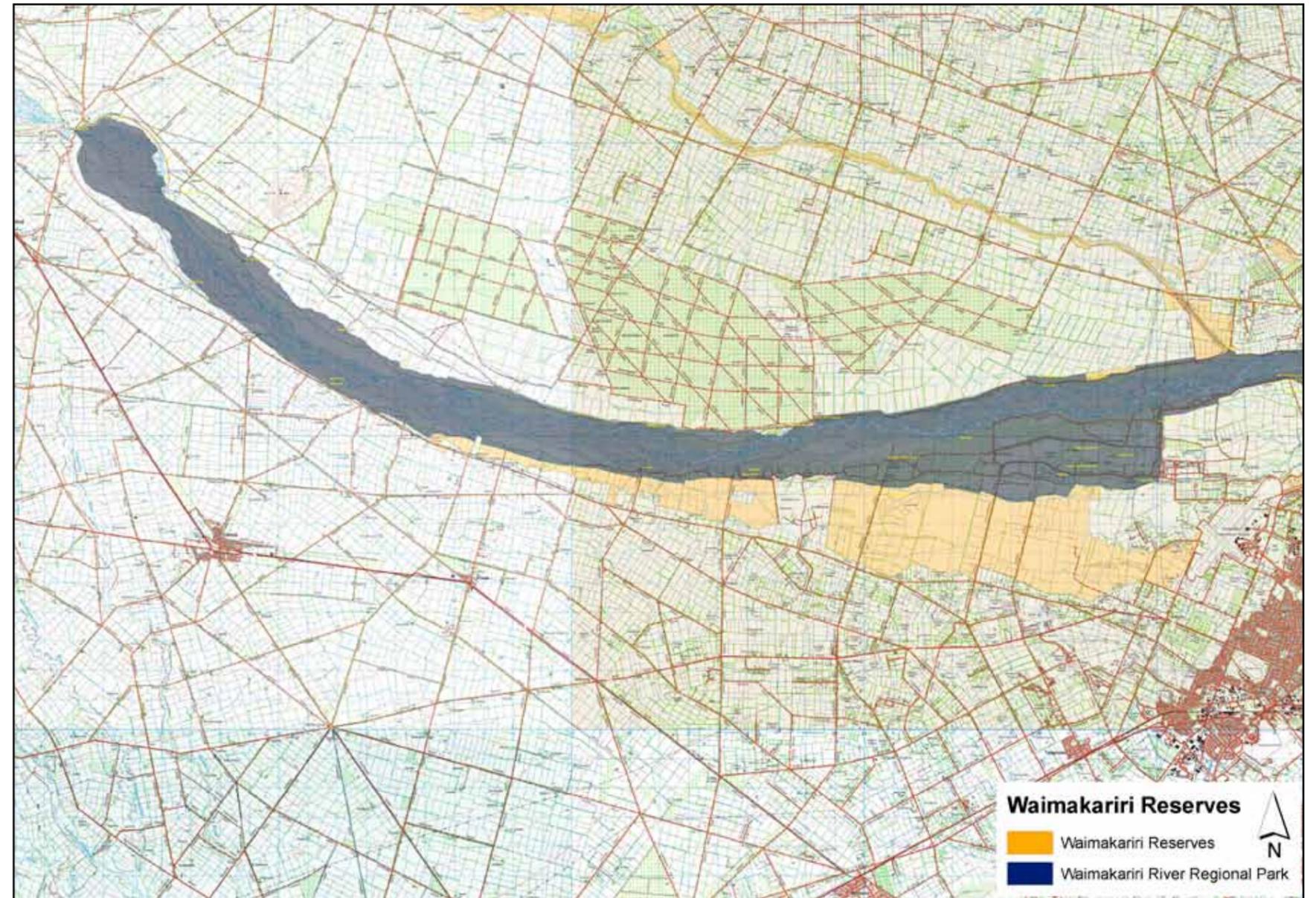
Aside from their primary functions, the lands play an important part in the protection of the Christchurch municipal water supply, rare remnant native species, and soil conservation.

The reserves significance are further emphasised in a regional context, given the rarity of their indigenous biodiversity values, proximity to Christchurch City and the loss of other ‘savannah’ dryland environments across the region to land use and intensification.

Currently the reserves are leased predominantly for dryland sheep farming with limited cattle numbers, and to a number of recreation clubs located along the Weedons Ross Road.

## Papatipu Rūnanga

The reserves are located within the takiwā of Te Runanga o Taumutu

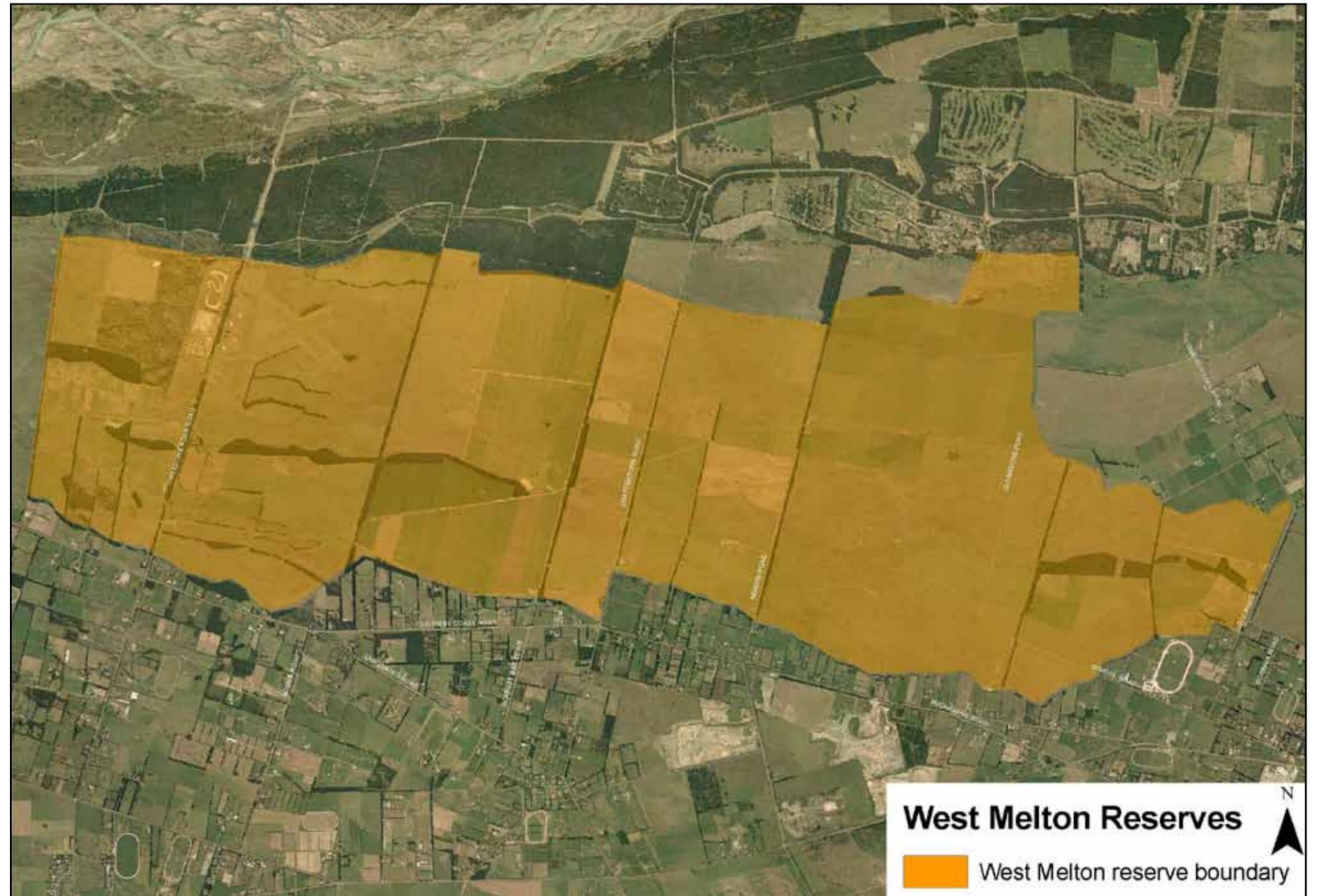


# Location

The West Melton Reserves are a continuous block of rural and recreation leases commencing from Pound Road immediately west of the Christchurch International Airport and terminating at the West Melton Rifle Range. The Christchurch City/Selwyn District boundary bisects the reserves at Chattertons Road. The land to the east of Chattertons Road is zoned Rural 6 (grasslands) in the Christchurch City Plan and the land to west of Chattertons Road is zoned Rural Inner Plains in the Selwyn District Plan.

The section contains the following land parcels or parts thereof.

Lease Number	Legal Description	Area (ha)
8A Waimakariri Reserves	Pt Lot 1 DP70568	150.000
8B Waimakariri Reserves	Lots 1 & 2 DP67948 blks 5,9,&12 ChCh SD	150.989
10A Waimakariri Reserves	Lots 1 & 2 DP68764	435.0371
10B pt 1 Waimakariri Reserves	Lot 2 pt lot 1 DP26644 pt res 3542 bk 5 ChCh SD bk 8 Rolleston SD	309.200
11 Waimakariri Reserves	Lots 1 – 3 DP26437 pt res 947 & 2464 bk 7 Rolleston SD	488.000
12 Waimakariri Reserves	R 2466 pt R 947 & 2467 bk 7 and 11 Rolleston SD	487.6462
13 Waimakariri Reserves	Lot 1 DP59937 bk 7 & 11 Rolleston SD, pt lot 8 DP24168, pt res 947& 2467, bk 7 Rolleston SD (recreation area)	423.7059
13A Waimakariri Reserves	Lot 1 DP41754, Lots 2 – 7 DP59937 bk 7 Rolleston SD	81.7465
14 Waimakariri Reserves	Pt Res 947 bk 7 Rolleston SD	175.000
14 pt 1 Waimakariri Reserves	Pt Res 947 Block 7 Rolleston SD	12.000
14 pt 2 Waimakariri Reserves	Pt Res 947 Block 2 Rolleston SD	10.0005
14 pt 3 Waimakariri Reserves	Pt Res 947 bk 7 Rolleston SD	55.000



# History

During the late 1960s and early 1970s, R J Rains, formerly the Supervisor of Reserves for the North Canterbury Catchment Board, located more than 80 sites around the West Melton Reserves administered by the Board with evidence of former Polynesian activity. In some locations there was evidence of at least temporary encampments and stone tool manufacturing activities. The vast majority lay close to large river channels indicating that these channels were sources of fresh water, food and were possibly transport routes.

While some sites are simply isolated artefacts, others include man-made mounds of gravel often containing charcoal or partly burnt wood. Charcoal found in the shallow stony soils is exclusively Kanuka, but podocarp charcoal was found in deeper soils. The podocarp charcoal was mainly matai.

In 1852, 8094 hectares, which included most of the West Melton Reserves, was taken up by Charles Wedge. The following year it was divided into the Ashfield and Tresillian Runs and occupied by the McLean brothers and the Robertson brothers respectively. By the mid-1800s, early settlers had established a number of large runs along this stretch of the river including Sandy Knolls, The Desert, Ledard and Racecourse Hill.

Initially the runs were limited to merinos and cropping. However since the development of the water race network, started in the 1870s, the area has been used widely for more intensive sheep farming.

The Old West Coast Road to the south of the reserves was originally known as the 'Coal Track' and was the supply route between Christchurch and the Malvern Hills where coal was mined. The district was named West Melton by Henry Trickett after his home town in England.

The first flood protection works were constructed near Halkett in 1859, with a Board of Conservators being established in 1869. This led to the reserves being vested in the South Waimakariri River Board as endowment lands to provide an income for river protection works in 1880. In 1922 the Waimakariri River Improvement Act was enacted and the Waimakariri River Trust district established. The Act vested land on both sides of the river from the Waimakariri Gorge Bridge to the sea into the Trust's management. The Trust was empowered to do all such things as may, in its opinion, be necessary to effectively cope with the drainage and the flooding of the district. Control of the reserves passed to the Waimakariri River Trust in 1923.

A series of little known features located across the reserves at 880 yard (1/2 mile) intervals are the 'Dobson benchmarks'. These are named after Edward Dobson, the Canterbury provincial engineer up to 1868 who set up this marking system in the 1860s. The benchmarks are blocks of quarried stone, cut 8in by 8in by 36in and engraved with serial numbers. The stones were used to measure variations in the course of the river's channels or in the height of its shingle bed.

In the 1930s 462 hectares was exchanged for land needed for protection works in McLeans Island and in 1936 205 hectares was taken for the Christchurch International Airport. In 1943, 384 hectares was acquired by the Ministry of Defence and is the site of today's West Melton Army Range.

The Waimakariri River Trust merged with the North Canterbury Catchment Board in 1946 which in turn became the Canterbury Regional Council (Environment Canterbury) in 1989.



Dobson benchmark number 13



Early flood protection works

# City & District Council Considerations

The West Melton Reserves are bisected at Chattertons Road by the Christchurch City and Selwyn District boundary.

## Christchurch City Plan

The Christchurch City side of the boundary, east of Chattertons Road, is zoned Rural 6 in the Christchurch City Plan.

The City Plan identifies the two main factors for the Rural 6 zone classification. The first is the significance of indigenous grassland and shrub vegetation of unique ecological significance in Canterbury, and especially in the Christchurch area.

The second recognises that the area is largely an open and expansive landscape which, although subject to some modification, would have been typical of the plains environment prior to its settlement.

The purpose of the zone is to enable management of activities such that they are compatible with the natural, particularly ecological, values of the area and the maintenance of a predominantly open landscape. Accordingly the zone is suitable for the current use of extensive pastoral farming, and suitable recreational activities associated with the adjoining McLeans Island area. Measures to protect vegetation in particularly important areas within the zone are incorporated in the City Plan.

The Christchurch City Plan anticipates, over time, that some additional areas within the zone will be protected for their ecological values through a combination of regulatory and other means to achieve a compatible mix between pastoral and recreational activities and environmental protection and landscape enhancement.

The primary environmental results anticipated for the Rural 6 zone include the protection of the quality of the groundwater, the preservation of the open landscape and significant botanical and ecological values, continuation of flood protection activities, stability of the soil resources, and the minimisation of the risk of fire damage.

## Selwyn District Plan

The Selwyn District side of the boundary, west of Chattertons Road, is zoned Rural Inner Plains within the Selwyn District Plan.

The Rural Inner Plains zone has been established to recognise the demand for small rural allotments for residential development, primarily within the area up to 30km from Christchurch City. This demand affects natural resources including groundwater and soil, farming activities and potential 'reverse sensitivity' issues, and the character of the rural area.

The Selwyn District Plan recognises the need to promote sustainable management of natural and physical resources.

# Regional Council Considerations

## Resource Management Act 1991

Environment Canterbury is subject to obligations under the RMA for matters of national importance including the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development; the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna; the relationship between Maori, their culture, and traditions and their ancestral lands, water, sites, wahi tapu, and other taonga and the protection of historic heritage from inappropriate subdivision, use and development.

## Regional Policy Statement - Proposed Change 1

The Regional Policy Statement Proposed Change 1 aims to limit intensification across the groundwater recharge zone in order to protect Christchurch's drinking water, where urban land use increases the risk of contamination. Additionally, it seeks to limit intensification between the primary and secondary stop banks south of the Waimakariri River which are designed to retain floodwaters in the event of flood breakout.

## Natural Resources Regional Plan - Variation 6

Variation 6 relates to Chapter 4: Water Quality of the Proposed Canterbury Natural Resources Regional Plan. The variation provides a specific resource management focus on this valuable resource, and results in greater control of activities occurring over the area where the groundwater is particularly vulnerable to contamination.

Variation 6 takes the approach that existing land uses can continue provided they minimise potential contamination of groundwater. However it controls new land uses that pose a threat to the quality of Christchurch groundwater. The level of control reflects the threat of the land use on groundwater quality.

## Policies for the Management of Environment Canterbury Lands

Environment Canterbury adopted Policies for the Management of Environment Canterbury Lands in 2009. The document provides a policy framework for the effective management of the Environment Canterbury land network. The document also provides the basis for developing detailed policy and conditions through site-specific reserve management plans.

The Commercial chapter requires that Environment Canterbury uses its land for the best use and highest value, subject to any constraints related to the purpose for which the reserve is vested (primarily soil conservation and river control), or environmental and to a lesser degree recreation considerations.

# Other considerations

## Canterbury Biodiversity Strategy

The Canterbury Biodiversity Strategy is a non-statutory document that seeks to promote the collaborative management of indigenous biodiversity in the region, including that present on Council lands. It is important that any management activities undertaken in the West Melton Reserves are planned in order to give effect to the vision, goals, targets and actions of the Canterbury Biodiversity Strategy.

## Canterbury Water Management Strategy

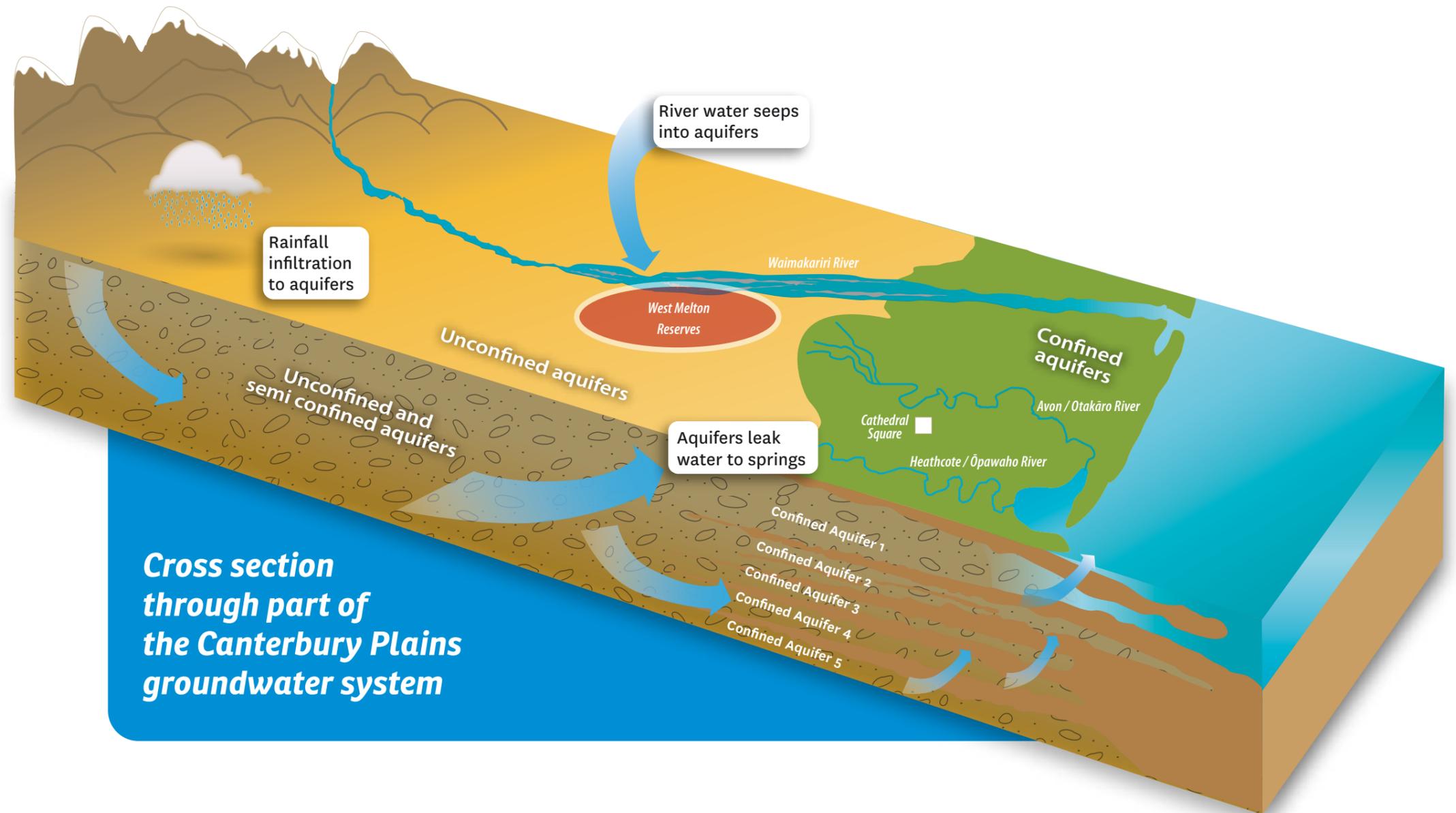
The Canterbury Water Management Strategy seeks to enable present and future generations to gain the greatest social, economic, recreational and cultural benefits from our water resources within an environmentally sustainable framework. There may be opportunities to link the indigenous biodiversity aspects of the Water Strategy to possible activities within the West Melton Reserves.

# Groundwater

The West Melton Reserves are located above the Gravel Aquifer System, which is the source of Christchurch city's drinking water. The aquifer system is also a major economic asset and ranked as a potential water body of national significance.

The water is generally of a very high quality, but urban development particularly associated with industrial and commercial activities and intensified rural development over the unconfined aquifer is considered the most serious long-term threat to groundwater quality.

The West Melton Reserves are within Zone 1 of the Christchurch Groundwater Recharge Zone and have special status within the Christchurch West Melton Allocation Zone.



# Heritage Sites Inventory (Dobson Markers/Maori Ovens)

Local Territorial Authority	NZAA Site No.	Location	Description	Condition	Notes
<b>Christchurch City</b>					
	M35/154	E1554705 N5186385	Ovens artefacts	Ovens have been subject to stock damage and erosion	This number is for ovens within Rains & Rains:1992 Zone 12
		Christchurch International Airport	Dobson Marker 1	Not sighted	
		Christchurch International Airport	Dobson Marker 2	Not sighted	
		Harewood Golfcourse	Dobson Marker 3	Number barely visible, marker painted white	Club recognises historical significance
		Private Property	Dobson Marker 4	Not sighted	
		Christchurch City Council Reserve	Dobson Marker 5	Not sighted	CCC has recorded
		Private Property	Dobson Marker 6	Not sighted	
		Private Property	Dobson Marker 7	Not sighted	
		Lot 10B Waimakariri Reserves	Dobson Marker 8	Not sighted	
		Lot 10B Waimakariri Reserves	Dobson Marker 9	Good, number clear	
		Lot 10B Waimakariri Reserves	Dobson Marker 10	Missing	
		Lot 11 Waimakariri Reserves	Dobson Marker 11	Missing	
<b>Selwyn District</b>					
	M35/153	E1553806 N5184286	Ovens artefacts	Ovens have been subject to stock damage and erosion	This number is for ovens within Rains & Rains:1992 Zone 11
	M35/152	E1552806 N5185086	Ovens artefacts	Ovens have been subject to stock damage and erosion	This number is for ovens within Rains & Rains:1992 Zone 10
	M35/151	E1550307 N5183886	Ovens artefacts	Ovens have been subject to stock damage and erosion	This number is for ovens within Rains & Rains:1992 Zone 8
	M35/150	E1549107 N5185785	Ovens artefacts	Ovens have been subject to stock damage and erosion	This number is for ovens within Rains & Rains:1992 Zone 7
	M35/149	E1548607 N5184786	Ovens artefacts	Ovens have been subject to stock damage and erosion	This number is for ovens within Rains & Rains:1992 Zone 6
	M35/148	E1546508 N5186285	Ovens artefacts	Ovens have been subject to stock damage and erosion	This number is for ovens within Rains & Rains:1992 Zone 5
	M35/147	E1543009 N5186185	Ovens artefacts	Ovens have been subject to stock damage and erosion	This number is for ovens within Rains & Rains:1992 Zone 2
	M35/146	E1542209 N5186385	Ovens artefacts	Ovens have been subject to stock damage and erosion	This number is for ovens within Rains & Rains:1992 Zone 1
	M35/4	E1550507 N5184886	Ovens artefacts	Eroded	Oven stones and charcoal in two areas about 30 feet apart
	M35/3	E1550007 N5184786	Oven	Ovens have been subject to stock damage and erosion	This number is for ovens within Rains & Rains:1992 Zone 9
	M35/2	E1545308 N5186185	Ovens artefacts		This number is for ovens within Rains & Rains:1992 Zone 3
		Lot 11 Waimakariri Reserves	Dobson Marker 12	Missing	
		Lot 12 Waimakariri Reserves	Dobson Marker 13	Good, number clear	
		Lot 12 Waimakariri Reserves	Dobson Marker 14	Good, number clear	
		Lot 13 Waimakariri Reserves	Dobson Marker 15	Missing	
		Lot 13 Waimakariri Reserves	Dobson Marker 16	Good, number clear	Requires straightening
		Lot 14 Waimakariri Reserves	Dobson Marker 17	Missing	
		Lot 14 Waimakariri Reserves	Dobson Marker 18	Missing	
		NZ Army West Melton Range	Dobson Marker 19	Good, number clear	Some lichen cover
		NZ Army West Melton Range	Dobson Marker 20	Not sighted	
		NZ Army West Melton Range	Dobson Marker 21	Not sighted	
		Lot 16B Waimakariri Reserves	Dobson Marker 22	Not sighted	
		Lot number unknown	Dobson Marker 23	Missing	
		Lot 17A Waimakariri Reserves	Dobson Marker 24	Missing	
		Lot 17B Waimakariri Reserves	Dobson Marker 25	Missing	
		Lot 18 Waimakariri Reserves	Dobson Marker 26	Good, number clear	Some lichen cover
		Lot 18B Waimakariri Reserves	Dobson Marker 27	Good, number clear	Some lichen cover
		Lot 19	Dobson Marker 28	Good	Presented to the Canterbury Museum in 1924 when threatened with river encroachment



# Indigenous biodiversity

The West Melton Reserves are part of the alluvial floodplain of the Waimakariri River that is now confined within a narrower bed by a system of stopbanks, groyne and flood protection plantings. Within the West Melton reserves are found some of the last remaining examples of Canterbury's dry plains native shrubland, grassland and moss-herbfield habitats.

Soils of the West Melton Reserves are generally shallow, stony and well-drained; dry through most of the year and subject to extreme summer drought. They were formed on recent alluvium deposited on the braided river floodplain, with stony channels separated by islands of deeper soil. Although the West Melton reserves have not been part of the active river bed for over 100 years, the distribution of braided channels, islands, terraces and sand dunes persist in the landscape and continue to influence vegetation patterns.

The West Melton Reserves show a strong contrast in vegetation cover between the deeper soils, largely in developed pasture and crops, and the vegetation of shallower stony soils which in places still support a substantial native plant component. These remnant natural and semi-natural areas are of very high significance for indigenous biodiversity conservation, as the Canterbury Plains retains so little native vegetation cover. Although dry and barren in appearance, they support distinctive plant and animal communities adapted to the harsh conditions.

Perhaps the most notable native plant is New Zealand's rarest shrub, the plains olearia (*Olearia adenocarpa*). This sprawling shrub daisy is found only on the

Canterbury Plains, and most of the population lies in the West Melton Reserves. Other nationally rare or threatened plant species include the mat daisy *Raoulia monroi* and leafless pohuehue (*Muehlenbeckia ephedroides*). Locally rare plants in the West Melton reserves include shrubs of native broom (*Carmichaelia australis*), matagouri, prostrate kowhai and porcupine shrub (*Melicactus alpinus*); longwoods tussock (*Carex comans*), silver tussock (*Poa cita*) and fine-leaved spear grass (*Aciphylla subflabellata*); and low-growing grasses and herbs such as sand twitch (*Zoysia minima*) and dwarf broom (*Carmichaelia corrugata*). The open 'savannah-like' landscape of scattered kowhai and cabbage trees are another special feature of the West Melton Reserves.

More than 150 indigenous invertebrate species have been identified in surveys of the West Melton and adjoining Christchurch City Council reserves. Common and McCann's skinks are found throughout the area. The larger threatened spotted skink has been recorded from around Orana Park on occasions and may be more widespread here. Most birds in the West Melton Reserves are introduced species, but native harrier, grey warbler, South Island pied oystercatcher and banded dotterel are common here.

Native species and habitats of the West Melton reserves have been greatly reduced since European settlement by agricultural development, exotic forestry, stock grazing, fire, and effects of introduced plant and animal species. Although attempts have been made to protect remaining indigenous habitats are from direct human disturbance, indigenous biodiversity is still in decline.

The combination of mammalian grazing and competition from introduced plant species has resulted in regeneration failure for many indigenous plants, while introduced predators continue to take a toll on native invertebrates, lizards and birds. A range of conservation management actions are therefore required such as: protection of palatable native plant species from livestock, rabbit and hare browse; managed grazing in some areas to control exotic grasses and maintain native dry moss-grass-herbfield habitats; native planting; shrub weed and animal pest control. Connection of fragmented remnants with restored ecological corridors is also desirable.

The best or most appropriate methods for restoration planting, pest control and grazing management in the harsh climatic soil and conditions of the West Melton Reserves are still to some extent uncertain, and will in any case need to vary depending on site and management objectives. In seeking to protect and enhance the indigenous biodiversity of the West Melton Reserves, Regional Council will need to draw on the advice and experience of ecological researchers, other agencies, farmers, and native restoration planting experts.



Kowhai 'savannah'



Native orchid *Thelymitra* sp.



Photo plotting West Melton moss/herb fields

# Farming

The West Melton reserves play an important role in the protection of the Christchurch municipal water supply, protection of rare remnant native species and soil conservation. These and the constraints caused by climatic and soil conditions have restricted land use options to mainly sheep grazing with limited cattle numbers.

While the special character of the Waimakariri grassland ecosystems has partly only persisted due to the biota's adaptation to extreme climatic and droughty soil conditions and the resulting relative resistance to weed invasion, extensive grazing has to some extent helped to control the encroachment of gorse, broom, thistle and exotic grasses.

Some pasture improvement has occurred, predominantly in the deeper soils, but the scope for pasture improvement in the absence of irrigation is limited. The cultivation of paddocks has occurred over the years, but this has been limited by lease conditions and the erosion proneness of soils. Today, some of the highest value ecological areas remain the least productive farming areas.

Currently there are nine, 5-year terminating, farm leases made up of six sheep farms, two dairy run-offs and one outdoor pig farm. The leases include special conditions relating to the protection of high value ecological sites, protection of groundwater quality and capacity to resume land for river protection purposes and recreation.



Sheep grazing



Dairy run-off lease

# Recreation

Most recreation clubs and groups leasing land off Environment Canterbury are located within the adjacent McLeans Island section of the Waimakariri River Regional Park. However, there are four sport and recreation clubs or groups operating off Weedons Ross Road within the West Melton Reserves. These are the Canterbury Aero Club, Christchurch Off-Road Motorcycle Club, Canterbury Off-Road Club and the Tactical Airsoft Club.

The Canterbury Aero Club established the West Melton Airfield in 1973 on 81.7 hectares located on the eastern side of Weedons Ross Road. The airfield is used by the Aero Club for training purposes. There is a wide range of infrastructure including runways, clubrooms and hangars. The club has the only perpetual lease within the block of lands covered by this management plan. Permission to subdivide and sublease for a total of 8 hangar sites was granted in 1997. The Aero Club is based at the Christchurch International Airport. The lease with Christchurch International Airport Limited expires in 2036 and its renewal is not guaranteed. The implications of the lease not being renewed would include the need to re-establish at another location. Whether the West Melton Aerodrome would be suitable to accommodate the Club's infrastructure and activity needs is unlikely. Therefore until a decision is made about its future at Christchurch International Airport, the Club will be limiting any development at West Melton Airfield to an additional 3 or 4 hangars.

The Christchurch Off-Road Motorcycle Club leases 10ha on the western side of Weedons Ross Road, which includes an off road track and a sublease for the Ronnie Moore Speedway. There has been development at the Ronnie Moore Stadium and there is provision for a public trailbike area at the end of Weedons Ross Road in the Regional Park.

The Canterbury Off-Road Car Club leases 12ha on the western side of Weedons Ross Road which includes an off road track catering for four wheel off road cars.

However, no further leases or licences will be issued for motorsport activities in the area in order to protect groundwater from contamination.

The Tactical Airsoft Club uses 60 ha of forest on the western side of Weedons Ross Road, to the south of the Christchurch Off-Road Motorcycle Club lease on a short term licence. Airsoft is a contact sport using realistic replica weapons discharging a hard plastic round. Their activities occur primarily at weekends.

The recreation leases have been granted under the provisions of the Public Bodies Lease Act 1969, which provides greater flexibility for lands used for activities other than farming.

Christchurch City Council is proposing the establishment of the Christchurch perimeter 'Great Walk'. The walk would include a section along the Waimakariri River Regional Park from Brooklands to McLeans Island and another heading south across the West Melton reserves from Chattertons Road. Provision for these will be made within any relevant new leases.



West Melton Aerodrome



Weedons Ross Road Clubs

# Issues

Several significant issues must be considered in relation to the management of the West Melton Reserves including groundwater protection, native biota protection, infrastructure development between the primary and proposed secondary stopbanks, and impact upon neighbours including the Christchurch International Airport on the eastern boundary of the plan area.

Issue	Mitigation
Groundwater Protection	<ul style="list-style-type: none"> <li>Limit activities to dryland farming and existing recreation leases</li> <li>Limit irrigation to a maximum of 10% of each leased property</li> <li>Prohibit cattle being grazed on irrigated areas</li> <li>Prohibit the spreading of stored effluent</li> <li>Impose stock limitations as required</li> <li>Impose conditions on the application of fertilisers</li> <li>Impose restrictions on imported feed supplements</li> </ul>
Indigenous biodiversity Protection	<ul style="list-style-type: none"> <li>Prohibit cultivation, the removal of vegetation for silage, oversowing, topdressing, irrigation, fencing or structural improvements, feeding out and planting trees on high value ecological sites</li> <li>Indigenous biodiversity protection and enhancement which may include caging of individual <i>Olearia</i>, porcupine shrub (<i>Melicytus</i>), native broom (<i>Charmichaela</i>), prostrate kowhai (<i>Sophora prostrata</i>) plants, planting trials, spray trials, surveys and monitoring of Indigenous biodiversity, planting of kanuka, cabbage trees, and kowhai along shelterbelts.</li> <li>Fence out high value contiguous ecological sites for separate management</li> <li>Create corridor links between high value conservation areas including the use of shelter belts and forests</li> <li>Liaison with farmer lessees to manage Indigenous biodiversity on remaining lease land</li> <li>Possible incorporation of some areas into Waimakariri River Regional Park</li> <li>Raising public awareness of special biota</li> </ul>
Flood Damage	Limit future infrastructure development between primary and secondary stopbank system (buildings, services etc)
Soil Conservation	Lessees required to maintain good land, pasture and stock management practices
Aircraft Bird Strike	Avoid creating habitats which attract birds in proximity of Christchurch International Airport



Hare damage to native broom



Poor land management practice

# 35-Year Vision

The West Melton Reserves will continue to play a significant role in contributing to the funding of flood protection, in the protection of the Christchurch aquifer recharge zone and as the last significant example of the plains ecosystem on the outskirts of Christchurch city.

The main land use will be dryland sheep farming and Environment Canterbury will resist any change of activity which could have a detrimental impact upon groundwater and indigenous biodiversity values.

There will be no increase in sport and recreation leases along Weedons Ross Road. Leases for sport and recreation activities may be located on vacant sites within the McLeans Island Recreation Community section of the Waimakariri River Regional Park. Should any of the current recreation lessees vacate their lease areas, it is desirable for these to revert to dryland farming with any indigenous biodiversity values being protected.

Natural values will be protected and enhanced. High value native indigenous biodiversity areas will be linked in order to facilitate the transfer of native biota. Many of these will be fenced to protect at-risk species from rabbit and stock grazing and predation. Exotic weed species will be eliminated, but those currently used for stock shelter will be replaced over time with appropriate native species compatible with existing ecosystems, maintaining the open vista and forming the backbone of the biota linkages. Species selection will also require that they do not encourage bird species which could increase the risk of bird strike.

Infrastructure development within the primary and secondary stopbank systems will be restricted in order to prevent property damage and loss during flood events and damage to the groundwater and natural values.

In order to best achieve the protection and enhancement of the reserves groundwater and indigenous biodiversity values, leases may be tailored to reflect the lessees' input and commitment to supporting such outcomes.

Fenced walkways will be formed to provide opportunities for the public to experience the grasslands. Such opportunities will not impact upon lessee activities. Interpretive signage will provide opportunities for walkers to understand the area's values.



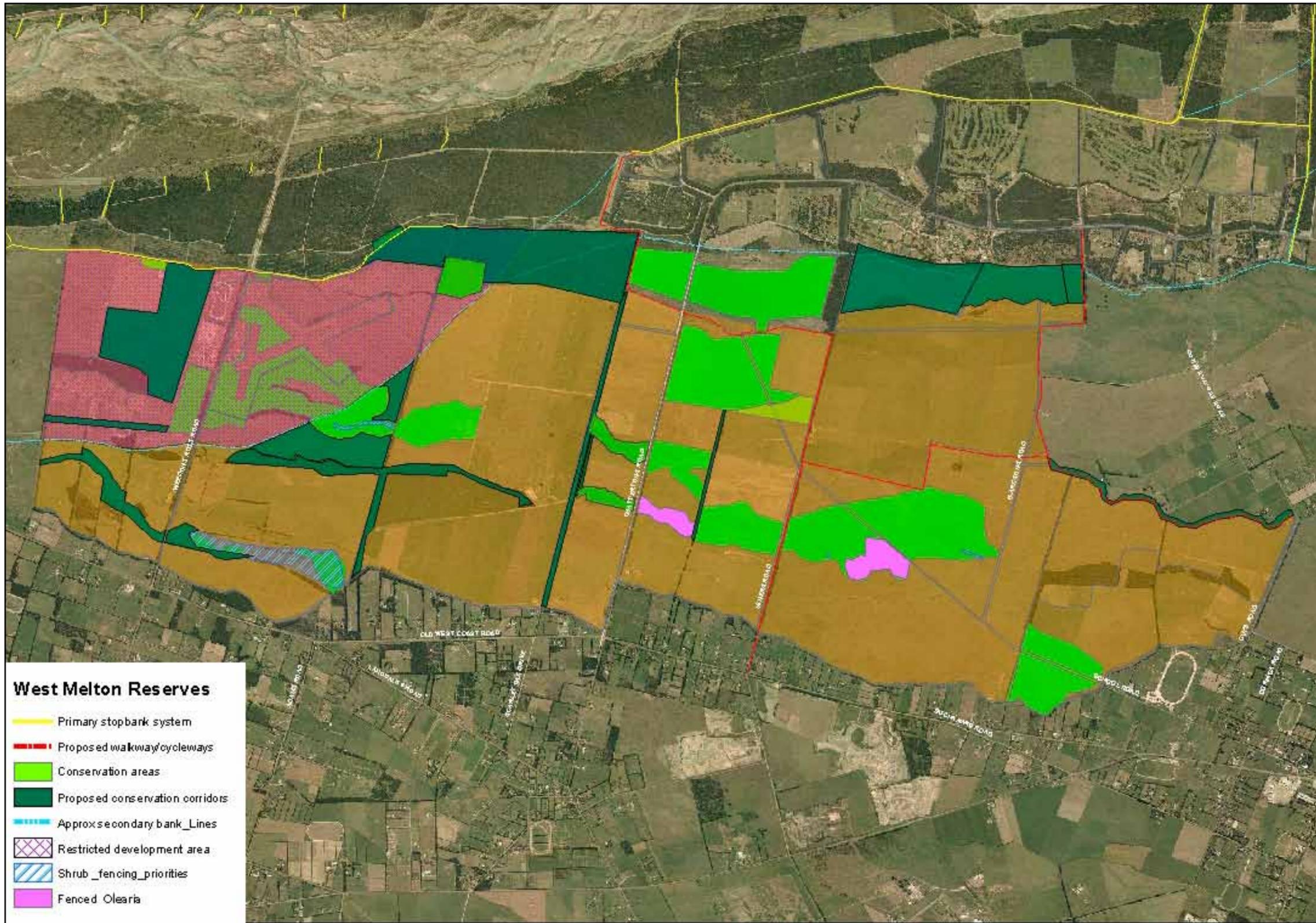
Merino sheep farming



Indigenous biodiversity protection



Christchurch water quality



# Policies

## RELATIONSHIPS

### Objective

To establish and maintain relationships to support the sustainable management of the West Melton Reserves.

### Papatipu Rūnanga

#### Policy

- Environment Canterbury will work co-operatively with Te Taumutu Rūnanga to provide for their traditional kaitiakitanga/guardianship role.

### Other Land Managers

#### Policy

- Environment Canterbury will work collaboratively with the NZ Defence Force, Christchurch International Airport Limited and local Territorial Authorities to realise mutually beneficial opportunities and minimise conflicts.

### Lessees

#### Policy

- Environment Canterbury will work collaboratively with the West Melton Reserve lessees to ensure the land is sustainably managed.

### Community

- Environment Canterbury will encourage partnerships with indigenous biodiversity restoration and care groups to promote the values of the West Melton Reserves.

## RESOURCE MANAGEMENT

### Objective

To protect, maintain and manage the West Melton Reserves' natural values and resources through environmental best practice.

### Sustainable Management

#### Policy

- Management of the reserves will give effect to the required outcomes of the Regional Policy Statement, Natural Resources Regional Plan and Policies for the Management of Environment Canterbury Lands and any subsequent changes and variations.

- Environment Canterbury will limit West Melton Reserves farm leases to dryland farming activities.
- Environment Canterbury will not permit an increase of motor sport activities at the West Melton Reserves.

### Groundwater Protection

#### Policy

- There will be a presumption against permitting new urban activities to establish on Environment Canterbury land located within the Christchurch Groundwater Protection Zone 1 where such land is not already in urban use.
- In determining whether a proposal amounts to an urban activity, Environment Canterbury will use the definition contained within Proposed Change 1 to the Canterbury Regional Policy Statement for guidance but retains the right to determine each proposal on its merits.
- The intensification of any activities on Environment Canterbury land located within the Christchurch Groundwater Protection Zone 1 will not be permitted unless it can be demonstrated that any such intensification will not result in the deterioration of groundwater quality in line with the provisions of the Canterbury Natural Resources Regional Plan (Variation 6, Chapter 4).
- Environment Canterbury will work with its lessees to protect and improve groundwater quality.

### Soil Conservation

#### Policy

- Environment Canterbury will ensure that any use or management of the reserves does not result in any loss of the vegetation cover.
- The establishment of indigenous vegetation communities, where these will contribute to improved vegetation cover, will be encouraged.

### Indigenous Flora and Fauna

#### Policy

- Indigenous biodiversity representative of Canterbury Plains Grassland ecosystems will be protected and enhanced.

### Research

#### Policy

- Research into the protection of indigenous dryland habitats and species of plants and animals will be encouraged.

### Fires

#### Policy

- The lighting of fires in the open air will comply with any restrictions of the relevant rural fire authority.

# PEOPLE & THEIR ENJOYMENT

## Objective

To provide opportunities for people to experience and enjoy the distinctive character of the West Melton Reserves, while minimising the impact on lessees and conservation values.

## Recreation

### Policy

- Recreation and leisure opportunities offered at the West Melton Reserves will be consistent with Environment Canterbury's statutory responsibilities.
- Recreation and leisure opportunities offered at the West Melton Reserves will have minimal effect on the natural environment and lessee operations.
- Public access may be restricted during periods of high fire risk and farming operations.

# COMMERCIAL ACTIVITIES

## Objective

To ensure that the West Melton Reserves carry out their endowment function to earn income for the Waimakariri, Eyre, Cust River Rating District.

## Leases

### Policy

- Leases will contain conditions which give effect to the required outcomes of the Regional Policy Statement, the Natural Resources Regional Plan and Policies for the Management of Environment Canterbury Lands.

# References

Byrnes, G.C. 2009. Policies for the Management of Environment Canterbury Lands. Environment Canterbury.

Byrnes, G.C. 2009. Waimakariri River Regional Park Management Plan, McLeans Island Chapter 1. Environment Canterbury.

Christchurch City Plan. 2005. Christchurch City Council.

Hawkins, D.N. 1957. Beyond the Waimakariri: a regional history. Whitcombe & Tombs, Christchurch.

Grove, P. 2002. Indigenous biodiversity Values of Environment Canterbury Reserve Lands. Environment Canterbury.

Grove, P. 2006. Ecological Assessment of Waimakariri River stopbank designation area, Selwyn District. Environment Canterbury.

Loach, A.C. 8/9/73. Stone bench-marks used for Waimakariri. The Press.

Logan, R. 1987. Waimakariri, the river of cold rushing water: an illustrated history. Logan Publishing, Christchurch.

McCallum, L.R. 2010. Officer Report on submissions on Variation 6 (Christchurch Groundwater Protection Zones and Related Map Volume Amendments) to the Proposed Natural Resources Regional Plan, Chapter 4: Water Quality. Canterbury Regional Council.

Norton, A.C. Dimpleby, B.R. Owen, D.N. 1985. McLeans Island Resource Assessment & Draft Management Plan. North Canterbury Catchment Board & Regional Water Board.

Norton, A.C. McIntyre, S.J. Whitford, A.R. Dimpleby, B.R. 1985. Waimakariri Reserves – West Melton Resource Assessment & Management Plan. North Canterbury Catchment Board & Regional Water Board.

Rains, R.J. Rains, R.B. 1989. Late Holocene Alluvial Fan Development and Early Polynesian Sites, Lower Waimakariri River, Canterbury.

Rough Landscape Architects. 1997. Canterbury Plains Grassland Park - A proposal to capture the experience and broad vistas of formerly extensive primeval grasslands, shrublands and woodlands of the Canterbury plains. Christchurch City Council.

Selwyn District Plan - Volume 2 Rural. 2008. Selwyn District Council.

Urban Development Strategy Partners. 2007. Greater Christchurch Urban Development Strategy and Action Plan. Urban Development Strategy Partners, Canterbury.

Von Tippelskirsh, M. 2008. Indigenous biodiversity management objectives on West Melton short-term farm lease areas. Environment Canterbury, unpublished.

Watson, C. 1972. West Melton: a history of the district to 1971. West Melton Centennial Committee.