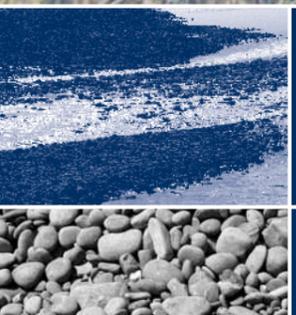




# **WRRRP Management Plan**

## **Te Rauakaaka**

### **Chapter 4**



Waimakariri River Regional Park

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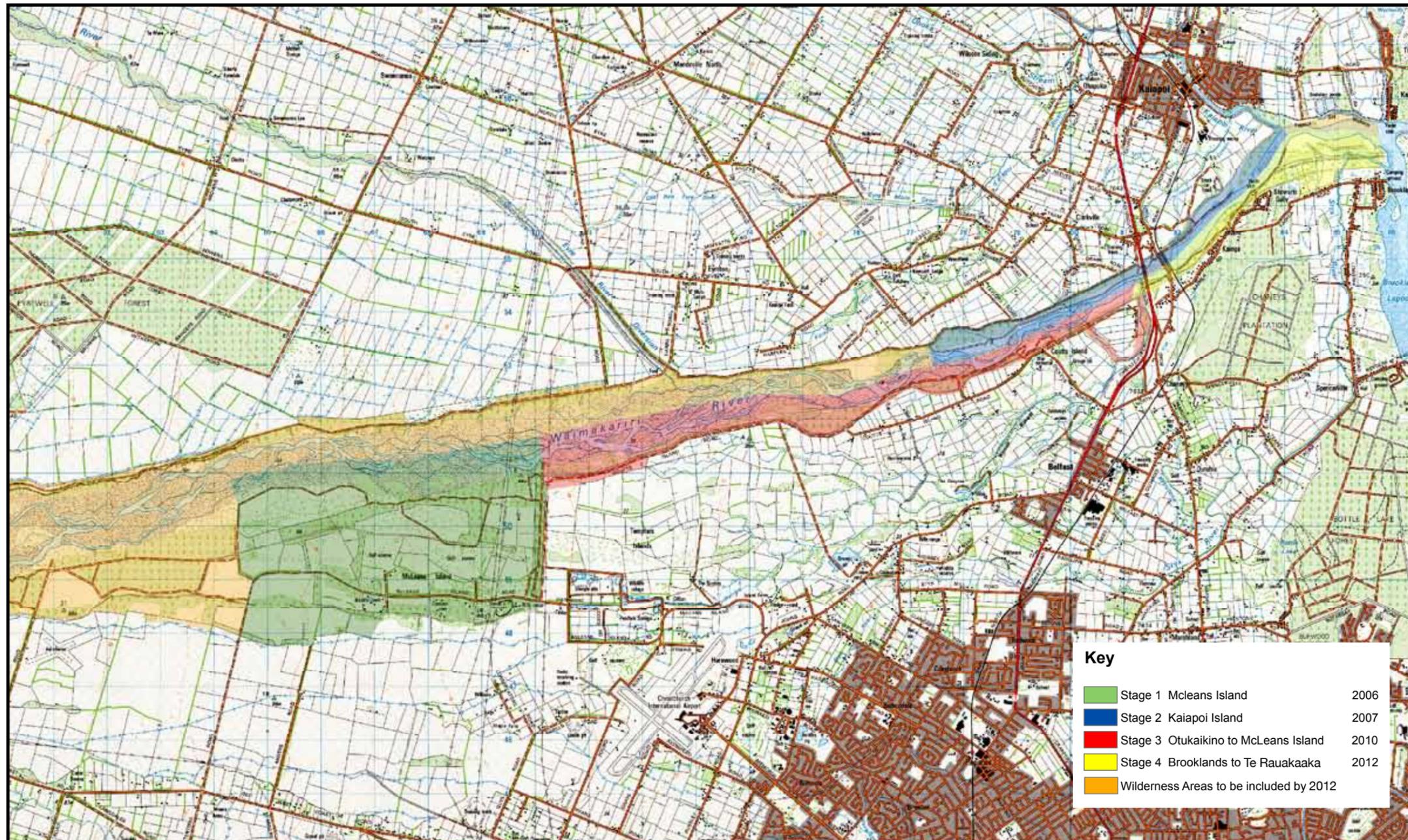
# Background

This document is Chapter 4 of the Waimakariri River Regional Park Management Plan. Due to the immense size of the Park (15,000 hectares) the plan is being prepared in stages. Each stage relates to a geographical location within the park and the corresponding chapter can be read independently but will eventually, along with the introduction and technical chapters, form the completed plan.

After the completion of the first three chapters of the plan, the number of proposed geographical areas has been reduced from nine to eight. Of these eight areas, there remain four main locations targeted for significant development. Areas of the park falling outside these four main stages will generally remain unchanged but will be covered by regional park signage and management.

The four main stages identified for major development are McLeans Island, Templars Island and Te Rauakaaka on the south bank, and Kaiapoi Island on the north bank.

## Park Stages



# Te Rauakaaka

## Introduction

This section of the Waimakariri River Regional Park is known as Te Rauakaaka. The section runs from the eastern side of the Otukaikino Stream confluence downstream to the Brooklands Lagoon.

There is a single motor vehicle access point off the Main North Road and another three off Kainga Road, although unauthorised 4WD and trailbike access occurs across the unfenced sections of the stopbank. An unfinished heavy vehicle access road that will become the primary public entrance and exit for Te Rauakaaka runs parallel to the eastern side of the railway line off Kainga Road.

The Stewart's Gully Sailing Clubhouse is located on the river berm adjacent to the Stewart's Gully settlement.

There are a number of operational shingle extraction consents from the Otukaikino confluence to approximately 100 m upstream of the sailing club. However, due to the low bed levels extraction has not been carried out in the past four years.

Te Rauakaaka also includes the Waimakariri River Saltmarsh and Styx Rivermouth. This area covers approximately 144 hectares of saltmarsh, relict saltmarsh, freshwater wetland and 80 ha of terrestrial habitat which have medium to high conservation values. A further 20 ha of leased farmland on the Kainga Road side of the stopbank in also included due to its biodiversity values.



Dawn breaks across Brooklands Lagoon

## Location

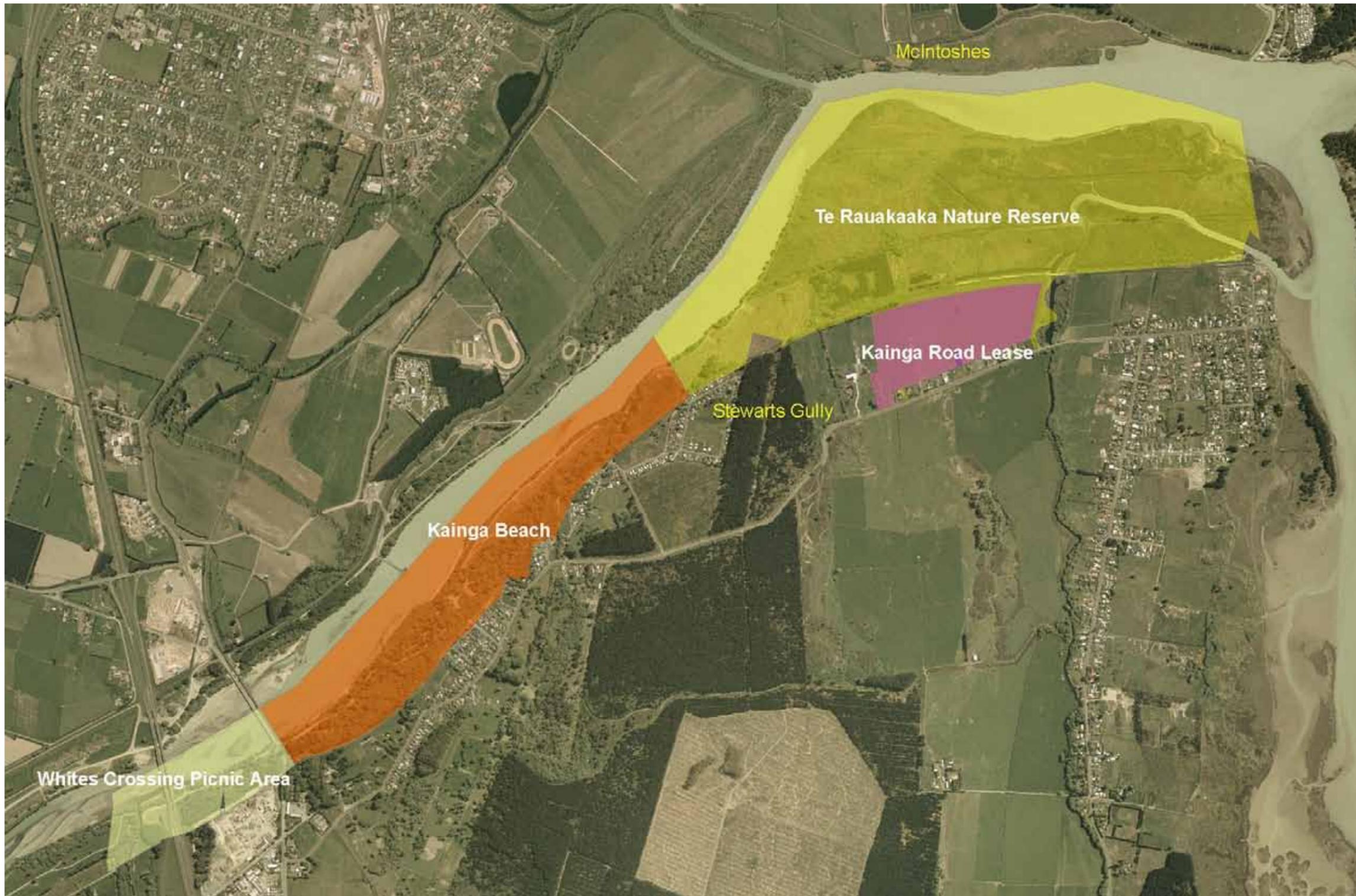
Te Rauakaaka is situated on the true right or south side of the Waimakariri River. It borders the communities of Kainga, Stewart's Gully and Brooklands and covers approximately 212 hectares and is zoned Conservation 3W (Waterway conservation - Waimakariri) with the Kainga Road blocks zoned Rural 1 (Coastal) within the Christchurch City Plan.

The section contains the following land parcels or part thereof.

Valuation	Legal Description
2191831803	Lot 1 DP 11172
2191831902	Pt Lot 1 DP 9272
2191832902	Lot 21 DP 10499
2191817100	Lot 2 DP 51185, Closed Road Survey Office Plan 11684
2191817200	Pt RS 9650
2173002000	Pt RES 1360
2185231800	RES 4234, Pt RS 39265, RS466
2191817200	Crown Land (under action) Survey Office Plan 10286
2191832100	Lot 29 DP 10499, Pt RS 534, Pt Lot 2 DP 9273, Pt Lot 3 DP 9273, Pt RS 17118
2191831900	Pt RS 17167
2191832202	Lot 27 DP 10499
2191834300	Lot 5 DP 10499
2191832201	Lot 28 DP 10499, Pt RS 37194, Pt RS 2695
2191817000	Lot 1 DP 51185
2191813600	Lot 46 DP 50480, Pt RS 465
2191815400	Lot 31 DP 50838
2191816303	Lot 22 DP 50838
2191815000	Lot 33 DP 50480
2191831900	RS 14216
2191829400	Lot 4 DP 11675
2191829400	Pt RS 14348
2191817200	Crown Land (under action) Survey Office Plan 10286, RS 14887
2191829400	Lot 5 DP 11675
2191832300	Lot 26 DP 10499
2173002000	Pt RS 368A, Pt RS 8495, Pt RS 39265
2191829400	Pt RS 14181
2161124900	RS 994, Pt Lot 1 DP 9672, Pt RS 465
2191804201	Pt RES 1360, Pt Lot 3 DP 9273, Closed Road Survey Office Plan 8138, Pt Lot 2 DP 9273
2191833400	RES 4591, Pt Lot 1 DP 9672, Pt Lot 2 DP 9672

Valuation	Legal Description
2191816900	Lot 3 DP 51185
2191832500	Lot 24 DP 10499
2191831802	RS 39490
2191833000	Lot 20 DP 10499
2191832901	Lot 22 DP 10499
2191815500	Lot 14 DP 50838, Pt RS 570, Pt RS 14181
2191811400	Lot 70 DP 51297, Lot 160 DP 50482, Pt RS 39265
2191829400	Lot 3 DP 11675
2173002000	Pt RS 17118, Lot 3 DP 43887, Closed Road Survey Office Plan 8138, Pt Lot 2 DP 9273
2191832600	Lot 23 DP 10499, Pt RS 412
2191829400	Lot 6 DP 11675
2191831900	Pt RS 14091, Pt RS 2695
2191834200	Lot 6 DP 10499
2191817700	RS 39264
2191831902	RES 4231, Closed Road Survey Office Plan 11684
2191817200	Pt RS 9650, Lot 161 DP 50838
2191817800X	Section 1 SO 13433
2191829400	Lot 2 DP 11675
2191817700	Section 1 SO 17412, RES 49
2191832000	Lot 30 DP 10499
2191817800X	Pt RS 8495, Pt Lot 1 DP 9273, RES 4234, Pt Lot 1 DP 9672, Pt RES 1360, Pt RES 1360, Pt RES 2695, Pt RS 14143
2191831801	Pt RS 14143
2191831900	Pt RS 14118
2191804201	Pt RES 1360, Shown A SO 11683, Pt Lot 3 DP 9620, Shown G SO 11683

## Location Map - Te Rauakaaka



# History

In 1880, Hori Kerei Taiaroa identified this general vicinity of the Waimakariri south bank as Te Rauakaaka, a settlement and food production site. The food included aruhe (fernroot), eels, panako (sp.fern), duck (grey and paradise) and pora (turnip). Herries Beattie wrote of the area "The Waimakariri is one of Canterbury's largest rivers and the name can be translated 'Wintry River' or 'Icy Cold Water'. Proceeding inland from its debouchure the place where the railway line hits its south bank had the name Te Rau-a-Te-Kaka (the gathering or netting of Te Kaka - this personage was apparently named after the kaka parrot)".

Today this area borders the communities of Kainga, Stewart's Gully and Brooklands.

The name Kainga is likely a derivative of kā (place where a fire has burnt) hence is commonly interpreted as an unfortified village, place of residence or encampment.

Stewart's Gully derived its name from the Stewart family who arrived from Scotland in 1865 on the ship 'British Empire'. The family ran a flax mill on the banks of the Waimakariri River, just about at the site of the present railway bridge. A son James had a farm in the area and grew oats and barley.

In 1868 farmers seeking relief from floods carved out the 'new' channel and soon the North Branch of the Waimakariri River was choked off by accumulating shingle. This was the beginning of the flood protection works which continue to this day.

Nearer the sea, floods cut a new course down Stewart's Gully about 1880 and in 1930 the 'New Cut' (later named Wrights Cut) completed the river straightening exercise. Since then cross banks have blocked the flow in the South Branch, confining the river to approximately the line of the 1868 cut, Wrights Cut and Stewart's Gully, and enabling most of the old bed to be reclaimed for river protection forestry and recreation.

The railway line between Christchurch and Kaiapoi was opened on 29 April 1872. The line crossed the Waimakariri River between Stewart's Gully on the south bank to near the site of today's Woodford Glen Speedway. The Waimakariri River Railway Bridge was made of iron girders resting on 80 Australian iron-bark piles, some of which are still visible on the south side of the river. The old railway bridge across the Kaikanui Stream on the Kaiapoi side of Woodford Glen is also still in place today.

By the late 1800's Stewart's Gully was a popular holiday resort and picnic spot for the people of Christchurch. The old railway brought trainloads out for day excursions and led to the building of baches and facilities. A major attraction was the sandy beach located just below the then railway bridge complete with a men's and women's bathing shed. It was also notable for its boating and fishing.

During WW2, the 1st Battalion of the Canterbury Regiment commandeered Stewart's Gully as a training site for the defence of the coast from the threat of

a Japanese invasion. "The country was ideal for manoeuvres" and the "roomy baches were a pleasant change from the cold tents of Z Block." After the war, the settlement returned to its role as a weekend retreat.

In those early post-war days there were many children who spent their time fishing, whitebaiting or shooting rabbits. It was during this time the local kids noticed what was to be the catalyst for the formation of the Stewart's Gully Sailing Club. The old fishermen would use bits of canvas rigged up on their boats to help them get back upstream after salmon and trout fishing down near the Styx confluence (The Styx River was named as a result of the early settlers travelling between Christchurch and Kaiapoi having to cross a large creek on flax-stick rafts; hence its being name of 'Sticks', altered now to the classical form of Styx). The local kids too started adding bits of canvas to their boats when they were out fishing and of course the "the last one home's a so and so" became a regular feature of the return back to the 'gully'. As competition grew so did the bits of canvas. Soon the parents decided it was time for yachts and the Stewart's Gully Sailing Club was established in Andy Holland's parents' bach in the summer of 1949/50.

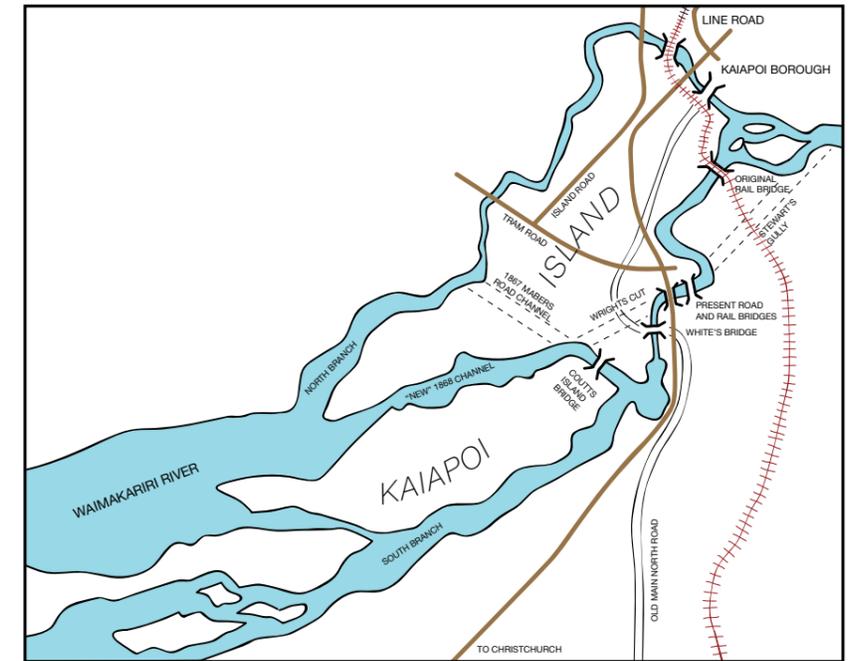
The old men's bathing shed served as the first clubroom and was moved up the bank to its present location by traction engine with the blessing of the local farmer Mr Wright, if not the Catchment Board, after the 1957 floods. During the flood local residents helped club members secure the clubhouse to pine trees to stop it being washed away after 40ft of riverbank had disappeared. The 1957 flood caused severe damage around Coutts Island, Kainga and Stewart's Gully with a number of houses being destroyed.

Whitebaiting too has also been a popular pastime and Andy Holland recalls how he and his brother Merv caught so much whitebait at the mouth of the Styx River one day, that it filled the middle section of their boat. When they had rowed back up to Stewart's Gully, they gave most of it away to the weekenders gathered there. Andy recalls the sight of a gentleman dressed in a double breasted suit walking away with his bowler hat in hand filled to the top with the delicacy. Today dwelling numbers are restricted in and around the Kainga and Stewart's Gully communities, allowing them to retain their rural village atmosphere.



A group at Stewart's Gully in the 1920s. Railway bridge in the background since demolished.

Courtesy Allan Hunter - "The Young Defenders"



River re-alignment stages in the lower reaches



Flood 1957



This watercolour by Frederick Aloysius Weld in 1850, shows a tent and shelter with camp fire on the nearer (south) side of the river. On the far side are two Maori whare and two food storage platforms (Werata Tainui, Kainga). The strip of green is the native bush at Tuahiwi. A range of foothills of the Southern Alps, including Mount Grey, is in the distance. In the centre foreground by the tent, are a European man, woman and child, probably the Godley family. Two further people are by the campfire and tent on the right. There are flax bushes and scrub on the south side of the river, and a cabbage tree on the north side.

Reference Number: A-269-011

Kindly reproduced with permission from The Alexander Turnbull Library



# Biodiversity

At first glance Te Rauakaaka mirrors the adjacent Kaiapoi Island north bank. Its appearance is of a highly modified semi-wilderness area confined within stopbanks and exotic flood protection plantings. However, a closer look reveals that the river has retained a number of important landscape features and indigenous biodiversity.

The Styx River mouth, part of the Te Rauakaaka Nature Reserve section of the Regional Park, contains regionally-significant saltmarsh and freshwater wetland habitats. The Brooklands Lagoon complex and lower reaches of the Waimakariri is also regionally-significant in terms of abundance, species richness and nesting for wetland/coastal birdlife.

Areas of the saltmarsh are classified as an ecological heritage site (EHS) in the Christchurch City Plan. However, a significant proportion located below Mean High Water Springs are outside the jurisdiction of the Christchurch City Plan and lie within the Coastal Marine Area. The City Plan identifies that these areas have equivalent or even higher ecological value to those lying within the EHS, and warrant a corresponding level of protection.

Between the stop banks the river becomes a tidal single channel with a number of greywacke shingle islands and banks. These bare shingle areas are important resting areas for a number of river birds, amongst them the threatened black-fronted tern and the vulnerable Caspian tern, black-billed gull, and white-fronted tern. These and several other braided river bird species can be seen frequently during the breeding season.

A drain winds its way along the length of the Kainga Beach berm where it becomes tidal before entering the Waimakariri River immediately upstream of the Stewart's Gully Sailing Club. Another tidal stream/drain crosses the berm downstream of the railway line. These streams/drains aid the regeneration of indigenous plant communities.

At the western end of the section, the Te Rauakaaka and Templars Island sections meet at the confluence of the Otukaikino Stream. A feature of the stream and its tributaries are the old willow trees which shade the spring-fed waters and support an understory of indigenous plants. The Otukaikino lends itself to restoration to a native lowland kahikatea forest stream habitat.



Kotuku *Egretta alba modesta*



Nursery web spider nest *Dolomedes* sp



*Spergularia* sp

# Recreation

Te Rauakaaka has been associated with recreation since the earliest times of European settlement in Canterbury with swimming, boating, fishing and whitebaiting among the most popular activities.

The Stewart's Gully Sailing Club served as the hub of the community for many years and its success resulted in a number of members gaining national titles and the Club hosting the NZ National Regatta. The Club was also the annual host of the South Island Rowing Championships for many years. Today they share their premises with the Canterbury Radio Controlled Club.

During the late 1950s Stewart's Gully was one of the early venues for 'go-kart' racing in the greater Christchurch region.

The margin between the saltmarsh and river has been popular for waterfowl hunting. The Canterbury gun dog club has an informal agreement with the lessee of the adjoining Environment Canterbury paddocks to accommodate a small hut and regularly hold gun dog training sessions.

Water-based activities continue to attract people to this section especially white baiters within the Styx River mouth and Stewart's Gully backwater areas and anglers along the numerous 'fishing spots' during the respective seasons, although access is difficult for people with limited mobility. Other water-based activities including kayaking and radio controlled model boats.

During summer the confluence of the Otukaikino and the area between the bridges are used extensively for swimming and picnicking as people make use of the weekends and long hot evenings. However, swimming below the North Road Bridge is not recommended due to industrial waste discharge.

Many people use Te Rauakaaka simply to experience the semi-wilderness setting as the riverside scenery provides an appealing backdrop with the Southern Alps off to the west especially from the stopbank above the Styx confluence.

Trailbikes and 4WDs have used the section for many years. However, given the narrowness of the river berm, biodiversity values, adjoining communities and the number of people using the area for less invasive recreation, these activities will be prohibited at Te Rauakaaka.

The recently completed Christchurch City Council Brookland Master Plan identifies a proposed lookout on the Brooklands side of the Styx River to provide views over the saltmarsh, an upgraded boat ramp and toilet facilities. Mountain bike and walking connections are also proposed from the Park to the Christchurch City Council urban perimeter walkway and to the Spencer Park and Bottle Lake mountain bike trails.



Kayaker at Te Rauakaaka Nature Reserve

# Issues

There are a number of issues which impact upon this section of the Park including water quality, protection of the Waimakariri Saltmarsh and Styx River mouth, cycle and pedestrian access across the river and shingle extraction activities.

Water quality is severely affected below the Main North Road Bridge from the industrial discharge from the Silver Fern Farms meat processing plant in Belfast. This is particularly evident from the warning signage and discoloration and odour of the water. Their consent to discharge into the river expired in February 2010. At the time of completing this chapter, Silver Fern Farms were exploring other options for disposal.

The Styx Rivermouth and saltmarsh areas are regionally significant ecosystems. As the Brooklands community expands and visitor numbers to Te Rauakaaka increase, pressure will be put on this area. By developing a self guide trail system, visitors will get to understand and appreciate the values of this area while minimising their impact upon it.

The Main North Road Bridge is the only cycle crossing point within the lower reaches of the river with the next crossing some 50 km upstream at the Sheffield/Oxford Gorge Bridge. However due to the narrowness, traffic volume and truck use of the bridge, cycling across is extremely dangerous. The Christchurch City and Waimakariri District Councils have identified a cycleway clip-on for the bridge within their respective LTCCP's. However at the time of this plan being developed, the New Zealand Transport Agency funding component has been cut, stopping any progress on the project. Environment Canterbury has advised the respective Councils that it will commit to supporting the project by providing an easement across its lands free of charge.

Shingle extraction vehicles are prohibited from accessing the park from the roads within the Kainga township. A new heavy vehicle access road is being established on the eastern side of the railway line off Kainga Road. This will become the only public motor vehicle access point in this section and will service the park roads between the Otukaikino Stream and the Stewart's Gully Sailing Club lease.



Discharge from Main North Road Bridge

# Anti-Social Activities

Many of the park visitors within this section of the river coexist with little or no impact upon each other and the river environment. However, a number of activities, almost all motor vehicle related, cause considerable conflict and damage to river protection infrastructure and with people engaged in non-motorised recreation activities.

Many of the people involved in these vehicle activities are oblivious or indifferent to the conflict caused to other visitors, lessees, the environment and essential river protection infrastructure. Some, however, deliberately engage in illegal activities including joy riding, vehicle stripping and arson.

These activities, combined with the frequent rubbish dumping place, a great burden on the park resources and day-to-day management. They also impact upon the neighbouring properties within Kainga and Stewart's Gully.

This plan seeks to address these issues through a mixture of collaboration with other agencies, design consideration, education and enforcement.



Dumped car parts Kainga Beach berm

# 25 - Year Vision

Te Rauakaaka will become the most popular access point to the lower reaches of the Waimakariri River Regional Park due to its proximity to Christchurch, range of recreation opportunities and high ecological values. This will be reflected by both the number of visitors to the area and community participation in rivercare projects.

Te Rauakaaka will be a tourist destination providing visitors with a distinctive semi-wilderness experience. The area will also form an integral part of the coastal and mountain cycleway / walkway trails which link the adjoining Christchurch City Council coastal lands with locations throughout the Park and out across the Canterbury Plains.

There will be commercial recreation and leisure operators at Te Rauakaaka and the nearby industrial areas of Bridgend and Chaney's which will likely accommodate commercial operations that support the many activities occurring within the lower reaches of the park.

The nature reserve downstream of Stewart's Gully will be acknowledged as a significant environmental education resource. It will be well wooded with establishing indigenous forest species, supporting the core habitat area at the saltmarsh/Styx River mouth.

A wide range of native forest birds will utilise the river as a passageway from the foothills and mountains to the Pegasus Bay foreshore and Banks Peninsula forests. The forest, saltmarsh and waterways will also support a diverse range of indigenous animals including fish, lizards, invertebrates and reintroduced bird species such as fernbird.



Pied Shags

# Area 1 – Whites Crossing Picnic Area

## Introduction

Whites Crossing runs from the western side of the Otukaikino Stream downstream to the Kainga Railway Bridge. It is an extremely popular destination for swimmers, anglers and visitors just wanting to interact with the river. Unfortunately due to ease of access through the many vehicle entry points, the area is subject to a significant amount of undesirable activity including rubbish dumping, speeding and inappropriate vehicle use.

## Vision

A popular riverside destination.

## Existing Issues

The main existing issues include:

- Undesirable activities including rubbish dumping, speeding and inappropriate motor vehicle use
- Lack of facilities including toilets, information and activity areas
- Limited river access for visitors with mobility issues
- Dangerous swimming around the bridge piers
- Conflict between gravel extraction and recreation activities
- Conflict between swimmers and jetboats.

## Design Aims

The design aims for Whites Crossing Picnic Ground are:

- To develop a safe and popular riverside setting that will encourage extended stay activities and community ownership
- To reduce the effects of motor vehicles on the river environment and recreation activities
- To protect and enhance the riparian corridor along the Otukaikino Stream
- To create a linkage across the Otukaikino Stream
- To ensure that development is consistent with the protection of the natural setting
- To reduce conflict between shingle extraction vehicles and recreation users

## Key Design Features

The key design features include:

- A single night-gated motor vehicle entrance located off Kainga Road running parallel to the Railway Line
- Signage and interpretation
- Walking and cycling trails linking to other sections of the Park
- Development of cycling and walking trails along both sides of the Otukaikino Stream with linkages to The Groynes
- Installation of a walking/cycle bridge across the Otukaikino Stream linking both sides of the Whites Crossing Picnic Ground
- Development of a carpark and toilet facilities catering for visitors to the Whites Crossing Picnic Ground
- Installation of picnic settings
- Riparian planting along the Otukaikino
- Swimming hole development at the Otukaikino confluence
- Narrowing of the roadways
- Bollard and cable fencing to manage vehicle access and parking

## Biodiversity

The Otukaikino Stream riparian zone and the Tasmanian Blackwood forest on the berm below the 'Readymix' yard offer opportunities to enhance the natural values within this area and upstream along the Otukaikino and its tributaries to The Groynes and beyond.



Confluence of the Otukaikino Stream

# Activities

Category	Whites Crossing Picnic Ground	Reason for Category
<b>Permitted</b>	Swimming at Otukaikino confluence	Preferred activity
	Portable gas bbq	Limited fire hazard, public safety
	Fishing	Preferred activity
	Cycling	Preferred activity
	Walking	Preferred activity
	Dogs under control in all areas except where specifically prohibited	Protection of wildlife, conflict with other users
<b>Managed</b>		
<b>Restricted</b>	Events	Permit required
	Commercial filming	Permit required
	Commercial operations	Permit required
<b>Prohibited</b>	Trailbikes/ATV's	Conflict with other users, protection of the environment
	Horses outside designated areas	Conflict with other users
	Lighting fires	Protection of the environment
	Camping or campervans overnight	Commercial operator nearby
	Hunting	Conflict with other users



# Area 2 – Kainga Beach

## Introduction

Kainga Beach is currently a popular destination for 4WD vehicles, trailbikes, fishing, whitebaiting and visitors just wanting to interact with the river. It runs from the Kainga Railway Bridge downstream to the Stewart's Gully Sailing Club, a distance of approximately two kilometres.

The settlement of Kainga is located directly to the south of the main stopbank. Unfortunately, due to ease of access through the many vehicle entry points, the area is subject to a significant amount of rubbish dumping and the berm area has lost much of its core amenity value due to 4WD and trail bike use. There are ongoing issues for Kainga residents over vehicle use on the settlement's streets which provide access to and from the park.

## Vision

A well organised river destination and main entry point to the recreation opportunities offered on the south bank of the lower Waimakariri River

## Existing Issues

The main existing issues include:

- Inappropriate motor vehicle use
- Rubbish and vehicle dumping
- Water quality
- Conflict between shingle extraction activities and river visitors

## Design Aims

The design aims for Kainga Beach are:

- To reduce the effects of motor vehicles on the river environment and recreation activities
- To reduce the effects of inappropriate motor vehicle use on neighbouring communities
- To reduce the conflict between the many recreation and leisure activities
- To enhance appropriate recreation opportunities
- To reduce conflict between shingle extraction vehicles and recreation users

## Key Design Features

The key design features include:

- A single motor vehicle entrance off Kainga Road running parallel to the Railway Line
- Enhanced cycle and walking access
- Installation of an information kiosk
- Public toilet facilities
- Restoration of the open grass space picnic areas
- The naturalisation of the open drain system
- Narrowing of the roadways
- Bollard and cable fencing to manage vehicle access and parking
- Further development of the river bird roosting areas
- Riparian corridor enhancement
- Access to the sandy beach

## Biodiversity

The main biodiversity features of Kainga Beach are based around the tidal stream and drain network running beneath the poplar and willow flood protection plantings. The exotic plantings offer protection to the native plant species growing below the canopy and include cabbage tree (ti kouka), flax (harakeke) and coprosma. The network supports a range of invertebrate, fish and bird species. While there are weed species within these areas, they have not choked the network, thereby making protection and enhancement an easier proposition.

The shingle islands just off the Kainga berm are used by a variety of river bird species as roosting areas and it will be essential to control weed growth in order to maximise their potential benefit.



Stewart's Gully Sailing Club



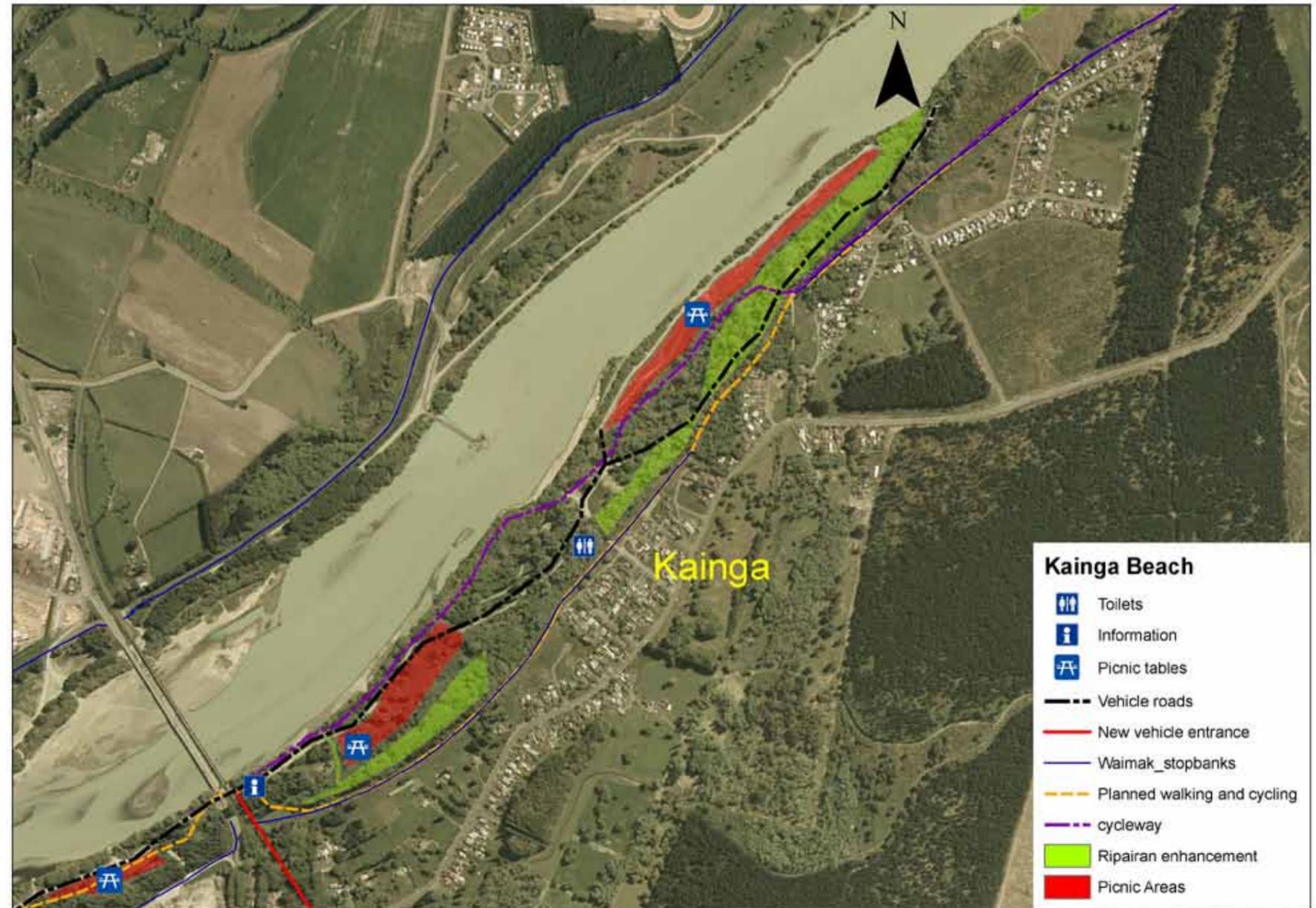
Fishing off Kainga Beach



Current entrance, Seddon Street - Kainga

# Activities

Category	Kainga Beach	Reason for Category
<b>Permitted</b>	Fishing	Preferred activity
	Cycling	Preferred activity
	Dogs under control in all areas except where specifically prohibited	Protection of wildlife and neighbours stock, conflict with other users
	Portable gas bbq	Limited fire hazard, public safety
<b>Restricted</b>	Events	Permit required
	Commercial filming	Permit required
	Commercial operations	Permit required
<b>Prohibited</b>	Trailbikes/ATV's	Conflict with other users, protection of the environment
	Lighting fires	Protection of the environment
	Camping or campervans overnight	Protection of the environment, Night Gates in operation
	Hunting	Conflict with other users



# Area 3 – Te Rauakaaka Nature Reserve

## Introduction

Te Rauakaaka Nature Reserve runs from the eastern boundary of the Stewart's Gully Sailing Club lease downstream to Brooklands Lagoon. The area contains regionally-significant saltmarsh and freshwater wetland habitats. It is an integral part of the nationally significant Brooklands Lagoon wildlife habitat, supporting populations of threatened swamp birds and waders. It is also a potential site for the reintroduction of some locally extinct bird species including Fernbird and Banded Rail.

In 2004 the Foreshore and Seabed Act resulted in the transfer of areas on the seaward side of the mean high water springs from Environment Canterbury to the Department of Conservation. A Memorandum of Understanding between the two agencies commenced in January 2009 providing for the day to day management of the entire Saltmarsh/Styx River mouth reserve by incorporating it into the Waimakariri River Regional Park. At the time of completion of this document, the Foreshore and Seabed Act was under review. Should the opportunity present itself, Environment Canterbury would apply to have the lands restored to their previous designation.

A number of reports describe the indigenous biodiversity and habitat values of the Saltmarsh/Styx River mouth reserve and recommend that the area be managed primarily to protect and enhance these values.

## Vision

Te Rauakaaka will be recognised and managed as a regionally significant nature reserve

## Existing Issues

The main issues include:

- Coordination of interagency responsibilities
- Plant and animal pest infestation
- Wildlife disturbance by humans and domestic animals

## Aims

The aims for Te Rauakaaka Nature Reserve are:

- To protect and enhance the natural values
- To formalise interagency relationships to coordinate management of the Lower Waimakariri River, Brooklands Lagoon and Styx River
- To manage access to reduce damage and disturbance

## Key Actions

The key actions include:

- The establishment of an interagency Advisory Group to coordinate activities/ share expertise/complete initiatives etc
- To protect and enhance biodiversity values
- Extending the salt meadow
- Protection, restoration and enhancement of Inaka (whitebait) spawning sites
- Replace exotic river protection forest with native dryland coastal forest
- Completion of the moat system to deter human access in vulnerable areas and create barriers to predators
- Establishment of a predator control programme
- Managed public access to avoid damage to native vegetation and disturbance to sensitive wildlife
- Managed game bird hunting access
- Dog access restricted to hunting dogs only during the hunting season
- Installation of education and interpretive signage
- A self-guide walking trail
- An elevated observation platform
- Installation of a bird hide

## Biodiversity

Te Rauakaaka Nature Reserve covers approximately 144ha with an approximate habitat breakdown of 40ha saltmarsh, 10ha relict saltmarsh, 10ha freshwater wetland and 80ha terrestrial.

Botanical, wildlife and habitat values of the Styx Mouth wetlands have been well described in publications and reports over the last 15 years and these will provide the basis for managing the area to protect and enhance these values.

Specific recommendations include such things as weed and predator control, reinstating tidal connections with stranded saltmarsh habitats and managing access to avoid disturbance of sensitive wildlife.

The wider saltmarsh and swamp habitats are known to have supported a range of native swampbirds and as such have been identified as a potential site for reintroduction of locally extinct bird species.

While a 2005 survey found no evidence of inaka (whitebait) spawning in the tidal section of the Styx, spawning sites were located immediately upstream above the floodgates. The tidal section is therefore an important migratory path for inaka, while the wider nature reserve waterways are a feeding area for a range of estuarine and marine native fish including smelt, mullet, flounder and giant bully. A new survey and report has been commissioned to provide recommendations for enhancing spawning opportunities below the floodgates. Whitebait spawning areas will be clearly marked and protected.

The establishment of a dryland coastal forest covering the terrestrial habitats from the downstream boundary of the Stewart's Gully Sailing Club to wetland margin plantings supporting the existing freshwater habitats will replace the existing exotic river protection forest.

Within the leased paddocks on Kainga Road (lot 29 Waimakariri Reserves), the sea rush has been replaced by native freshwater rushes, although patches of saline turf remain. The lease holder has relinquished 11.8ha of the land from the perpetual lease, which will allow habitat restoration for the benefit of threatened species including banded dotterel and possibly inaka.

# Recreation

Recreation activities will be consistent with the vision for the nature reserve area. A self-guide trail, establishing coastal forest species and habitat enhancement, education resources, an observation platform and bird hide will cater for walkers and nature enthusiasts while protecting the very environment they are there to experience.

An elevated cycle/walkway will run along the top of the stopbank from the Kainga Beach section and link to the Christchurch City Council trail around the south end of Brooklands Lagoon to Spencer Park and Bottle Lake.

The Christchurch City Council development at the Brooklands Lagoon boat launching ramp (Styx River Mouth Reserve) will have an observation platform for viewing across the saltmarsh and public toilet and changing facilities.

Whitebaiters and anglers will continue to utilise the nature reserve and interpretive signage will alert them to how they can contribute to habitat protection and restoration.

Environment Canterbury will work with Fish and Game and the WRRP Hunters Advisory Group to limit the number of fixed stands to that of the current season and restrict hunting hours.

Category	Te Rauakaaka Nature Reserve	Reason for Category
<b>Permitted</b>	Fishing	Preferred activity
	Whitebaiting	Preferred activity
	Bird watching	Preferred activity
<b>Managed</b>	Harakeke/Raupo harvesting	Cultural harvest agreement in place, permission required
<b>Restricted</b>	Gamebird hunting	Restricted hours dawn - noon, 3pm - dusk. Fish and Game licence required
	Events	Permit required
	Commercial filming	Permit required
	Commercial operations	Permit required
<b>Prohibited</b>	Dogs except gun dogs under control during hunting season	Protection of native fauna
	Public motor vehicle access	Protection of the environment, conflict with other users
	Trailbikes /ATV's	Protection of the environment, conflict with other users
	Lighting fires	Protection of the environment
	Horses	Protection of the environment
	Cycling except on designated tracks	Protection of the environment



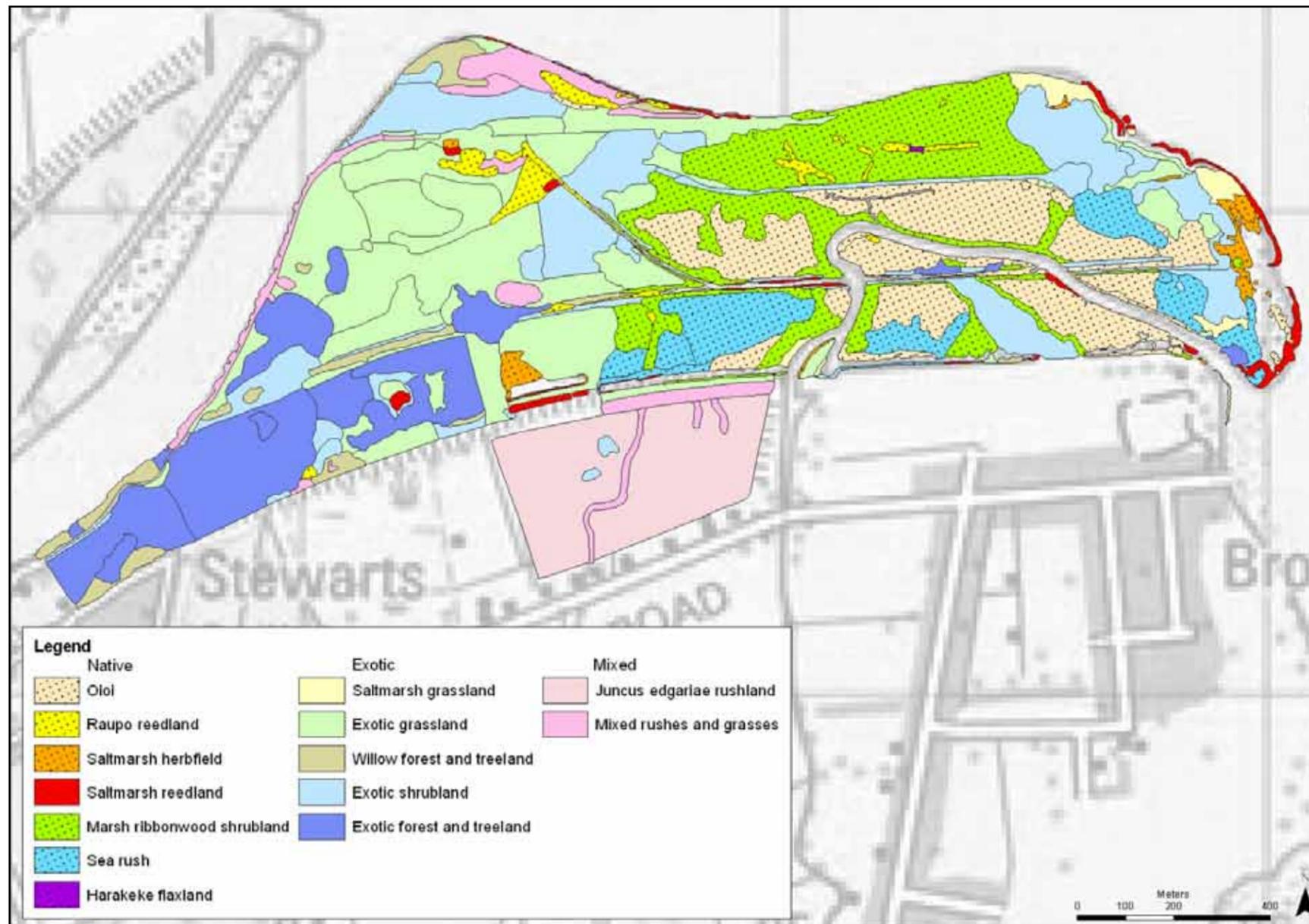
Cyclist and dogs on stopbank between Stewart's Gully and Styx floodgates



View north across the saltmarsh to Maukatere (Mt Grey)

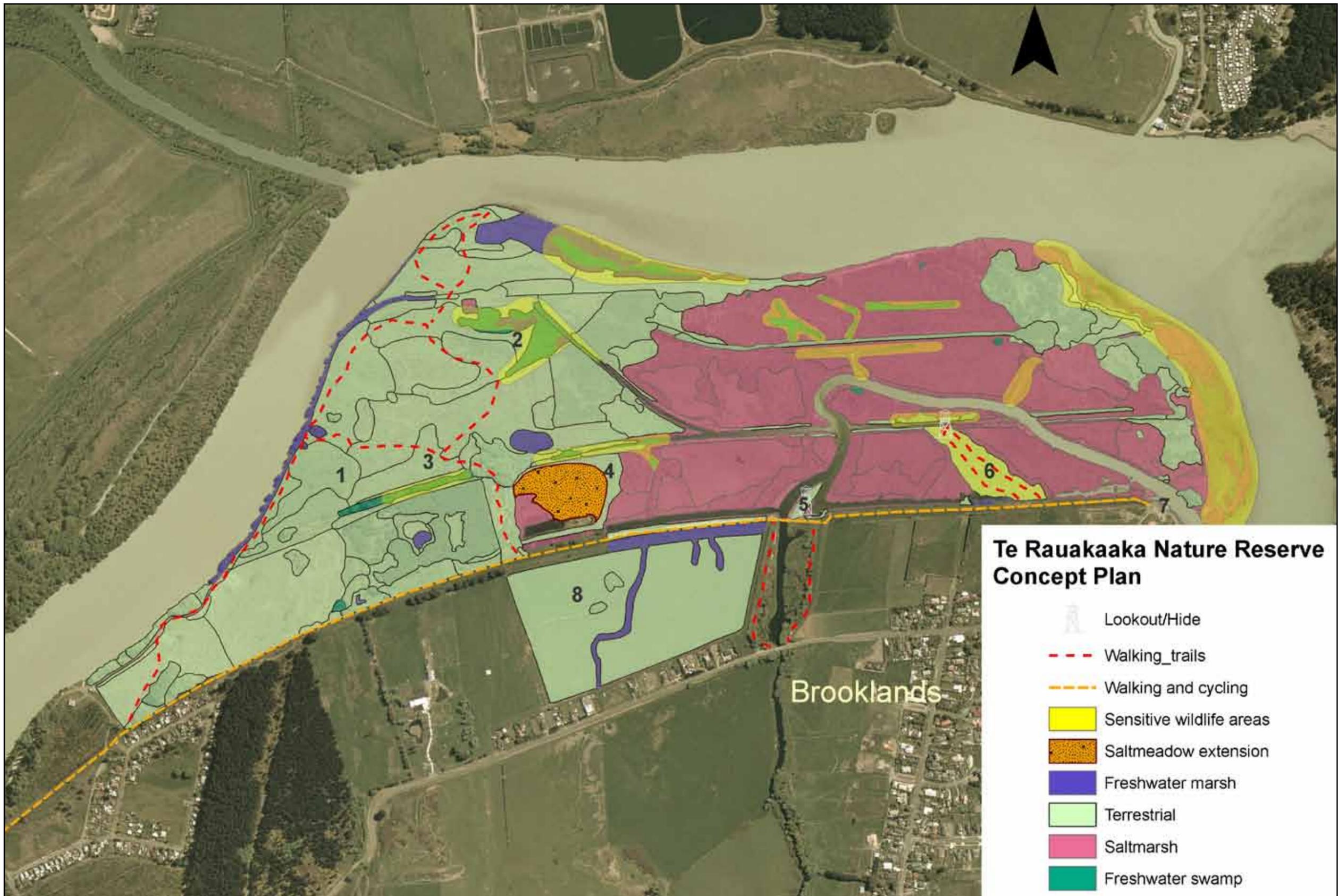


Gamebird hunters



No.	Area	Action	Species
1	Terrestrial	Replace exotic forest and shrubby weed species with representative dryland coastal forest	kanuka, cabbage tree, ake ake, ngaio, toe toe
2	Freshwater swamp and marshland	Develop wetland margin planting sites	manuka, broadleaf, kowhai, kahikatea, cabbage tree, mingi mingi, karamu, thick-leaf coprosma, harakeke, ribbonwood
3	Walking trail	Develop looped trail bypassing salt meadow, swamp and dryland communities	
4	Saltmeadow	Increase the area of salt meadow	
5	Styx River floodgates	Install nature reserve Observation platform with interpretation of area and plant communities	
6	Sand dune	Restoration of sand dune and coastal shrubland, including completion of moat for predator control, walking trail to bird hide with interpretation of bird species.	ngaio, ake ake, poroporo, tauhino, matagouri, small-leaved coprosma
7	Brooklands boat ramp	Create connection to CCC boat ramp and Styx River mouth development and trail around Brooklands lagoon	
8	Kainga Road leased land	Restore to indigenous habitat	To be determined

See adjacent map for feature locations.



See adjacent table for feature descriptions 1-8.



Tidal saltmarsh



Tidal stream into Brooklands Lagoon



Styx River riparian enhancement



Shore birds on the Waimakariri River

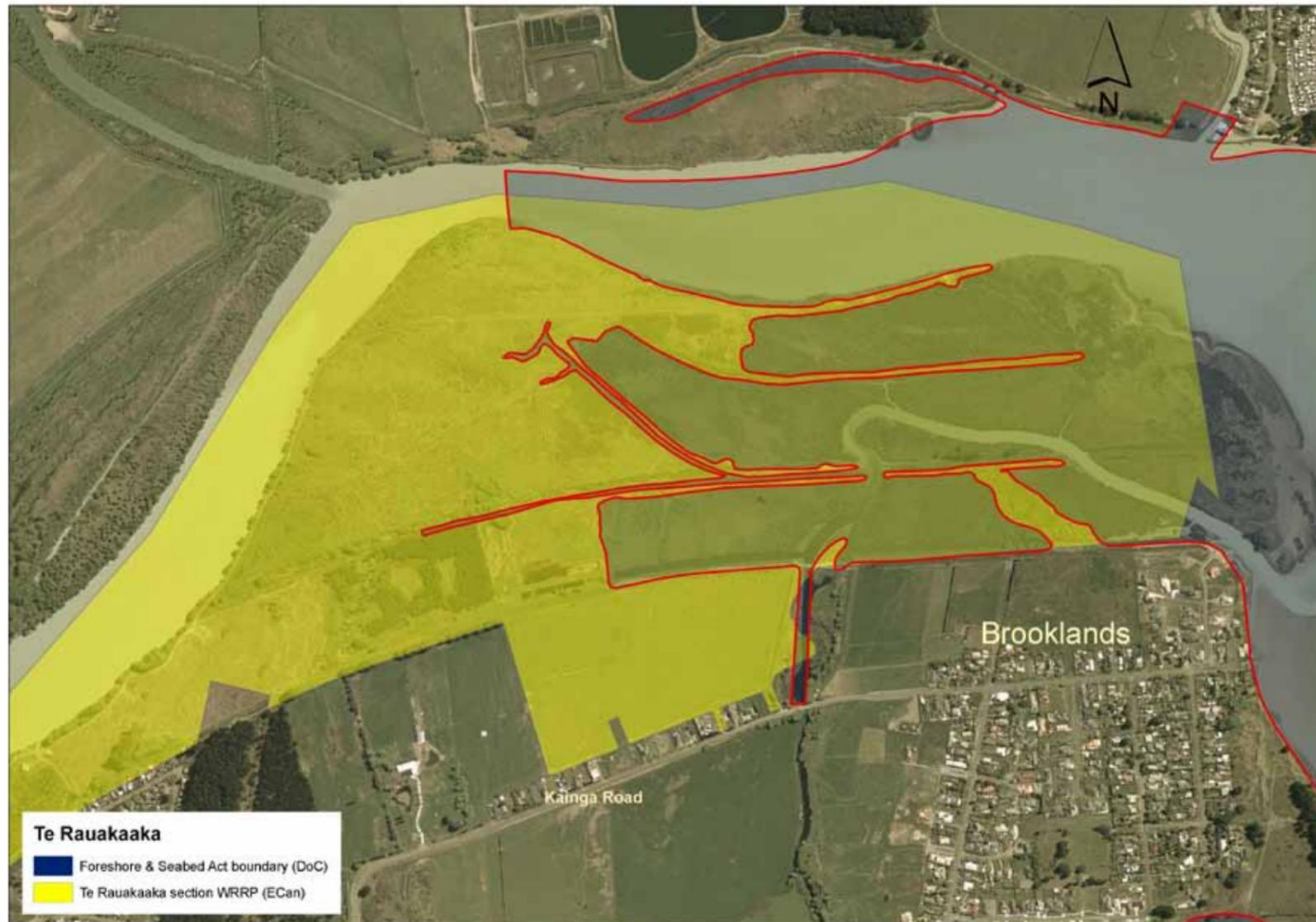


Kainga Road paddocks



White-faced Heron *Ardea novaehollandiae*





Boundaries after the establishment of the Foreshore & Seabed Act 2004

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