
Te Puawai Invercargill City Urban Design Report



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Te Puawai Urban Design Report

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Project Team

Baxter Design

Baxter Design is a team of landscape architects involved with many high profile projects throughout the Southern Lakes region, Central Otago, South Island and throughout New Zealand.

Our extensive portfolio of work covers urban and rural landscape masterplanning, resort development, public streetscape and parks, rural subdivision, residential design and landscape assessment.

Bonisch Consultants

Based in Invercargill for over 40 years, Bonisch has a proud history of providing land development services to the Southland and Otago Provinces and, more recently, throughout New Zealand.

The company has been involved in many high profile projects throughout the Southland and Otago regions – from the Tiwai Point aluminium smelter and Fonterra developments at Edendale to rural subdivisions in the Gibbston Valley and large-scale residential developments in Te Anau, Winton and Invercargill.

Invercargill

Invercargill is the southernmost city in New Zealand, situated in the heart of the Southland Plains and by the Oreti River where the river's estuary flows into the Foveaux Strait.

The city is the commercial centre of the Southland region, with industries including dairy, meat, brewing and tourism, located on the Southern Scenic Route.

Invercargill has numerous educational facilities including the Southern Institute of Technology. It also has the Southland Hospital, serving a wide area, numerous sporting grounds and recreation spaces within its boundaries.

The Murihiku Marae is located in southeast Invercargill. The marae is of the Waihōpai Rūnanga branch of Ngāi Tahu, and includes Te Rakitauneke whareniui (meeting house).

The proposed site, Te Puawai, is in the Heidelberg suburb to the southeast of the city centre.



Legend

	Main road / SH		Te Puawai site
	Secondary road		Public activity areas
	Waterway		Cultural site
	Green space		

Te Puawai

The site is 70.7 hectares in size and currently in use as farmland. The site is bounded by Centre Street to the north, Rockdale Road to the east, Tramway Road to the south and by Regent Street to the west and is located in the Heidelberg area of the city.

Established residential neighbourhoods are located to the north and west of this site, continuing in towards the centre of Invercargill, with agriculture to the south and east of the site, extending off to the Southland Plains.

The Heidelberg suburb features Elizabeth Park, which has a playground and BMX bicycle park and is approximately 500m to the west of the proposed development area. North of the park is Calvary Hospital Southland.

To the northwest is a kindergarten and tavern, to the southwest is Aurora College and the Murihiku Marae which adjoins the southeast corner of the site.

In the northeast corner is Rockdale Park, a small green space which will be incorporated into this development, with green spaces provided in lieu of this area.

The site land form is generally rolling in character with no distinctive topographical features. The site falls generally to the southwest with overland drainage falling accordingly.

Aside from a group of trees at the northern boundary, the site is covered in pastoral grasses.



Legend

- | | | | |
|---|----------------|---|-----------------------|
|  | Secondary road |  | Te Puawai site |
|  | Green space |  | Public activity areas |
|  | Cultural site | | |

Local links

The site is situated approximately 3.5km to the southeast of Invercargill city centre on the edge of the existing urban residential area.

Opportunities for connection exist on all sides of the site from existing legal roads.

The site itself is approximately 700 x 1000m in size, a scale which is comfortably walkable within the site.

It is well served by the existing road network and the local Heidelberg Star bus route passes to the north west along Regent Street and Centre Street.

Various supermarkets and dairies, as well as schools and nurseries are situated along the bus route.



Legend

- | | | | | | |
|--|------------------|--|-----------------------|--|-------------------------|
| | Local road | | Te Puawai site | | Main entry points |
| | Local facilities | | Public activity areas | | Pedestrian entry points |
| | Bus route | | Cultural site | | |
| | Green space | | Walking radius | | |

Concept

The Te Puawai development is a proposed new neighbourhood in the southeast of Invercargill and is designed around a network of connected green spaces with a 'village centre' at its heart.

The principal design components of the masterplan are:

Village Centre

The centre of the development features a compact commercial heart or 'village centre' located at the junction of the two main road axes. It will provide opportunities for small to medium 'local' stores and facilities as well as a green space, parking and a potential play area.

Higher Density Core

The village centre is surrounded by higher density lots which sit within a 400m radius or a 5-10 minute walk. These smaller lots will offer a more affordable housing options and provide support for the village centre businesses.

Internal Roding Network

The road network comprises a north-south and east-west axes, which connect into the existing surrounding roads. The main north-south axis is a wide boulevard with generous footpaths and cycle ways under large street trees. All roads are to have adequate width for parking provision.

Internal Footpaths & Cycleways

The road network is accompanied by footpaths and cycleways, which also extend into the green spaces and connect to the surrounding neighbourhoods offering car-free routes through the development and beyond.

Green Spaces

Te Puawai features parks of varying sizes spread throughout the development. These will provide amenity and recreation space to each stage of development.

Stormwater / Wetlands

The development also contains two large storm water retention areas. These will feature extensive native planting and provide space for wildlife as well as offering visual amenity to residents.



Overview

The Te Puawai development is designed to work with the existing residential patterning of the surrounding neighbourhoods and Invercargill as a whole. To achieve this the proposal is of a similar scale and format as the context in which it sits.

Urban design aims to improve the built environment by creating well connected, human-scaled neighbourhoods which are well integrated and respond to the various characteristics of their surroundings. The New Zealand Urban Design Protocol identifies seven essential design qualities which contribute towards a quality urban design proposal. These are:

- **Context**
- **Character**
- **Choice**
- **Connections**
- **Creativity**
- **Custodianship**
- **Collaboration**

Context

Quality urban design sees buildings, places and spaces not as isolated elements but as part of the whole town or city. For example, a building is connected to its street, the street to its neighbourhood, the neighbourhood to its city, and the city to its region. Urban design has a strong spatial dimension and optimises relationships between buildings, places, spaces, activities and networks. It also recognises that towns and cities are part of a constantly evolving relationship between people, land, culture and the wider environment. Source: NZ Urban Design Protocol

The Te Puawai site is currently farmland and sits in the southeastern corner of the urbanised part of Invercargill in the suburb of Heidelberg. It is bounded to the east by Rockdale Road and to the south by Tramway Road, with residential areas to the north and west, rural use south of Tramway Road including residential blocks, small scale agriculture and nurseries, and predominantly agricultural use to the east, peppered with some larger residential blocks.

The area was called Conyerstown by its first European owner, who sold the land to settlers from Heidelberg in Germany. That suburb is predominantly residential and features Elizabeth Park, Aurora College secondary school, and one of Invercargill's main marae, the Murihiku Marae, which is of the Waihōpai Rūnanga branch of Ngāi Tahu, and includes Te Rakitauneke whareniui (meeting house).

Invercargill is situated in the heart of the Southland Plains, stretching over flat, open plains beside the Waihōpai River which runs to the north and west, with the Oreti to the west. Both waterways flow into the New River Estuary to the southwest of the city centre. The area was settled by Europeans in the mid 19th Century, on land purchased from the local Māori iwi. The city became the centre of the province of

Southland after its separation from Otago in 1861, the short live gold rush in the Wakatipu to the north, boosted the town though was short lived. As the town grew in the late 19th Century, a gasworks and waterworks were built and farming industries developed in the area, which were to be the economic drivers of the Post-war boom.

The Invercargill Licensing Trust's recent financing of a 'no fees' policy at local tertiary education facilities has led to a large increase in student numbers at the Southern Institute of Technology with a resultant population increase in the city.

The main economic activity of the area is agriculture, as symbolised by the vast areas of farmlands surrounding Invercargill.

A recent, large scale redevelopment of the city centre has begun, with the demolition of many of the buildings between Esk Street, Kelvin Street, Tay Street and Dee Street currently underway. The project aims to reinvigorate the centre of the city, providing retail, entertainment and restaurant facilities.



Esk Street, city centre



Whites Aviation Collection, Alexander Turnbull Library



Bank Of New South Wales building, corner of city centre redevelopment



Godber Collection, Alexander Turnbull Library

Character

Quality urban design reflects and enhances the distinctive character and culture of our urban environment, and recognises that character is dynamic and evolving, not static. It ensures new buildings and spaces are unique, are appropriate to their location and compliment their historic identity, adding value to our towns and cities by increasing tourism, investment and community pride. (Source: NZ Urban Design Protocol)

The original Heidelberg area is a mixture of gridded streets towards the north and west, with the rigid pattern breaking down to a more organic road layout in the newer residential areas.

The proposed development plays off this with a rectilinear arrangement of roads to the eastern and southern perimeters, which softens in places to provide relief from the strict layout.

The proposed 'village centre' creates a heart to the development and the green connections provide a local character within the subdivision, as well as providing a link to the Murihiku Marae to the west.

Two large areas of wetland planting for storm water control provide visual amenity and space for wildlife. Smaller green spaces are arranged within the proposal to provide open areas of different scales for recreation and breakout.

The design of the roadways and green areas is intended to provide a framework for the new neighbourhood to be built within.

Choice

Quality urban design fosters diversity and offers people choice in the urban form of our towns and cities, and choice in densities, building types, transport options, and activities. Flexible and adaptable design provides for unforeseen uses, and creates resilient and robust towns and cities.

The Invercargill District Plan seeks to contain residential development to within the confines of the currently developed areas. The Te Puawai site would complete an empty corner of the residential grid pattern and provide an option for new housing within close proximity to the existing city infrastructure.

The inclusion of green spaces and walkways provides an alternative to car-based travel, encouraging healthy recreation. Adequate parking adjacent to green spaces allow for access by those less able to access them on foot or by bicycle.

Lots sizes will offer a range of larger and smaller properties to suit budgets and lifestyles, promoting some diversity in housing types within the development.

Connections

Good connections enhance choice, support social cohesion, make places lively and safe, and facilitate contact among people. Quality urban design recognises how all networks - streets, railways, walking and cycling routes, services, infrastructure, and communication networks - connect and support healthy neighbourhoods, towns and cities. Places with good connections between activities and with careful placement of facilities benefit from reduced travel times and lower environmental impacts. Where physical layouts and activity patterns are easily understood, residents and visitors can navigate around the city easily. (Source: NZ Urban Design Protocol)

Te Puawai is well connected to the existing road and public transport networks, with main roads to the north, east and south, and the local Heidelberg Star bus route passing to the northwest.

The development also includes a network of footpaths, cycle ways and a generously wide main boulevard providing space between pedestrians and cars, as well as adequate room for parking provision.

Green spaces and connections offer alternative routes through the neighbourhood for pedestrians and cyclists. These networks connect into the surrounding area, providing routes to local amenities such as Elizabeth Park and the site is within cycling distance of the local secondary school.



Elizabeth Park



Bill Richardson Transport World
Tay Street



Detail of historic
building on Esk Street



Classic Motorcycle Mecca
Tay Street, city centre

Creativity

Quality urban design encourages creative and innovative approaches. Creativity adds richness and diversity, and turns a functional place into a memorable place. Creativity facilitates new ways of thinking, and willingness to think through problems afresh, to experiment and rewrite rules, to harness new technology, and to visualise new futures. Creative urban design supports a dynamic urban cultural life and fosters strong urban identities. (Source: NZ Urban Design Protocol)

The masterplan has been developed around the main road axes creating strong, recognisable routes within the neighbourhood. The storm water management areas create two densely planted spaces, a contrast to the predominantly grassed open spaces in the surrounding areas, which provide visual amenity and a place for biodiversity.

Streetscape elements and strong, simple planting schemes in order to create a distinct identity for the neighbourhood. The 'village centre' will also have a local character, expressed through the architecture of the retail units and landscaping.

Custodianship

Quality urban design reduces the environmental impacts of our towns and cities through environmentally sustainable and responsive design solutions. Custodianship recognises the lifetime costs of buildings and infrastructure, and aims to hand on places to the next generation in as good or better condition. Stewardship of our towns includes the concept of kaitiakitanga. It creates enjoyable, safe public spaces, a quality environment that is cared for, and a sense of ownership and responsibility in all residents and visitors. (Source: NZ Urban Design Protocol)

The development seeks to build a neighbourhood that residents are proud of and take ownership of, creating a sense of place and making spaces and routes that are open, welcoming and safe. Custodianship is linked to that sense of place and the notion of kaitiakitanga.

Links to the local Murihiku Marae provide a cultural connection, which extends into the green space design adjacent to the marae.

The large storm water mitigation are designed to avoid the effects of natural hazards, with low-maintenance native planting to make the areas easy to care for.

Collaboration

Towns and cities are designed incrementally as we make decisions on individual projects. Quality urban design requires good communication and co-ordinated actions from all decision-makers: central government, local government, professionals, transport operators, developers and users. To improve our urban design capability we need integrated training, adequately funded research and shared examples of best practice. (Source: NZ Urban Design Protocol).

The development of Te Puawai is a collaboration between numerous professional design and engineering disciplines – landscape design, planning and water management, balancing the various aspects of aesthetic and pragmatic design with the fundamentals of civil engineering.

The development also offers potential areas for collaboration with local groups, in particular involving the local iwi in the design of the green space adjacent the Murihiku Marae, which could benefit the sense of ownership and contribute towards the notion of custodianship of the site.



Mural detail
Esk Street alley way



Mural behind
Esk Street



Detail of street furniture
Esk Street

Stormwater Management

There are two open areas which are required for stormwater management. The area in the northwest corner is to be a dry retention basin, whilst the southwestern area will include retention ponds. Both areas are to be planted extensively with natives and will provide space for native wildlife as well as amenity for residents and visitors.

Recreation / Green Spaces

The green spaces vary in size from 2,000 to 12,000 square metres. In general the green spaces are located evenly across the development to coincide with development staging.

All green spaces have at least one roading edge, avoiding the internalisation of green spaces.

The character of the green spaces is largely one of mown lawn and shade trees, with small sheltered spaces with seating. At least two playgrounds will be provided.



Roading & Footpath Networks

The proposed masterplan is arranged around two main road routes through the site: one running approximately north-south connecting Rockdale Road at the northeast corner to Tramway Road at the southwest corner; with the other main road running east to west across the centre, connecting Rockdale Road to Regent Street.

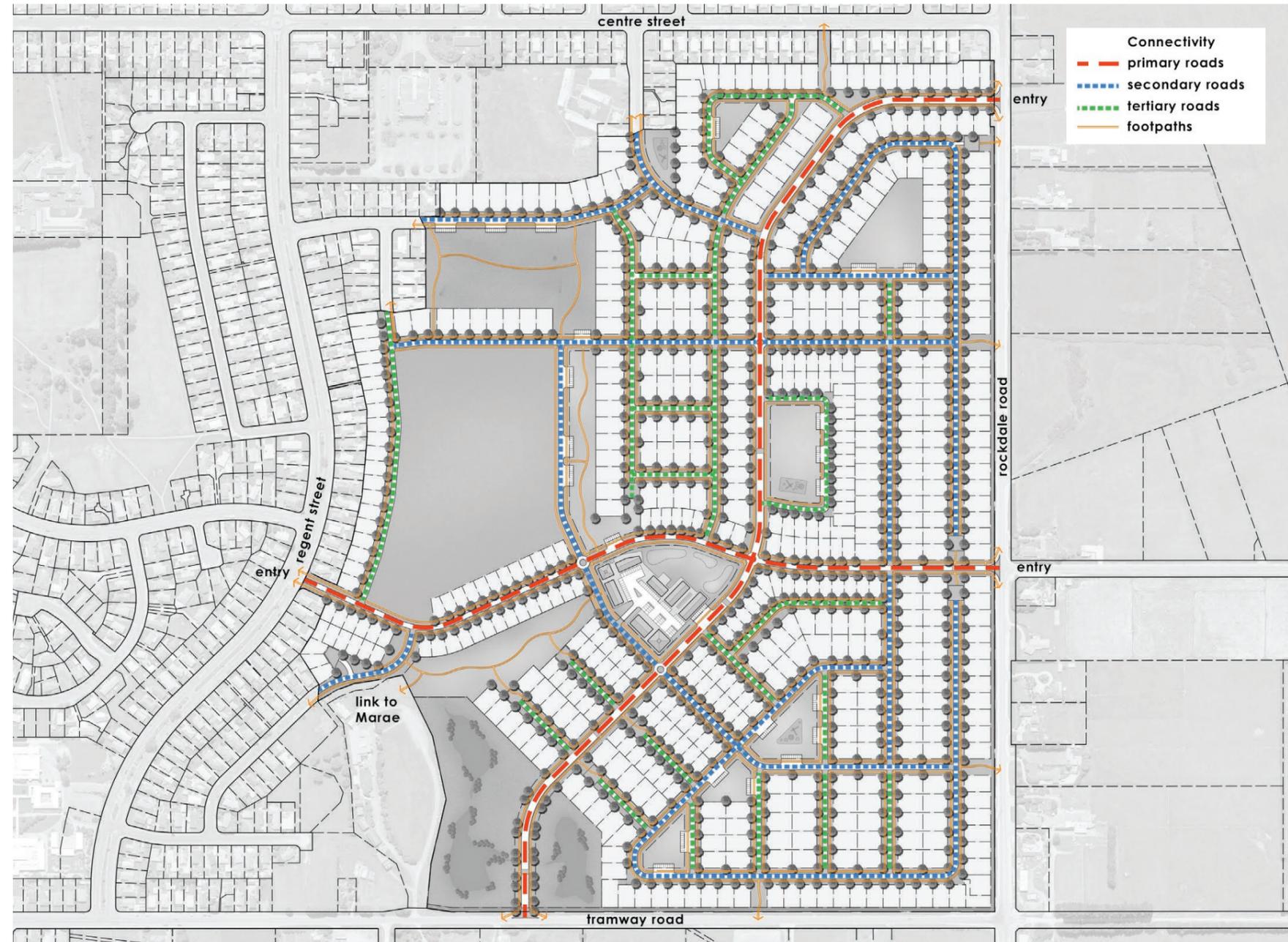
The north-south route takes the form of a main boulevard through the development, and as such has a wider road reserve at 25m, allowing for generous footpaths and cycleways, landscaping and parking bays.

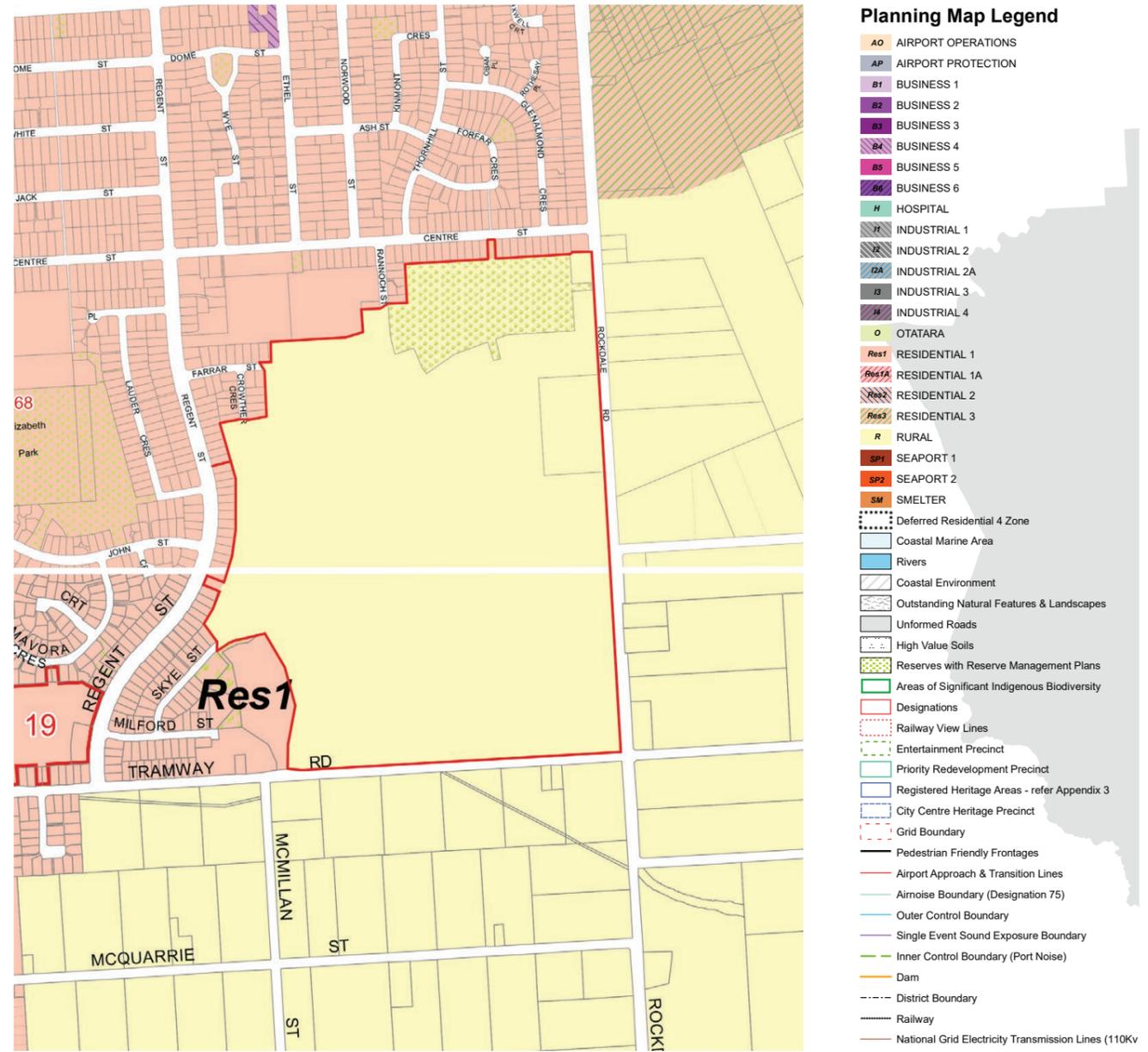
The east west route is still to be a significant roadway with footpath, street trees and landscaping.

Secondary roads provide access into areas of the masterplan with tertiary routes serving smaller clusters of housing. These are to have features such as change in carriageway materials and thresholds at junctions to create slow-zones.

A network of footpaths and cycleways runs alongside all roads in the development, and these connect into and across green spaces, providing green routes around the development.

These path networks would be connected into the existing infrastructure around the site to provide routes for walking and cycling.





Extract from ICC District Plan 2019, Planning Maps 11 and 18
<https://icc.govt.nz/public-documents/invercargill-city-district-plan-2019/>

Retention & Management

Two areas of stormwater retention are required for the development, one area to the north and one to the south. The northern area is a dry, planted retention basin, the southern area is a wetland with retention ponds.

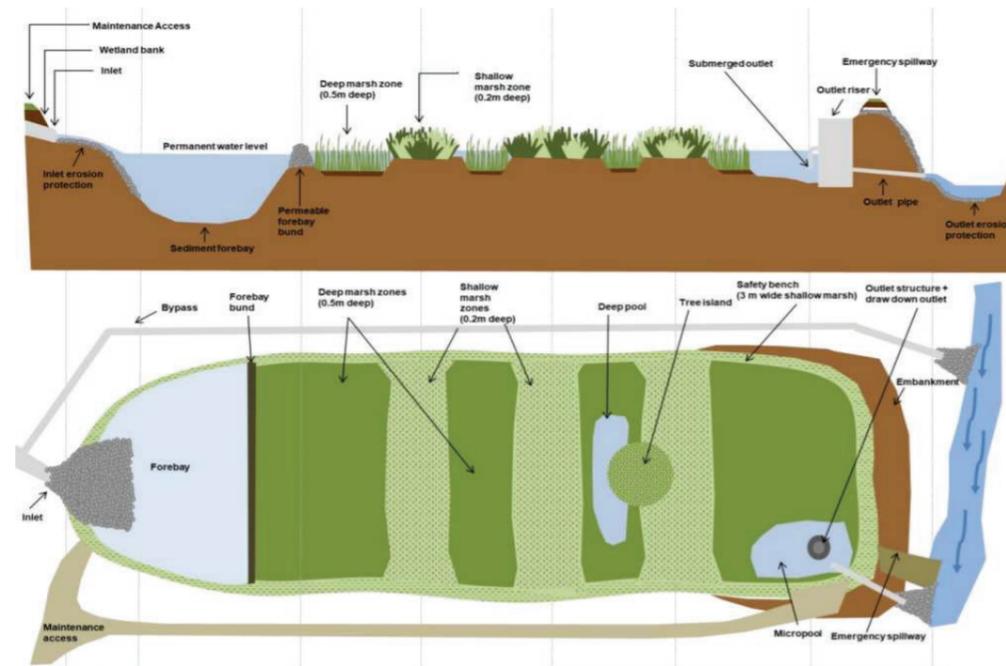
The attached images show potential proposed form and character of the future wetlands.



Wetland planting - Kauri Park Nurseries



St Kilda Subdivision, Cambridge - Kauri Park Nurseries



Bonisch Consultants - Wetland preliminary design



Wetland planting - Kauri Park Nurseries