

LIVING CORRIDORS IN RICHMOND

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ABSTRACT

An area to the west of the Richmond town centre (in Tasman District) was designated for residential, commercial and industrial development over 30 years. However, the special housing area legislation and pressure for more homes has meant that this area will be developed within 5 years.

The areas defining feature is stormwater corridors, to not only has to provide for its own run off, but that of the wider Richmond area. Instead of hiding these corridors, Council embraced them to create a unique feature and allow the corridors to serve multiple purposes.

The corridors not only provide for stormwater but provides for a wide variety of cultural and recreational outcomes that incorporates shared paths, fish passage, stormwater capacity, native plantings and picnic spaces. The development is anchored by the main corridor (Borck Creek) which is 70 metres wide and cuts diagonally through the development.

The development was at risk of being vehicle centric and miss the opportunity to encourage mode choice. The corridors were used to provide a network of interconnected shared paths to provide connections within the development and around town. In addition to active transport, Council is establishing a public transport route through the development that includes bus stops at key nodes where the road corridors intersect with these stormwater corridors.

As residents move into the area, the stormwater corridors have been embraced with a significant uptake in use by pedestrians and cyclists. Establishment of the paths have triggered accompanying infrastructure such as a bike shop, pathway connections from adjacent developments, a bowling club and a primary school.

Developers are also using the stormwater corridors to create medium density town housing instead of low density detached housing.

INTRODUCTION

Richmond is a small town with a population of 18,000 residents within Tasman District. The town is nestled between the Barnicoat ranges, Tasman Bay, Nelson City boundary and the Waimea Plains as shown in Figure 1. Richmond is growing fast with a population growth rate of 2.5% pa and growth in vehicle use around 5% pa.

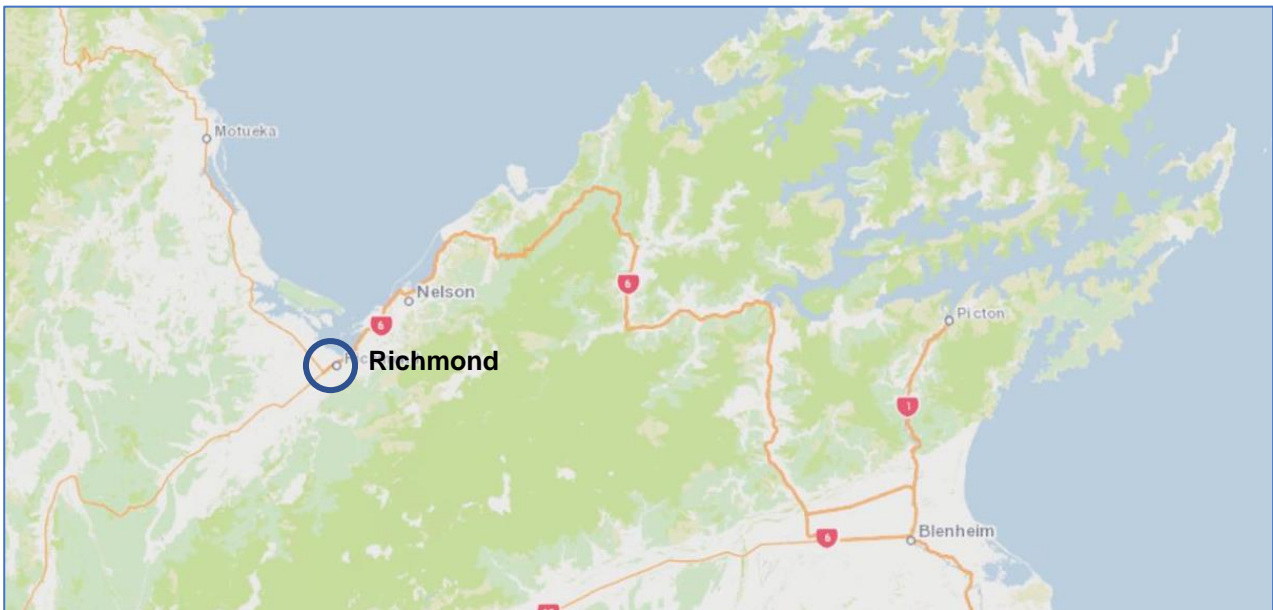


Figure 1: Location of Richmond

In 2012, Tasman District Council (Council) made a plan change to an area of land west of the current Richmond town centre for combined mixed business, residential and light industrial development. It was intended that this area provide most of the commercial land needed for the wider Nelson-Richmond area. However, through central governments Housing Supply and Special Housing Areas (SHA) process, much of the land zoned light industrial and mixed business was approved for residential development (Figure 2). This area is now providing for over 1,400 new houses.

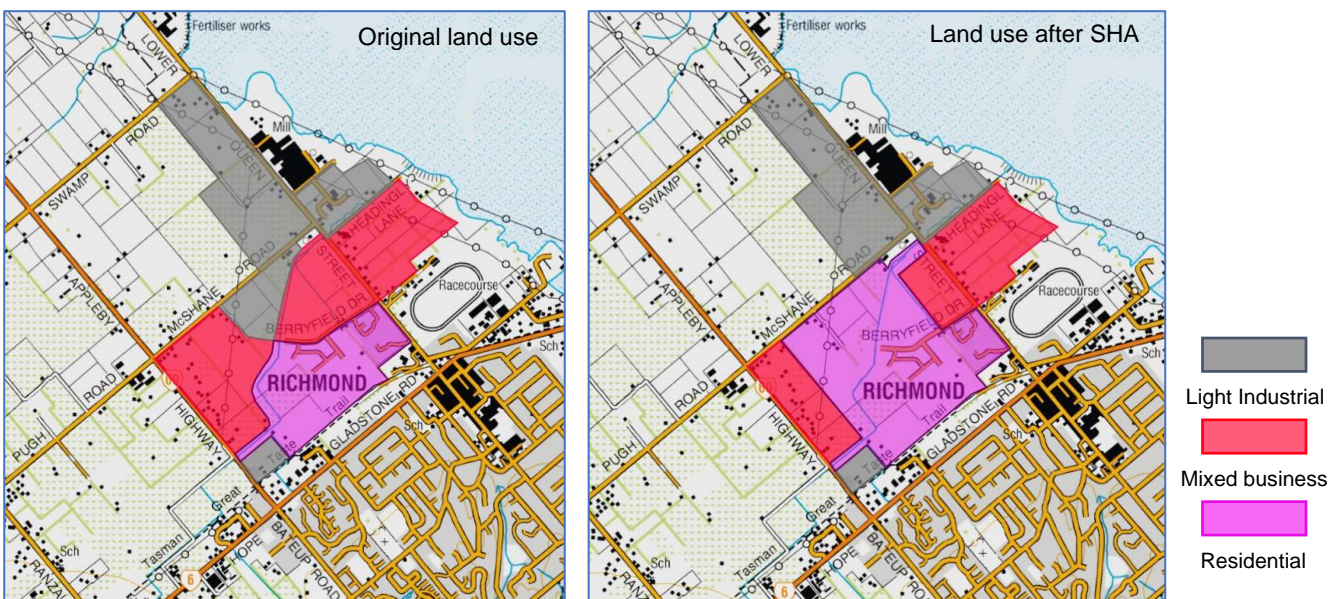


Figure 2: Original intended land use and land use after SHA process

Outcomes that Council was seeking from this development were:

- Walking and cycling networks that encourage residents to use active transport for local journeys.
- Public transport services that encourage residents to use for journeys into Nelson.
- Making better use of stormwater infrastructure for other community activities.
- Make spaces for people in the community to interact.
- Encourage medium density residential development.

In addition to Council’s community outcomes, Ministry for the Environment strengthened and clarified Te Mana o te Wai (Essential Freshwater) and how freshwater should be managed. Te Mana o te Wai imposes a hierarchy of obligations in the following order:

1. The health and wellbeing of the water
2. The health needs of people
3. The ability of people and communities to provide for their social, economic and cultural well-being

Infrastructure had not been planned for this level of residential development, nor were our engineering specifications adequate to achieve the residential outcomes that we wanted. Council knew it didn’t want to continue with traditional car dominated development that was reflected in previous residential developments. Developers were ready to start work immediately; Council was forced to partner with developers in order to influence the urban design going forward.

Because the zoning and planning work had not originally contemplated such a large residential area, the stormwater corridors were one of the few opportunities Council had to ensure wider community outcomes were preserved. From a transport perspective, the area is only 1km from the Richmond town centre which makes the area a good candidate for walking and cycling as a mode of transport.

STORMWATER CORRIDORS

Stormwater corridors were already considered as part of the development of the area as there is a natural spring feed flow path through Richmond West along Borck Creek. Borck Creek already dictated the shape of zones and was intended to be used to separate incompatible land uses as shown in Figure 2. Borck Creek not only provides stormwater capacity from Richmond West, but also serves a larger function to provide conveyance of stormwater from much of the existing Richmond urban area.

Stormwater modelling identified that a Borck Creek stormwater corridor needed to be around 40 metres wide to provide enough water capacity in a 1:100 year event. The underlying planning therefore provided for a 50 metre wide designation for stormwater. With pressure from developers wanting to move fast, Council infrastructure planners had to make quick decisions on how we wanted the area to function.

To cater for all these activities, the 50 metre corridor was no longer suitable, Council needed a wider corridor. An assessment by Council staff and consultants identified the corridor would need to be 90 metres wide but developers strongly opposed this level of land loss to their developments and a corridor of 70 meters was finally agreed to. Negotiations for some of the smaller corridors were not as successful and we were only able to obtain 32 metres for the lower part of Poutama Creek and 20 metres for the upper part of Poutama Creek. Despite the relative narrow widths, it was an improvement on the original designations to allow a shared path, low level planting and a wetland.

Some developers bought into the vision and have also included open stormwater corridors as part of their developments that include shared paths connecting recreational reserves, native planting and adjacent townhouses.



Figure 3: Stormwater corridors in Richmond West

The concept of using the corridors for more than just stormwater and using green corridors to encourage housing density is not unique to Richmond West. There are other developments of this kind in New Zealand. What makes this project notable is the full integration with the wider active and public transport network.

Council and developers have worked together to integrate the corridors into the wider development and make the best use of the space. The corridors meets the obligations of Te Mana o te Wai in the following ways:

1. The water channels have been improved by designing in a variety of habitat for fish species and plantings around the waterway provide locations of shade over the water.
2. The shared pathways (shown in yellow in Figure 4) provide opportunities for walking and cycling both as a recreational activity and as a form of transport. The path network provides loops of various lengths and direct connections to key destinations such as shops, schools and workplaces.
3. In addition to the paths, the corridors will include places for people to relax, have picnics but also provide interpretation panels to explain the local history and natural environment. The paths also connect to two schools and major local workplaces.



Figure 4: Shared paths and Greenways in Richmond West

CYCLE INFRASTRUCTURE

Shared Paths

One of the key reasons to expand the stormwater corridors was to provide the opportunity for walking and cycling. Each corridor includes a shared path running along its length which has deliberately been placed above the storm waterline (high flow) level to provide access in storm events. The main paths are complimented with a number of crossings, both above the high flow (for all weather access) and the low flow (to provide direct routes) level. The shared paths link with surrounding Great Rides trails to provide walking and cycling facilities to Nelson, Māpua and Brightwater. The paths also provide a 'safer' route to Richmond town centre using the recreational reserve and zebra crossing rather than the large State Highways 6 signalised intersection. This is likely to be complemented with a dedicated and separate cycleway within the next 3 years.

Work has already started on constructing and improving the bridges across Borck Creek to allow pedestrian and cyclists to pass under the bridges rather than having to cross the road. This means that bridges are being installed with deliberate curvature to provide adequate clearance as shown in Figure 5. Road crossings are also being provided where the paths go under the bridges to preserve access during storm events.



Figure 5: Borck Creek path towards Berryfield Bridge

Transport Networks

Council has recently closed consultation on a Walking and Cycling Strategy. The draft strategy proposes that all urban residential streets (One Network Framework: Local Streets) become slow speed (30 km/h) residential streets or ‘Greenways’ (Shown in green in Figure 6 below). Council will use a combination of chicanes, localised narrowing, speed humps and build outs to achieve this. When the Walking and Cycling Strategy is approved Council will require any new roads to support lower speed Greenways.

This means that all residential streets in the development area will become cycling transport infrastructure. Cyclists using the shared paths will be encouraged to keep their speeds low or use the roads if they want to travel at higher speeds. There will be a marketing campaign towards cyclists to treat shared paths like slow roads.

Public transport services linking Richmond West with Richmond and the wider Nelson area have also been considered. Bus stops have been situated close to where the bus route crosses the corridors to enable good walking and cycling access to the bus stops. Bus stops will include seating, shelters, electronic signage and bike racks. Bus stops are also positioned near commercial activity like a café, tavern or cinema where bike racks can be used by bus users and patrons. Future development of the public transport network will include a park and ride on the corner of SH60 (Coastal Highway) and McShane Road.

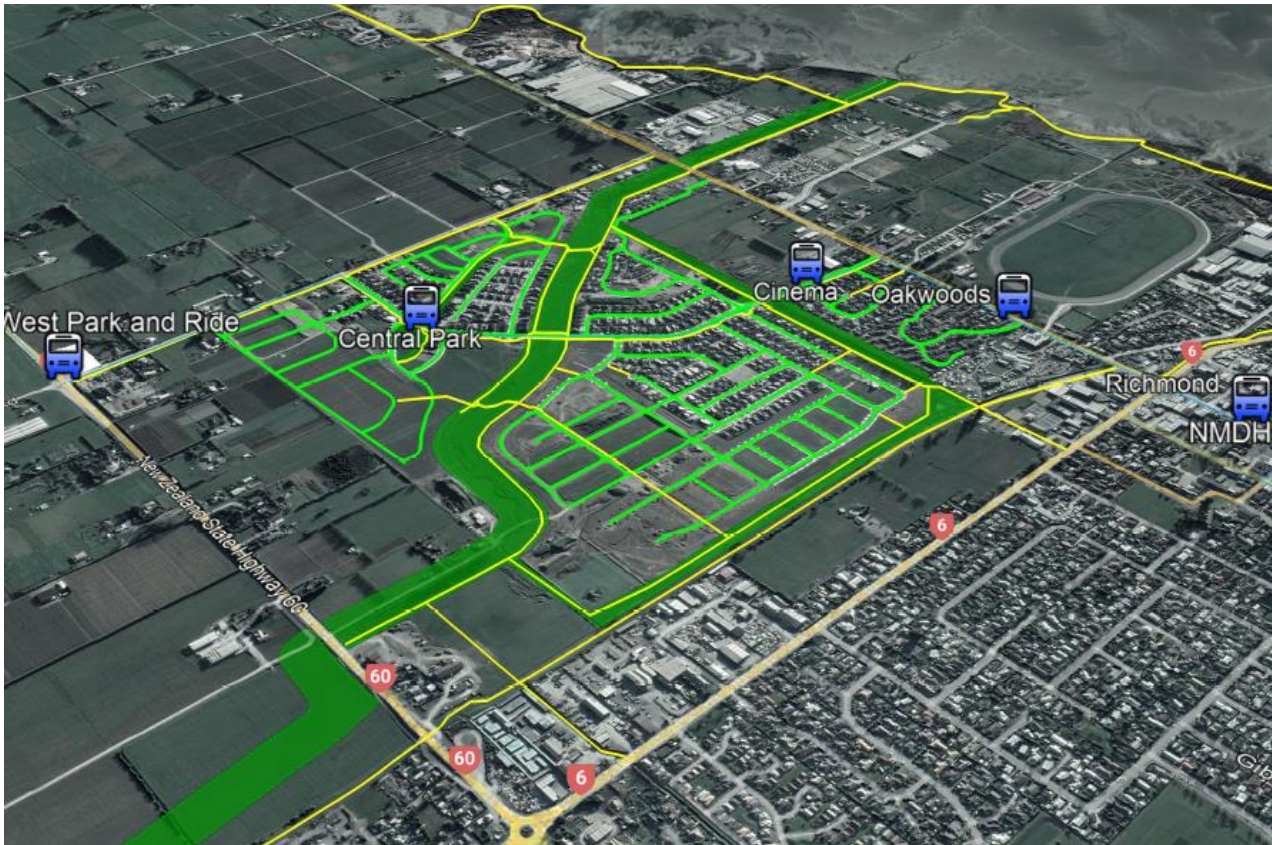


Figure 6: Active and public transport networks in Richmond West

CONSTRUCTION

Council had not included the cost of constructing a widened corridor. Developers needed additional quality fill for their developments, and Council needed the corridors dug out. Developers were supplied with corridor designs with finished profiles which gave them a quantity that they could remove. When developers had taken what they needed, Council contractors came through and finalised the shape and removed the last of the material. This provided a significant cost saving to Council which helped offset the additional land purchase for the wider corridors. Whilst much of the main excavation is complete, there are still significant portions of work to finish excavation, upgrade existing bridges on Lower Queen Street and Appleby Highway (SH60). The corridors will continue to be planted and lighting, interpretation panels, artwork and seating are still to be installed. Council will continue to work with contractors with completion of the corridors keeping pace with completions of adjacent development. It is expected that all corridors and most of the development will be completed by 2025.



Figure 7: Northern end of Borck Creek near complete, Southern end in development.

LANDSCAPE

Landscaping on the corridors has been designed to balance the functional requirements of the stormwater corridor with the amenity and community expectations. The primary use is stormwater conveyance. There is a permanent stream that is supplied by a number of springs, therefore the design has incorporated a stream that meanders within the corridor and incorporates random elements like rocks, pools and logs to provide natural habitat for fish species.

Native trees and ground foliage has been planted to provide shaded patches to the stream and pools. Some of the trees will require some time to mature and provide the desired cover, so the plants are being established in phases alongside the development to provide the amenity to residents, but also give the best opportunity to mature.

Council would have preferred to plant more trees, but extra trees and foliage will impede the stormwater flow in flood events. This was one of the trade-offs of not getting the full corridor widths from developers.

Lighting, seating, interpretation panels and other minor structures will add to the amenity of the corridors. The final design of and placement of these structures has been considered with respect to their interference with stormwater flows.



Figure 8: One of the low flow crossings

COMMUNITY RECEPTION

The initial response from developers to our use of wide corridors were varied, some developers bought into the vision and even extended it into their development. Developers who were initially reluctant or negative are seeing the benefits from a marketing and a property value perspective and have modified later stages of their developments to be more inclusive.

Development of the corridors and surrounding land is still ongoing but use of the shared paths within the corridors has been strong. As the pathways have been extended, we have seen people push past construction barricades to use the next section. Where Council have not developed the paths fast enough, the public are creating their own solutions to provide improved access (Figure 9).



Figure 9: Community tactical urbanism to cross the creek

DEVELOPER RECEPTION

Developers have been highly engaged in the process, in part due to the mutually beneficial excavation of the corridors for fill within the development, but also to respond to purchasers' feedback on the improved amenity of the corridors. Despite Richmond being a provincial town with 'normal' development patterns being low density detached single storey dwellings, most developers initially indicated some townhouses along the corridors. Through the different development stages, the number and position of the town houses has changed but when complete, developers will add a higher number of townhouses and duplexes than previously planned. It was hoped that developers would overcome their initial hesitantly and cater for a greater number of medium density town houses, but instead, the town houses have generally been large double storey homes that they have sold at a premium. Despite this, these are townhouses that otherwise wouldn't have been there and has contributed to a small number of additional dwellings that wouldn't have been in a 'normal' low density development.

Developers and existing developments are working with Council to connect their areas to the corridors. An existing retirement village has been working with Council to link their residents to the corridor network. Developers have modified urban design elements to better interact and provide access to the corridors, including a new retirement village clubhouse that faces and interacts with Borck Creek as seen in Figure 10. The same developer is intending to construct a new café that extends into the corridors. Since the pathways have been developed, a pop-up bike shop has also been established to help cater for the increase in local residents cycling around the area and connecting to the wider cycle trail network.



Figure 10: Development connection with the corridors

CONCLUSIONS AND RECOMMENDATIONS

The planning and development of this area had to react quickly to changes which meant that Council had to work closely with developers to achieve some of the outcomes we were seeking. Construction of the corridors and adjacent development is still ongoing so a quantitative analysis is not yet available, but anecdotal evidence suggests that we are likely to achieve most of the outcomes Council wanted which happen to be in line with Te Mana o te Wai outcomes.

Specifically:

- The shared paths are being used by local residents and the wider community alike. The incidents of people pushing past barriers and creating temporary bridges show that this type of infrastructure is desired by the community. Developers are using maps of current and future planned walking and cycling networks as a marketing tool. Work to slow down

traffic to create slow speed “Greenways” from the residential “local roads” will happen when the Walking and Cycling Strategy has been confirmed.

- The bus services through this area are not scheduled to start until July 2023. Council is currently installing bus stops with seating shelters and bike racks and have worked with developers to create bus parking bays. The bus stops coincide with places of interest to the community and have corridor pathways connecting them with the wider development.
- The stormwater corridors have a network of paths that are already widely used. Council does not have figures on the use of the corridors for other recreational purposes, but there have been a number of enquiries from members of the community wanting to enhance the visual amenity of the corridor in specific locations which means the public are talking ownership of the corridors.
- Council do not have any evidence of community interaction on the corridors. Council staff have however been at events like the opening of a bridge and have observed a high level of community involvement.
- The development of the corridors has led to a greater level of housing density than the ‘normal’ low density development typical of provincial towns. The developments were able to show that there is a market for medium density townhouses in Richmond. Work currently underway to zone new residential areas will be more upfront with Council’s expectations for the types of houses desired. Council will work with developers at an earlier stage to set clear expectations of housing density.
- The stream is still maturing. As the plantings grow there will be more shade and vegetation in the water to foster native fish species. Already there is a population of eels that local children have been feeding. As the corridors grow and connect to the wider stormwater network, it is likely that the sections that are spring fed with a constant flow of water will encourage fish passage.

New residents are happy with the paths, infrastructure and amenity as it is added. We have observed the uptake in walking and cycling despite having an incomplete network. It is too early to know the full benefits of these integrated corridors, but early indications are positive.

Council has at least four other areas that are going through the process of rezoning and spatial planning. With the benefit of more time, the positives and lessons learned from this area will be incorporated into the new areas. Council will continue using stormwater corridors as the anchor infrastructure and will integrate transport facilities within and alongside it.

REFERENCES

Ministry for the Environment 2020. *Te Mana o te Wai factsheet*, viewed 26 November 2021, <<https://environment.govt.nz/assets/Publications/Files/essential-freshwater-te-mana-o-te-wai-factsheet.pdf>>

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