Section E Pedestrian and cycle paths

The Urban Design Overview set out a design philosophy for pedestrian and cyclist access that was to maintain pedestrian and cyclist safety and efficiency consistent with minimum infrastructure requirements. It is recommended the following be considered:

- on-road cycle lanes in urban areas on approaches to the TEL
- shared off-road pedestrian/cycle paths on parallel routes to the TEL
- shared off-road pedestrian/cycle paths at busy intersections / roundabouts
- use of road shoulders in rural aeras with widths complying with minimum cycle lane widths
- footpaths on approaches to and over bridges traversing the TEL
- signalised crossings at busy traffic controlled intersections.

This Urban and Landscape Framework generally builds on those principles. Refer to Section B: Route Appreciation / Existing and proposed pedestrian and cycle paths for a locating diagram and description of the paths.

Shared path design objectives

- Shared paths are for use by pedestrians and low speed recreational cyclists. No cycling will be permitted on the highway.
- Shared paths are to connect to existing local and regional road and open space networks, the Kaituna River foreshores, other cycleways, and activity areas such as town centres and surrounding residential neighbourhoods,
- Shared paths are to allow for integration with future open space networks and cycleways.
- Shared paths are safe, comfortable and pleasant to use, with vertical and horizontal variation 'smoothed out', and as continuous as possible. Pedestrian and cyclist amenity is a primary consideration.
- Shared paths minimise the potential for pedestrian-cyclist conflicts, and for conflicts with vehicles at intersections of the path with the road network.

Shared path design principles

The following design principles support the shared path design objectives:

- Comply with design requirements for the maintenance of safe speeds for both cyclists and pedestrians
- Maintain roadside vegetation, and enhance where possible and consistent with the landscape character principles, to provide shade to shared paths and a soft buffer between the path, local road and TEL
- Incorporate the National Guidelines for Crime Prevention through Environmental Design in New Zealand, in particular:
  - access: safe movement and connections
  - surveillance and sightlines: see and be seen
  - layout: clear and logical orientation
  - quality environments: well designed, managed and maintained environments
  - physical protection: using active security measures
- Locate and design paths and adjacent landscaping to optimise casual surveillance between the path and adjacent context (road and/or other uses)
- Design paths are to provide the longest possible sightline in the forward direction
- Continue shared path treatment across private driveways to emphasise the continuity of the public domain
- Any drainage grilles will be designed and located to minimise cyclist and pedestrian hazards
- Path gradients will be consistent with NZ accessibility standards.

Refer also to design guidance published by the NZTA on underpasses at www.transit.govt.nz/planning/urban.jsp

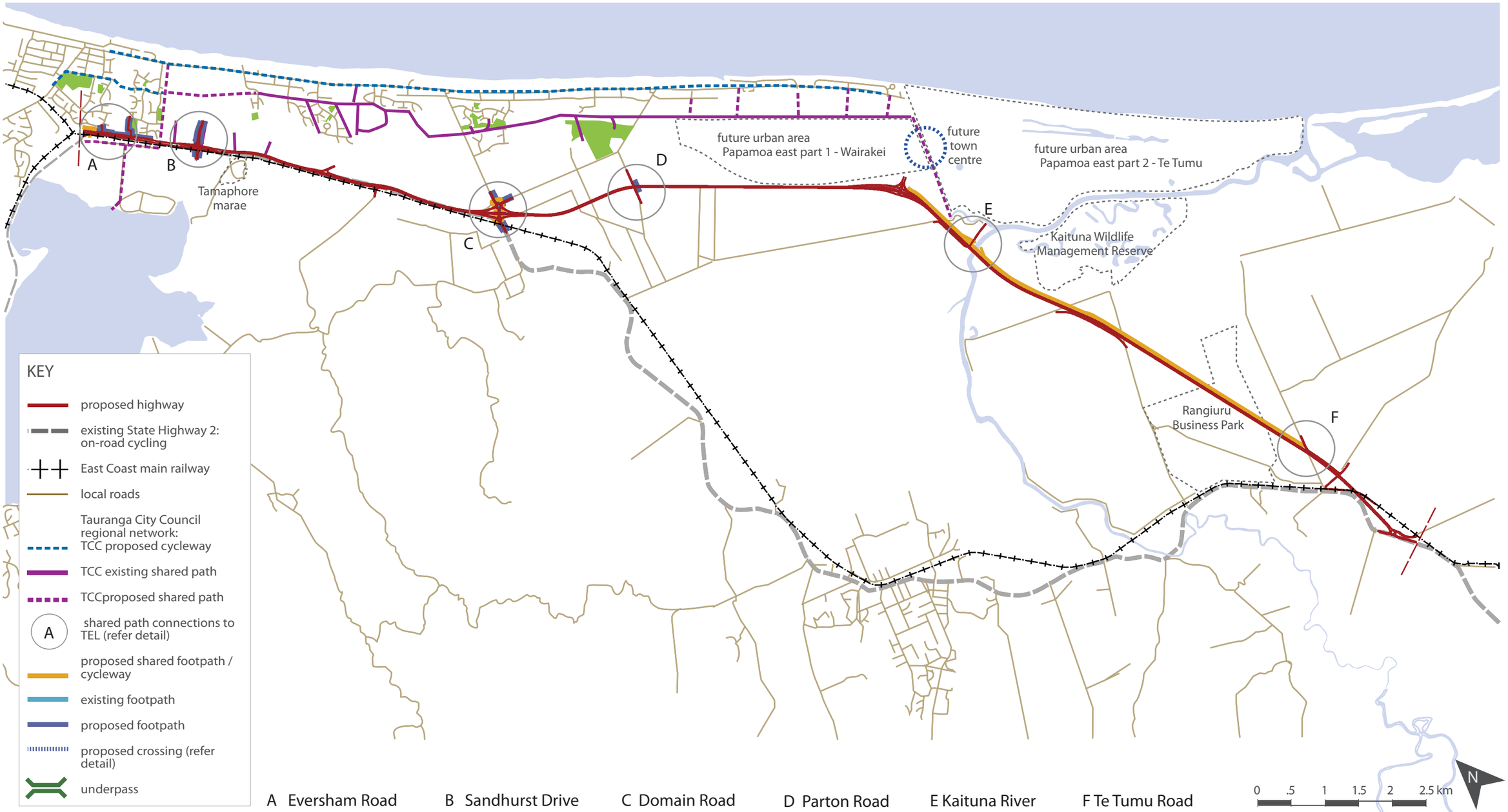
Local road design principles

- Upgrade interchanges between the TEL and local roads to support improved and rationalised vehicle access.
- Minimise the visual scale of the highway from local roads
- Design local roads parallel with the highway to eliminate unsafe access direct from adjacent residential properties and are designed and edged to buffer noise and view impacts from highway traffic
- Locate and select road lighting on local access roads to also illuminate shared paths
- Highlight the intersection of local roads and shared paths with a contrasting paving threshold treatment
- Design the underpass at Kaituna River to enhance the driver experience on approaching the boat ramp, through the use of light, warm wall colours and detailing of the walls to provide visual interest and create a sense of greater height and width. Colour should be through the use of aggregates rather than oxides
- For the new Te Maunga service road, design fencing to suit the residential character. Fence types will be determined in consultation with property owners (note: acoustic fences are covered in Section D: Noise Barriers).

Design criteria

- Construct shared paths to a minimum width of 2.5 metres on bridges and 3 metres else1.5 metres
- Construct footpaths to a minimum width of 1.5 metres
- Barrier design will comprise a single rail atop a solid base to optimise views over the surrounding landscape from the footpath
- Surfaces will have a crossfall of at least 2 degrees for surface drainage.

Proposed shared path network



Proposed shared path network

Pedestrian and cycle paths have been developed for the TEL. Their location in relation to the existing (and future) local road network, and their design are will support Smartgrowth by enabling links beyond the corridor, providing for recreation and commuting, and maintaining important connections across the highway for local communities. Pedestrian and cycle 'attractors' / generators of activity – including centres, business areas, schools, recreation areas and areas of cultural signficance – were considered in developing the pedestrian and cycle network linked with the TEL.

Pedestrian and cycle provision is as follows:

A. Te Maunga – Eversham Road

- This is an established residential area where it is important to provide for pedestrian and cycle connections into the local road network. These are achieved through a mix of shared paths, footpaths and on-road cycling (local roads only).
- A new access road parallel to the TEM will link into the existing residential area. Cyclists will use the road and a new footpath is provided for pedestrians.
- A new at-grade crossing is provided over the highway, and a 3m wide shared pedestrian / cycle path links it to the new service road.

B. Sandhurst Drive

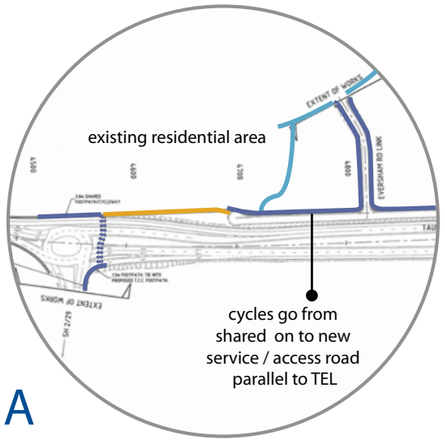
- This intersection allows for connections from the Tamapahore marae to the coast. It also supports access to a small business node on the south-west.
- The interchange design reflects the different volumes of traffic (slip lanes to one side only). Refuges between slip lanes are provided for pedestrian / cyclist safety.
- Shared paths in this location are 2.5m wide. Beyond the interchange, cyclists revert to on-road along Sandhurst Drive.

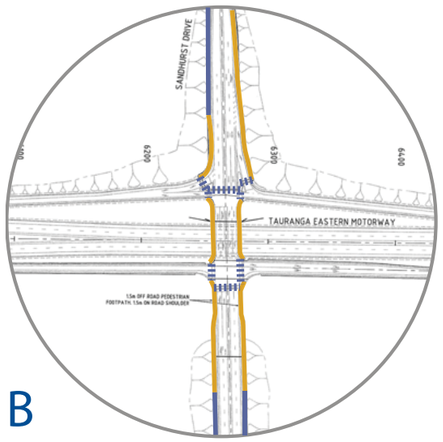
C. Domain Road

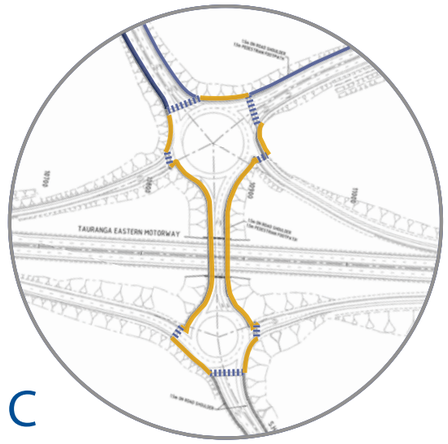
- Pedestrian paths, and cycle access on the shoulders of local roads are provided at Domain and Parton Road interchanges to be able to link into future roads for new subdivisions.
- Domain Road is a large interchange and crossings with refuges are provided at all points where pedestrians and cyclists move against vehicle traffic.
- 2.5m wide shared paths through the interchange change to 1.5 metre footpaths and on-road cycling on the local roads.

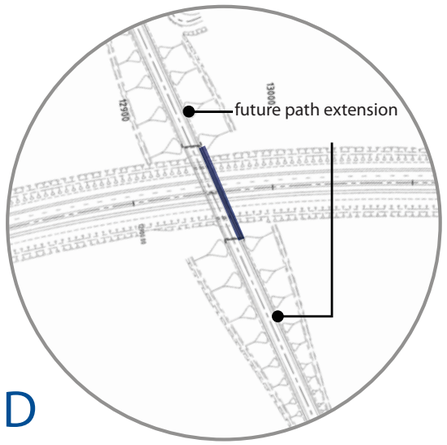
D. Parton Road

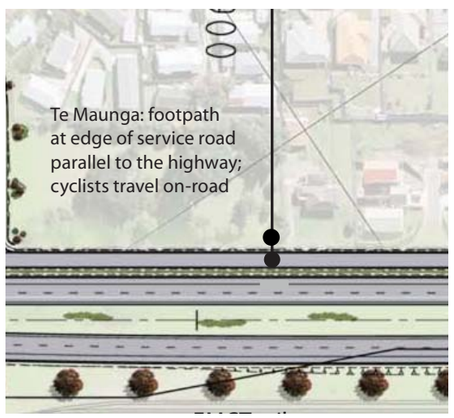
- The area surrounding Parton Road is not envisaged to develop. A 1.5m wide footpath is provided to one side of the bridge only, in response to WBOP identified needs.

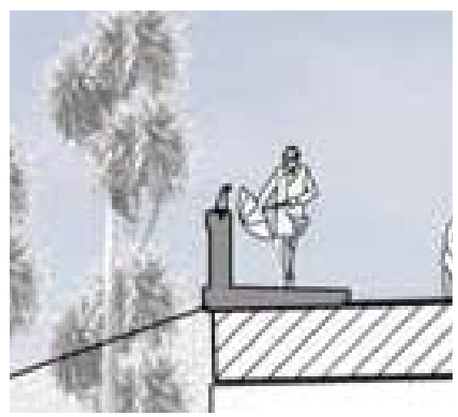






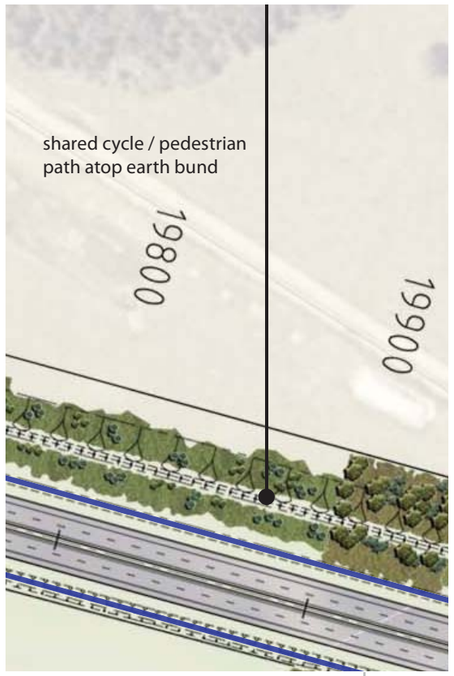






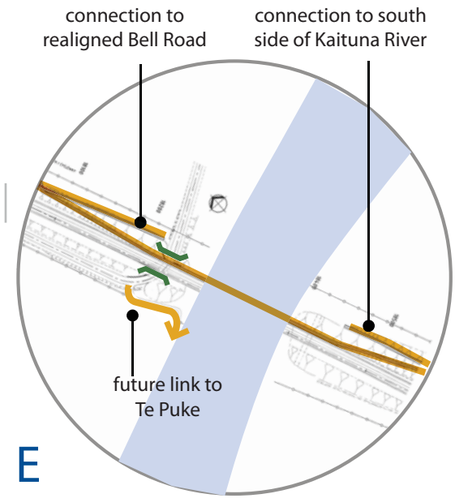
before E – F. Shared path alongside TEL

- Between the future Papamoa East Interchange (chainage approx. 7300) and Te Tumu Road will be a well designed, high amenity shared path that will link Papamoa East and Rangiuru while supporting recreational cycling and the enjoyment of views of the river and surrounding landscape.
- The path is around 5.6 km long and 3m wide, and elevated on the landscaped noise bund to optimise views and sightlines to the motorway.



E. Kaituna River

- The shared path is to the north-east side of the TEL. Access will be provided to the riverbank on both sides, and via a service road (possibly in underpass or within an open abutment of the bridge if levels permit) to the south-west of the TEL.
- The river crossing creates opportunities to set up future connections to the Rangiuru Bueinss park, the local road network, and the Kaituna Wildlife Management Reserve.
- If pedestrians and cyclists use the underpass as shown below, optimisng sightlines, lighting the underpass, and providing clear signage, are critical.



E

While this underpass is for pedestrian and cycle use, the following design elements are appropriate to consider for the Kaituna Bridge underpass, if built:

- landscaped approach that integrates the underpass with its context
- wall patterning that evokes natural materials (in this case recycled sleepers) and breaks down the wall massing
- a simple and direct path of travel.

Below:

Shared path, north side of Kaituna River bridge

Shared path, Westlink M7 NSW Australia. The open rail and mesh barrier provides views for path users and allows for casual suveillance to and from the bridge. A painted median improves safety for two-way movement.