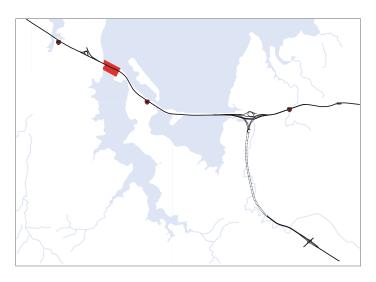
# Section C ► Sector Design Concepts

### C2 Sector 2 Whau River



Sector 2 works include widening of the motorway across the Whau River crossing, and on reclaimed land near Rosebank Domain. Additional reclamation is proposed to enable improved stormwater treatment, with the additional benefit of relocating the northwestern cycleway further away from the vehicle traffic.

Figure C-2.1: Aerial view of the sector 2 from the north

### C1.2.1 Existing situation

Sector 2 includes the enlargement of the existing Whau River Bridge to accommodate additional lanes. A separate dedicated cycle/pedestrian bridge is to also be constructed alongside the enlarged Whau River Bridge.

### Movement and connectivity

 Local road stops at raceway; off-road cycleway continues westwards.

### Landscape, planting, views

- Transition between harbour and peninsular landscape areas
- Views from the mainline to surrounding areas are not promoted due to crossfall, but views to CBD skyline are available from slower eastbound traffic lanes and elevated cycleway.

### Urban form

- Residential development to the south along the Whau River, with Te Atatu Boat Club occupying a large area of the foreshore with Bridge Avenue
- Rosebank Domain is used for vehicle racing, with some buildings and areas of open ground used for spectating.

### Structures

- Whau Bridge ramps up towards Te Atatu
- Bridge has a narrow cycle lane immediately adjacent to vehicle lanes and with steel edge barriers
- Pier layout and deck elevation of bridge enables boat passage, boat moorings immediately to south.



Figure C-2.2: Photo 2–1 Existing view to the north adjacent Rosebank Domain on off-road route



Figure C-2.3: Photo 2–2 Existing view westwards adjacent to Rosebank Domain



Figure C-2.4: Photo 2–3 Existing view westwards crossing the Whau River on the off-road route

# Western Ring Route > Waterview Connection



Figure C-2.5: Whau River existing plan

# Section C ► Sector Design Concepts

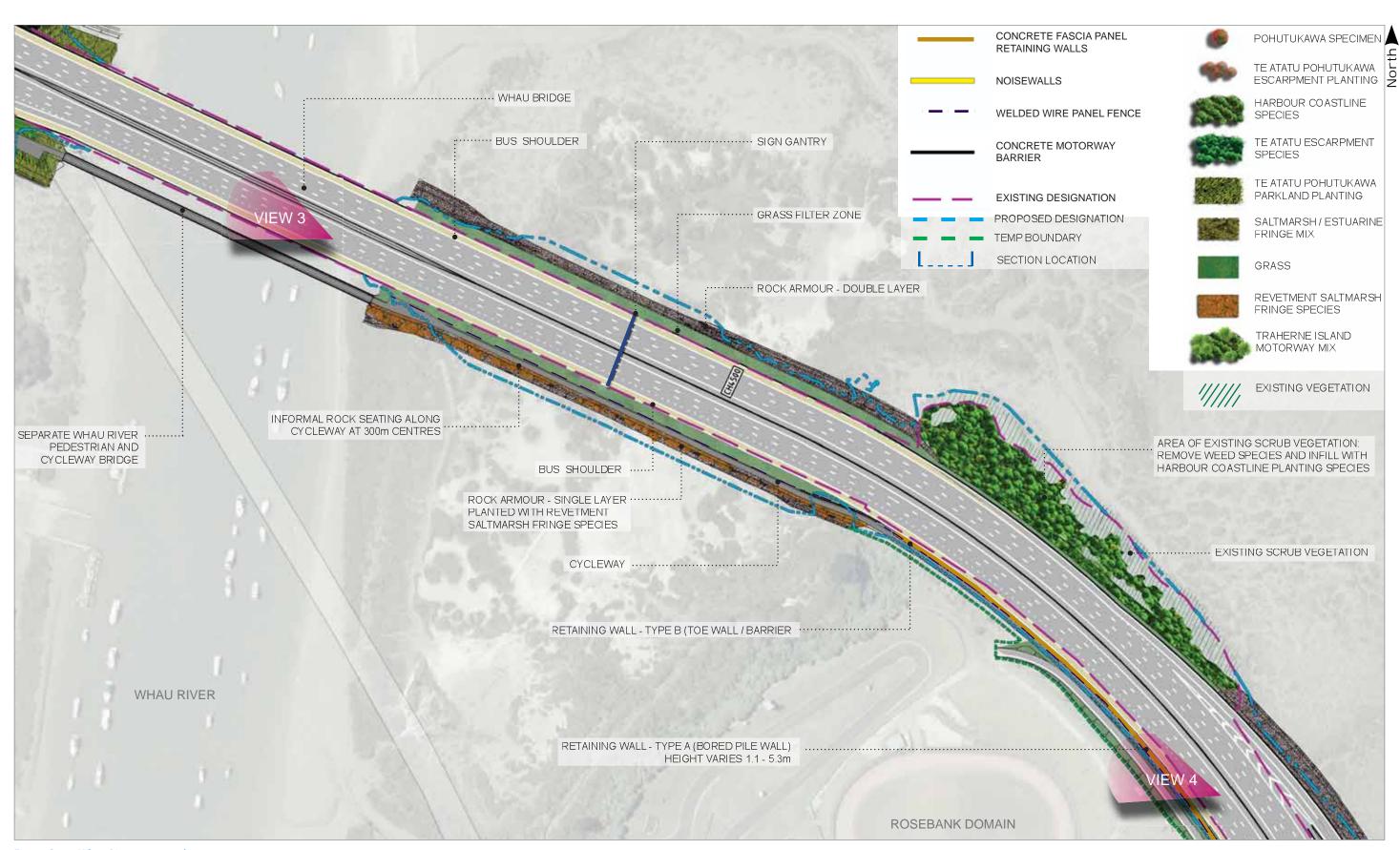


Figure C-2.6: Whau River concept plan

## Western Ring Route > Waterview Connection

### C2.1.2 Design concept

### Movement and connectivity

- Motorway is widened with an additional lane in each direction and continuous bus shoulders
- Cycleway is separated from the road on a new bridge (Fig C-2.7 to 10).

### Landscape, planting, views

- Land reclamation enables inclusion of grassed filter strips for stormwater in the clear zone area
- Saltmarsh species are to be planted into the new 'rip-rap' boulders forming the coastal armour on the southern edge of the motorway, as soon as areas of armour are completed to minimise establishment of weed species. In cases where additional boulder armour needs to be provided as part of the contract, for example due to settlement, additional plantings should be provided in the same manner
- Coastal harbour species planted in strategic location on northern edge of motorway
- Strength of existing open views into Waitemata Harbour and southern extent of the Whau River retained through planting and clear zone strategy
- Raised cycleway on retaining wall arrangement at Rosebank Domain gives exposure to views for cyclists, and varies the route experience (refer Figure C-2.11).

### Urban form

No direct change to urban form.

### Structures

- New separated cycle and pedestrian bridge: form, colour and detailing consistent with other cycleway bridges to support a 'whole route' cycle experience
- Vehicle bridge widened; concrete safety barriers with metal rail above 800mm high (Figure C-2.10)
- New bridge piers align with existing piers to maintain boating channel below. Cycleway bridge may have fewer piers than vehicle bridge
- Retaining wall west of the on-ramp up to 5.5m high, cycleway on top. Wall is bored pile with concrete panels; concrete vehicle barrier at base. Panels complement the horizontal landscape; subtle pattern seeks not to compete with landscape and relates to panels in use on SH18.



BALUSTRADE PANELS 20x5mm STEEL FLATS (I) MAX 100mm SPACINGS DAINT ENISH

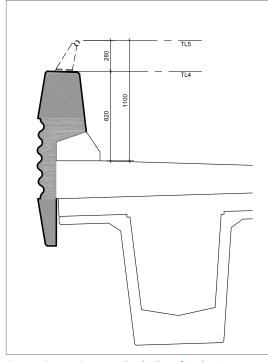


Figure C-2.7: Concept sketch of future bridge separation at Whau River (View 3)

Figure C-2.9: Concept design, pedestrian and cycle bridge

Figure C-2.10: Proposed vehicle safety barrier

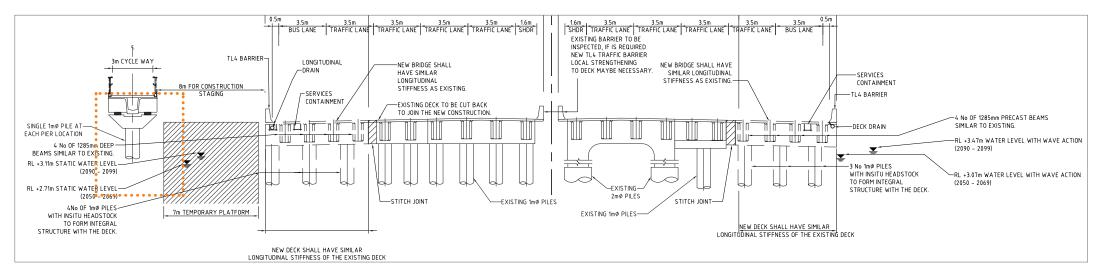


Figure C-2.8: Engineering arrangement proposals, Whau River bridges



Figure C-2.11: Visualistion of view at Rosebank Domain (View 4)