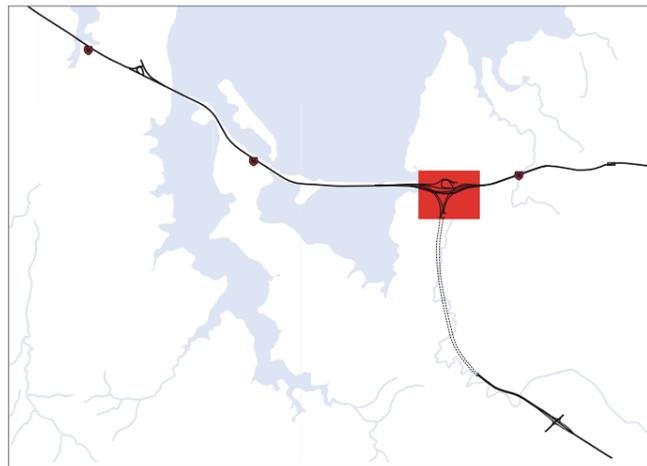


C5 Sector 5 Great North Road Interchange



C5.1 Existing situation

Sector 5 of the project extends from the Waterview Park area, and includes the ramps and alignment associated with the connection of SH20 to the Northwestern Motorway (the Waterview interchange).

C5.1.1 Movement and connectivity

- The archaeologically significant Star Mill site is not currently publicly accessible.
- Pedestrian connections to Waterview and Unitec are provided along Carrington Road and under SH16. The amenity of the pedestrian links is poor
- The 10km North-western cycle way (SH16) is a dedicated cycle way which includes a bridge over Great North Road and follows the northern edge of Unitec campus
- Oakley Creek and the Waterview Esplanade are not currently linked. The pedestrian path terminates at the Great North road pedestrian / cycle bridge, from where there is a connection to the North-western cycleway but not with the esplanade
- Current on and off ramp configuration takes up considerable footprint north of SH16; there are opportunities for rationalising.
- Significant and expansive views across the Waitemata Harbour toward Te Atatu become apparent just west of the interchange. Similar views are available from Waterview Esplanade, as well as the Great North Road cycle overbridge
- East of the interchange, the motorway becomes more visually confined as it travels through a series of volcanic cuttings, with exposed basalt clearly visible.
- The southern Point Chevalier residential catchment around Miller St has elevated views of the interchange, while views from the Waterview community are largely confined by intervening vegetation and open space.
- Waterview coastal properties view SH16 to the north across the inner Waitemata Harbour.
- Topography and surrounding houses restrict views to and from Waterview Park and Waterview Esplanade to those houses immediately bordering the parks.

C5.1.2 Landscape, planting, views

- Oakley Creek is a significant landscape feature of the sector, and follows the toe of the Mt Albert lava flow
- The Great North road interchange sits at Oakley Creek mouth, where it joins Waitemata Harbour, although views to the creek are highly restricted by intervening weed species growing along the creek margins
- Public open spaces in this sector include the two-hectare Waterview Park with a largely active recreation function, Waterview Esplanade on the south shores of Oakley Creek south of SH16, and Saxon Reserve - a community park centrally located within the Waterview neighbourhood
- The northern portion of the Oakley Creek Esplanade Corridor also sits within this sector, across Great North Road from the proposed interchange works
- Two schools exist in or near this sector: Waterview Primary, between Oakley Avenue and Herdman Street, and St Francis Primary, on Montrose Street. Both have views towards the proposed interchange works.
- Much of the planting around the motorway and nearby public spaces is a mix of grass, exotic weeds and some regenerating native 'pioneer' species. The Oakley Creek Esplanade corridor is the exception, where significant weed clearance and native replanting has taken place.



Figure C-5.1: Photo 5-1 View towards the proposed Great North Road interchange from Eric Armishaw Reserve

Western Ring Route ▶ Waterview Connection



Figure C-5.2: Sector 5 existing plan

Section C ▶ Sector Design Concepts

C5.1.3 Urban form

- Point Chevalier commercial node at the corner of Great North Road and Pt Chevalier Road is a low scale mix of commercial and residential buildings. Between is the Unitec Campus with a diverse collection of buildings from various eras set within landscaped grounds
- The Waterview neighbourhood is a low scale, 'fine grain' urban area characterised by single-storey houses on relatively generous sections. Along Great North Road between the school and the interchange is a townhouse development with a uniform two-storey scale
- Apart from the existing interchange, the mature trees of the Unitec campus are the dominant features on the skyline.

C5.1.4 Structures

- A large expanse of land is taken up by the interchange, dominated by elevated roading structures with open grassed areas in between on and off ramps
- The pedestrian / cycle bridge over Great North Road offers attractive views over the Oakley Creek Esplanade and the Waitemata Harbour
- The effects of replacing parkland with motorway structures including ventilation stacks, control buildings and ramps are significant and include the removal of existing housing along Great North Road
- The interchange further segregates the residential neighbourhoods of Point Chevalier to the north and Waterview to the south.



Figure C-5.3: Photo 5-2 View towards Great North Road interchange from the end of Maryland Street



Figure C-5.4: Photo 5-3 Elevated view of Great North Road interchange from Alberta Street

Western Ring Route ▶ Waterview Connection

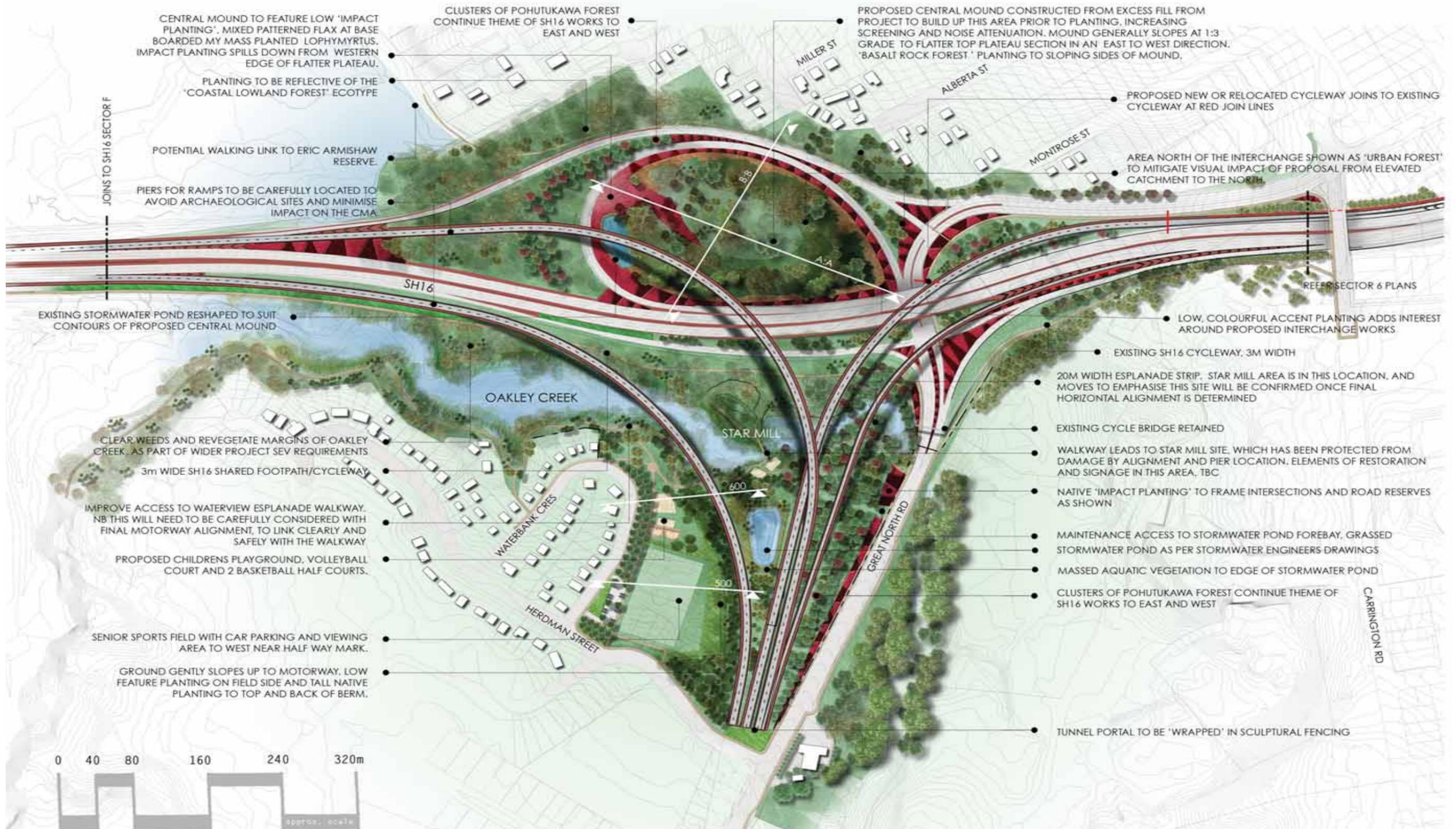


Figure C-5.5: Sector 5 concept plan

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C5.2 Design concept

C5.2.1 Movement and connectivity

- The design provides an extension of the walkable coastal route for local residents
- The cycle and pedestrian network will also enable appreciation of the revegetated Oakley Creek / Waterview Esplanade environment
- The SH16 cycleway is reconfigured to ensure connectivity under the new ramps, linking to the existing bridge over Great North Road. The 3m wide path is set back from the motorway to run alongside Oakley Creek. Visual connections between the cycleway and the Waterview Esplanade Reserve are also provided
- A 20m wide strip of land along Oakley Creek through the interchange area is to be vested in Council as a reserve and provided with all-weather tracks, including access to and potential interpretation of Star Mill site
- The existing connection to Point Chevalier town centre is maintained, with a new footpath connection to Eric Armishaw Park (refer Figure C-5.5)
- The interchange comprises four new ramps to connect SH20 to SH16:
 - A two lane westbound ramp will take traffic from the tunnel (SH20) towards Waitakere (SH16);
 - A two lane southbound ramp will take traffic from Waitakere (SH16) towards Maoro Street, the Airport and SH1;
 - A two lane eastbound ramp for traffic emerging from the tunnel (SH20) will connect with SH16 towards the city in the vicinity of the Carrington Road Bridge (there is no bus lane on this ramp); and
 - A single lane southbound ramp will take traffic coming from the City (SH16) and connect with SH20 towards Maoro, the Airport and SH1

- Auckland City Council are seeking an additional lane on Great North Road for a northbound bus lane between Oakley Ave and the Waterview interchange (within the project construction area). The bus lane is seen by Council as passenger transport enhancement measure to avoid morning peak period congestion
- Work is currently under way between NZTA and ACC to determine the potential benefits of providing a bus lane in this location. Provision of the bus lane is however outside the WRR – Waterview Connection project and will be a matter for ACC to pursue through network planning work being led by NZTA.

C5.2.2 Landscape, planting, views

- To the north, the existing on/off ramp north of SH16 will be reconfigured to create an 'urban forest', visually counterbalancing the interchange structures, while providing screening from the elevated northern catchment of Point Chevalier. There is also potential to mound up an area to minimise the height of piers supporting the flyovers, doubling as a visual screen between the new motorway structures and Point Chevalier residential properties. Refer to Figure C-5.5 and accompanying sections in Figures C-5.6 – C-5.7)
- Substantial planting is proposed around the interchange itself and along the riparian Oakley Creek tidal mouth. Retention of existing trees offers an opportunity to offset the scale of the new structures
- The Star Mill 'archaeological park' will be highlighted through:
 - retention of original foundations
 - seating and signage
 - sections of path or boardwalk to protect historic midden sites
 - gabion walls including site artefacts.Refer Figure C-5.10 and C-5.11 for concept landscape plan and indicative sections for this area
- Within the 'archaeological park' a karaka grove will be formed from existing historic planting strengthened by new planting.
- A stormwater treatment pond will attenuate flows and treat motorway runoff prior to entering the catchment.
- The wetlands design will take into consideration NZTA's Stormwater Treatment Standards for Road Infrastructure, and ARC's design manual, 'Making the most of Auckland's stormwater ponds, wetlands and rain gardens'.

C5.2.3 Urban form

- Properties along Great North Road and Herdman Street will be demolished for construction lay-down and parks, and to accommodate the new ramps and tunnel control / ventilation building
- The interface with existing land uses (houses and the school) will comprise a combination of noise bunds, walls and planting to mitigate the acoustic and visual impact of the ramps and buildings
- The single storey scale of existing buildings is retained as far as possible by undergrounding one level of the control building
- Part of the area of NZTA land not required for the interchange will be reinstated as a landscaped buffer between houses and the ramps
- A number of options have been investigated for the reinstatement of land in the vicinity of Waterview. The option to be consented is for removing housing along Waterbank Crescent and extending the area of Waterview Park to provide public open space replacing that lost to the motorway structures. This requires Saxon Reserve to be included in the open space provision. It has the advantage of 'putting back' open space in the immediate vicinity of the existing local park although it also precludes the potential for this project to enhance open space elsewhere. (refer Figures C5-8–C5-9).

Western Ring Route ▶ Waterview Connection

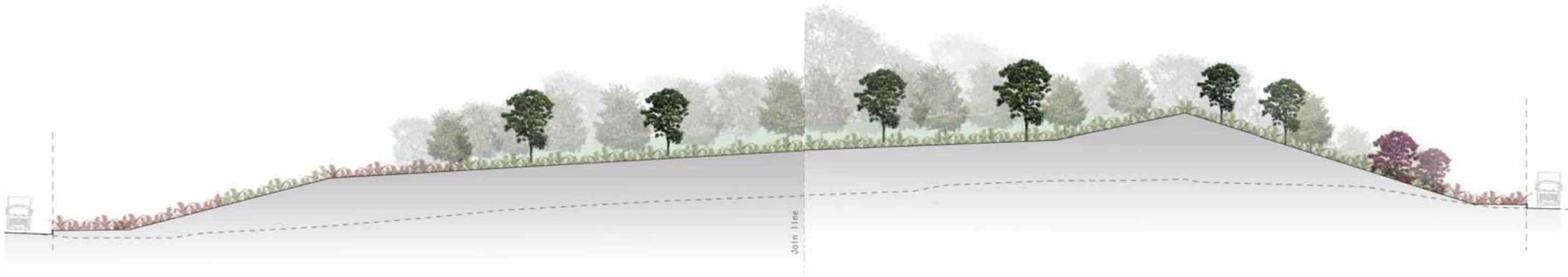


Figure C-5.6: Sector 5 future sections A-A through mound

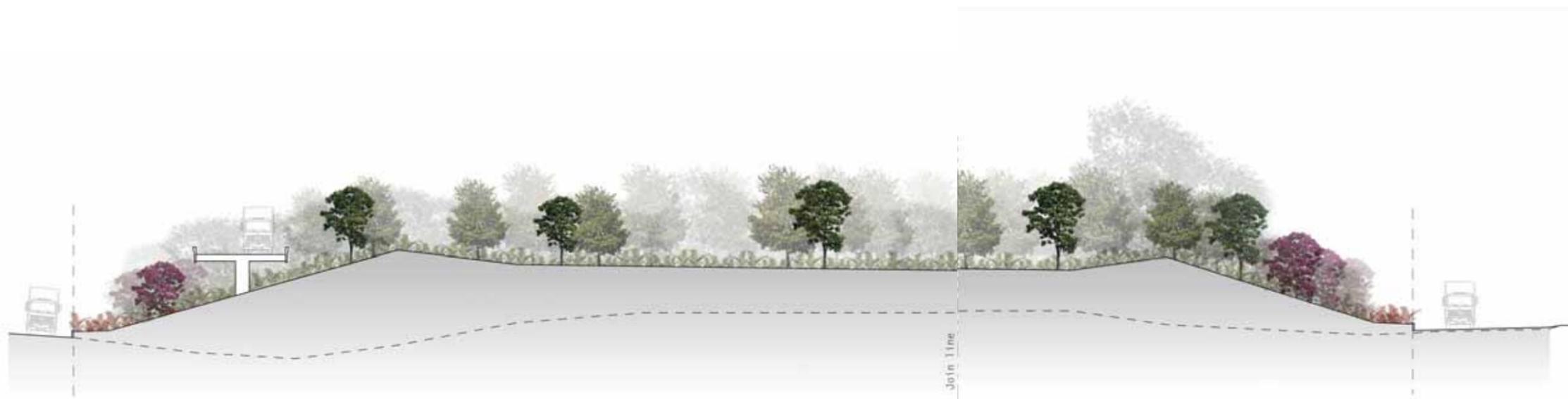


Figure C-5.7: Sector 5 future sections B-B through mound

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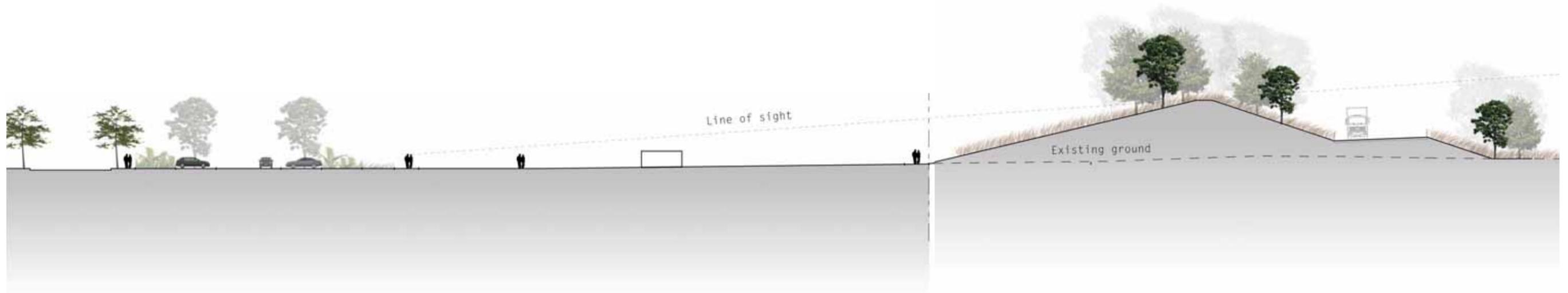


Figure C-5.8: Sector 5 future sections @ CH500: Waterview Park

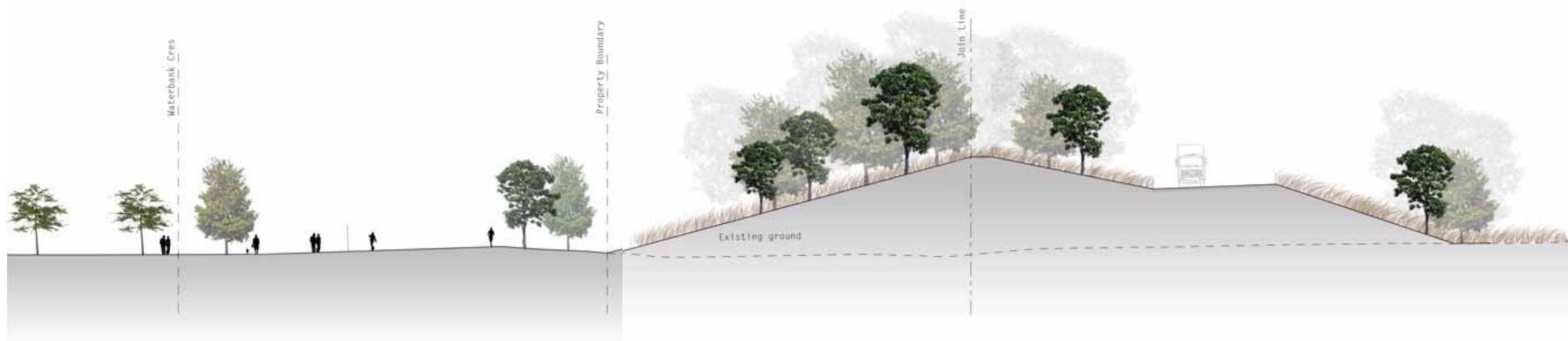


Figure C-5.9: Sector 5 future section @ CH600: Waterview Park

Western Ring Route ▶ Waterview Connection

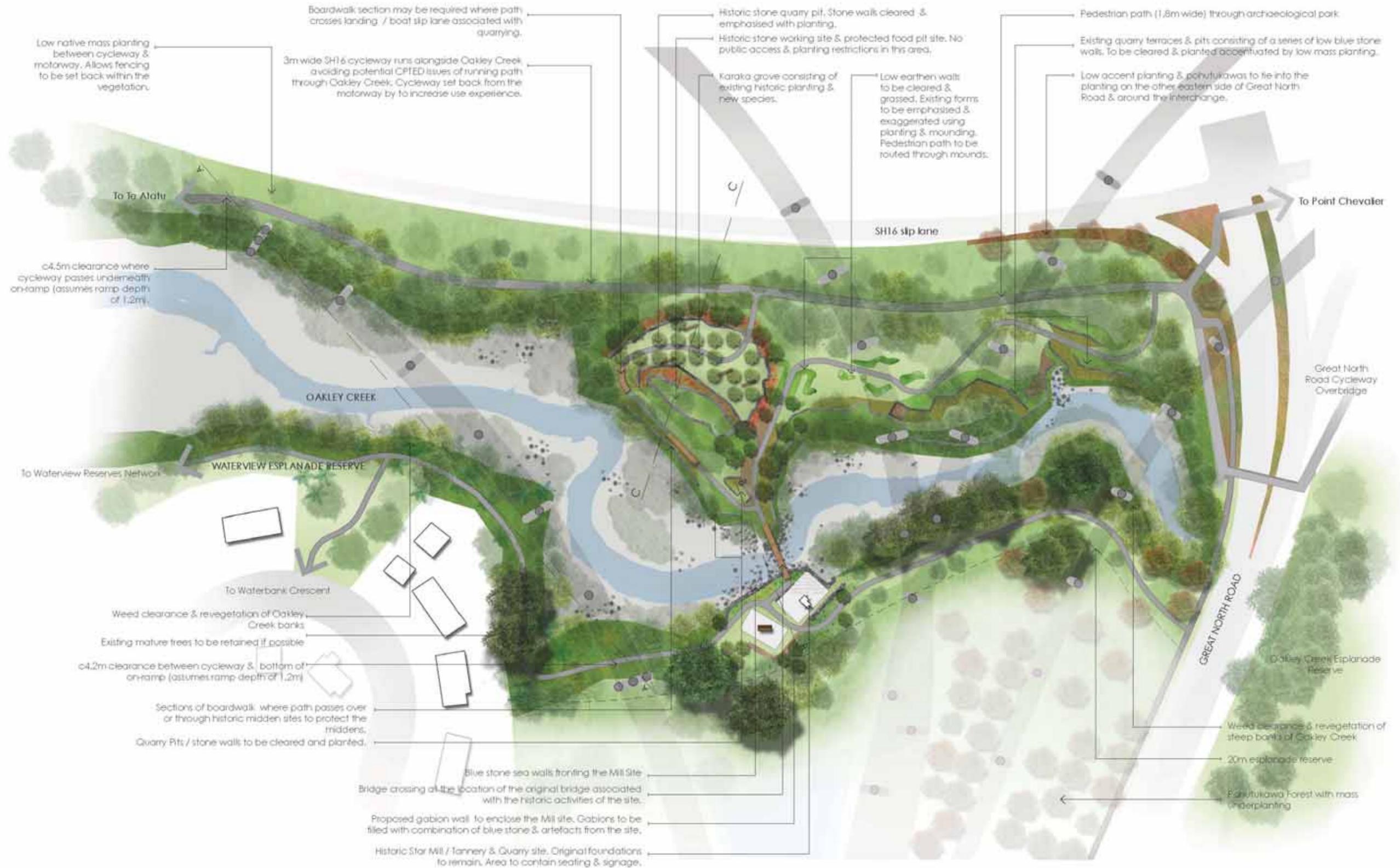


Figure C-5.10: Oakley Creek landscape concept plan

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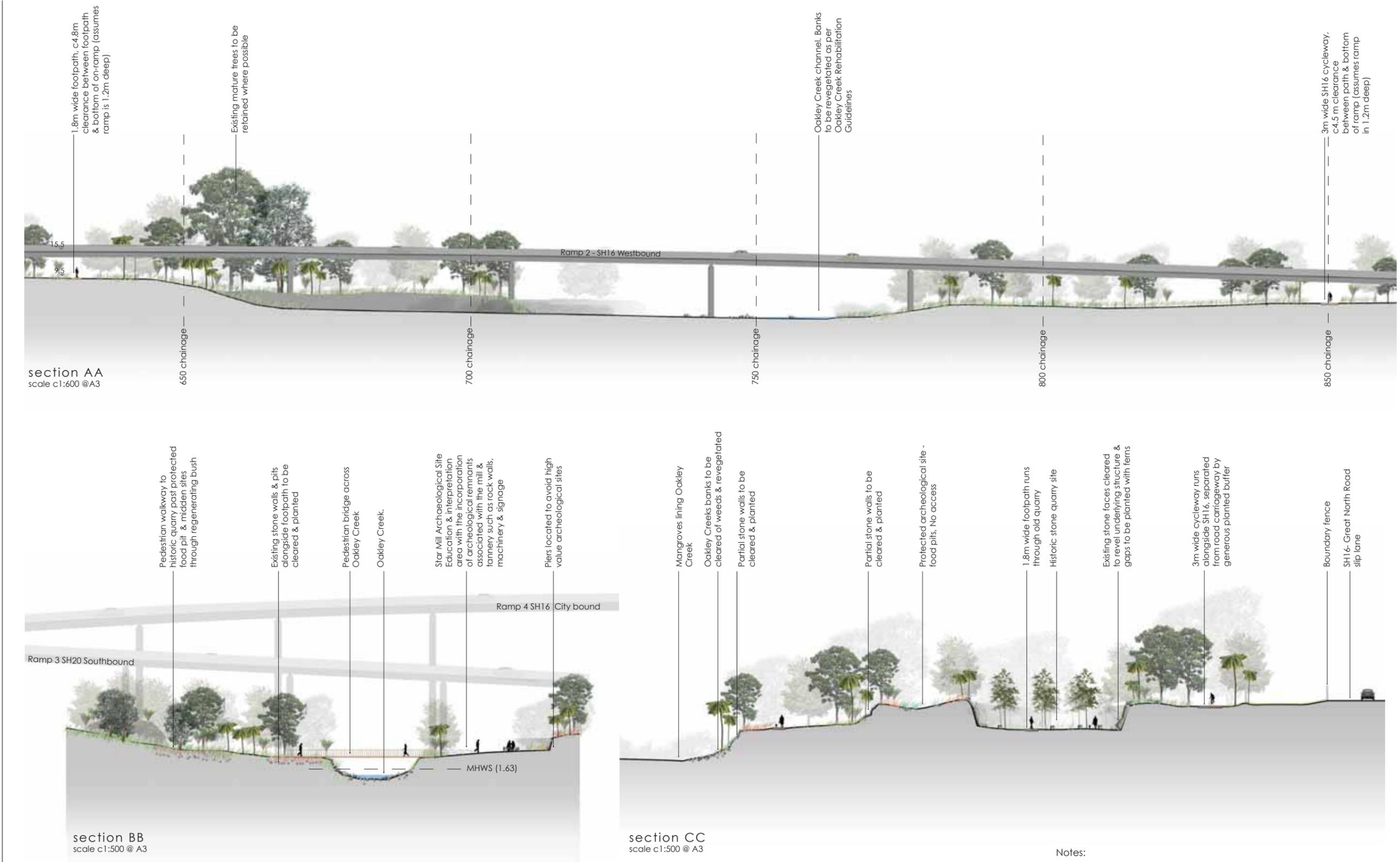


Figure C-5.11: Oakley Creek concept sections

Western Ring Route ▶ Waterview Connection

C5.2.4 Structures

- The Waterview flyovers should be designed to optimise both an aesthetic and environmental outcome by:
 - presenting a coherent appearance, especially from underneath (cycle / pedestrian path through the sensitive coastal environment and linking to the heritage site(s))
 - ideally utilising a box beam to give a flowing profile and enable longer spans and therefore fewer piers in the Coastal Management Area (refer to Figure C-5.12)
 - having a simple, angled profile to the barriers. Surface design treatment should be limited to the external face of the barrier and should be a simple 'all-over' texture.
- The northern portal building will be semi-buried to minimise its bulk, and covered with a green (grassed) roof to provide visual mitigation. Its form complements the landscape features of the site
- The 25 metre high ventilation stack is required to be located as close as possible to the tunnel mouth. The tunnel control building/ventilation stack will be designed as a positive feature in the landscape. (refer Section C7 for more detail of this and the associated northern portal building).

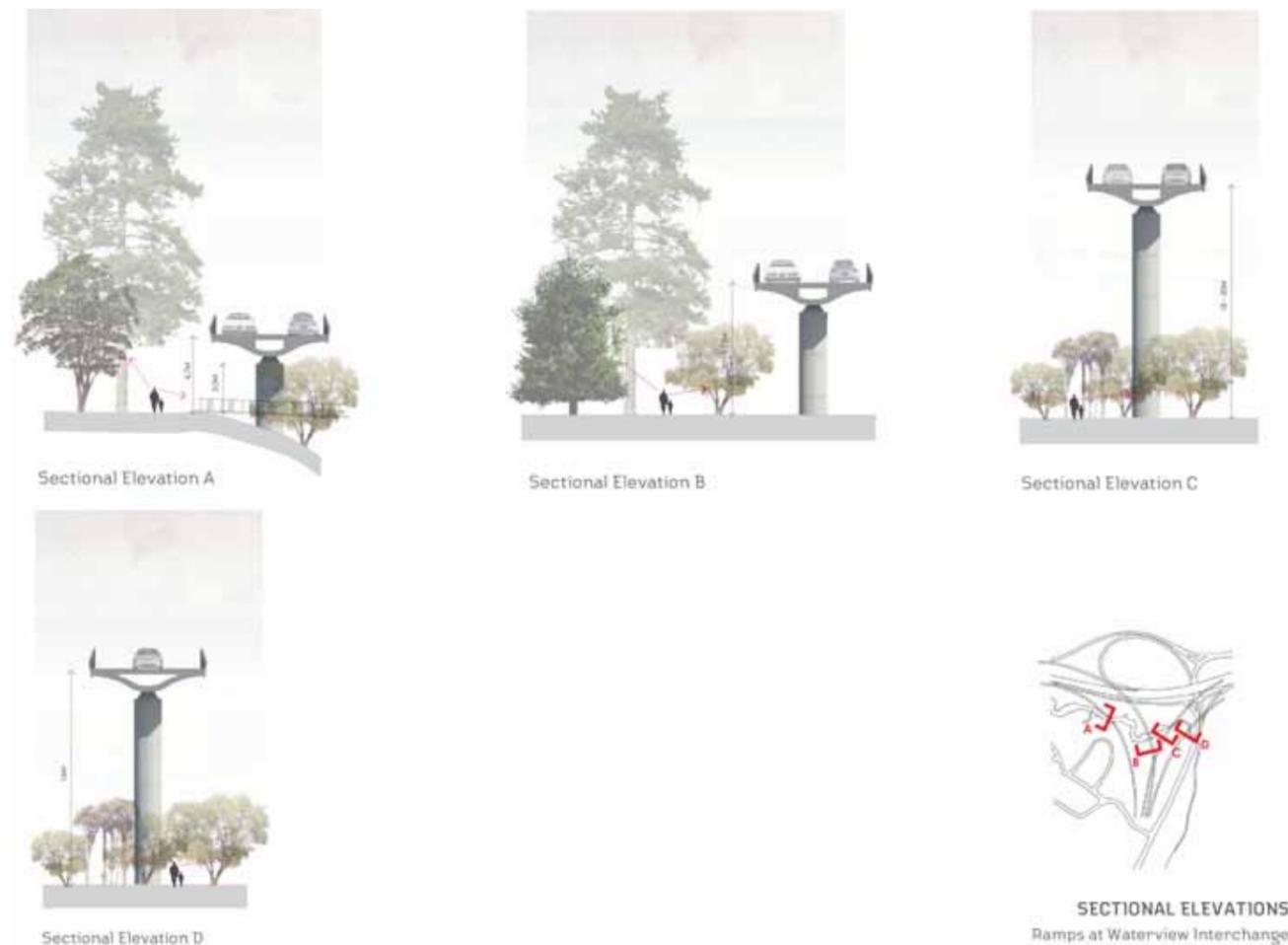


Figure C-5.12: Concept for flyovers at Great North Road Interchange