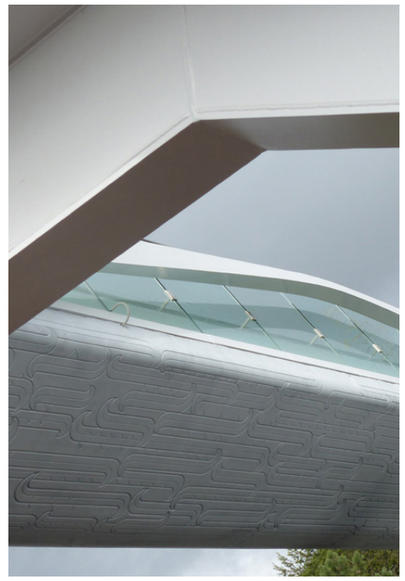
BRIDGES- PRECEDENTS



Resolution Point - Auckland | *Experience and Accessibility - Forms and Materials*

TQ2 -Bristol | *Experience and Accessibility - Forms and Materials*

BRIDGES - PRECEDENTS 2

Qatar - Velo Mondial | Model | *Experience and Accessibility - Forms and Materials*

Arnhem Nijmegen - Netherlands | Model | *Experience and Accessibility - Forms and Materials*

Waimea River -Nelson NZ | *Experience and Accessibility - Forms and Materials*

Onehunga-Auckland | *Location - Experience and accessibility - Forms and Materials*

To enhance cyclist and pedestrian amenity and landscape experience and as per required and best practice CPTED and traffic and engineering standards:

* for cyclist and pedestrians, adjacent residents/properties with an open outlook, motorists & train passengers

LOCATION

1. The underpass should be at grade with the surrounding land and offer a straight route and line of sight so that one end of the underpass is visible from the other. Ngauranga approach/exit sightlines should be improved
2. Maximise passive surveillance from the road/rail corridor
3. Minimise the covered length of the underpass route

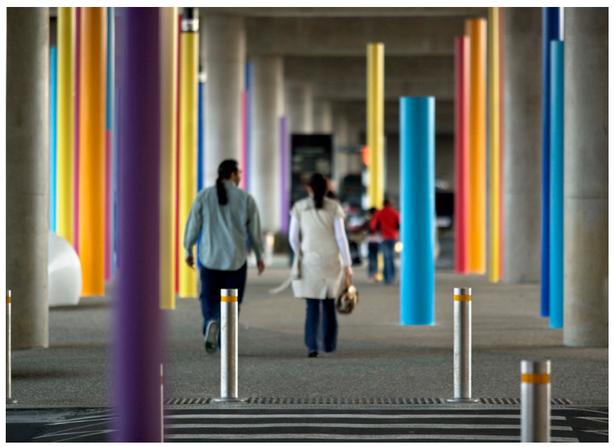
EXPERIENCE AND ACCESSIBILITY

4. Provide a typical 3m smooth surface concrete path (4m at handle bar height) with levels and cross fall to assist drainage/natural soakage and maintenance and avoid buildup of debris
5. Maximise light levels during the day and provide appropriate levels at night including natural day lighting via median skylights in new bridges/flyovers
6. Ensure clear sight lines near the underpass approach. Planting areas near the Ngauranga interchange need to be rationalised
7. Underpasses should be as wide and as high as possible to maximise light penetration, visibility and amenity. Note: Opportunities to widen the existing path at Ngauranga could include realignment of the off ramp and service road.
8. Avoid wall recesses to reduce CPTED issues and litter
9. Integrate approach areas to improve amenity Note: at Ngauranga this could include improvements to the crib wall vegetation and at Petone revegetation of the banks Korokoro Stream

FORMS AND MATERIALS

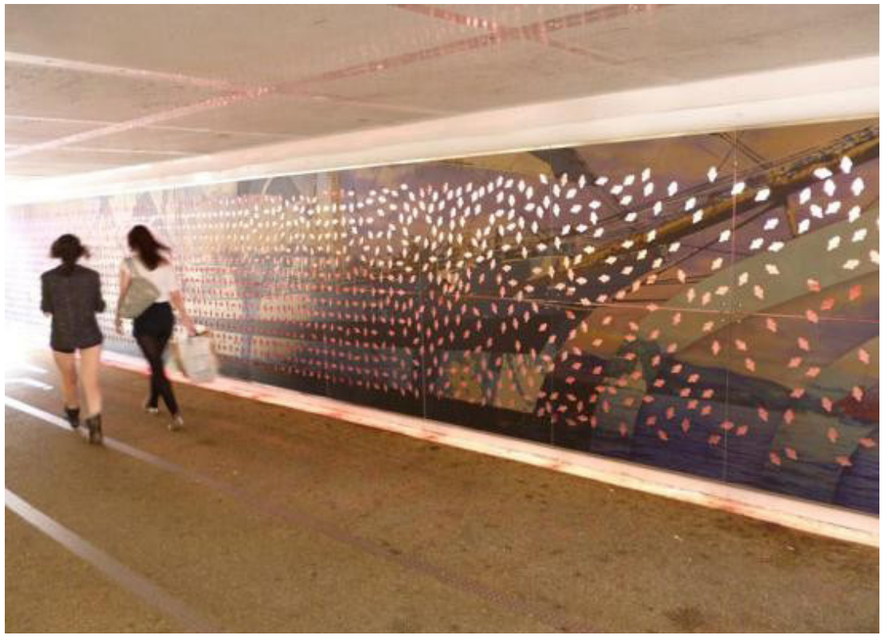
10. Use art/colour/patterns/textures and/or feature paving/lighting as part of a coherent route wide treatment and to emphasise the natural and cultural context of Ngauranga and Petone. Avoid visual clutter and token motifs
11. Use robust, long life vandal proof materials including lighting fixtures to minimise maintenance and life costs

Terminus Hoeheim North - Strasbourg | *Location - Experience and accessibility - Forms and Materials*



Slyvia Park - Auckland | *Location - Experience and accessibility - Forms and Materials*

FLYOVER UNDERPASS - PRECEDENTS



Greenock -UK | *Experience and accessibility - Forms and Materials*

Milton Keynes -UK | *Location - Experience and accessibility - Forms and Materials*

Larissa Ave - Maroondah Australia |*Location - Experience and accessibility - Forms and Materials*

Cumbernauld - Scotland |*Experience and accessibility - Forms and Materials*

COASTAL RECLAMATION ROUTE

URBAN AND LANDSCAPE DESIGN PRINCIPLES

To enhance amenity and landscape experience* and as per required and best practice CPTED, traffic and engineering standards:

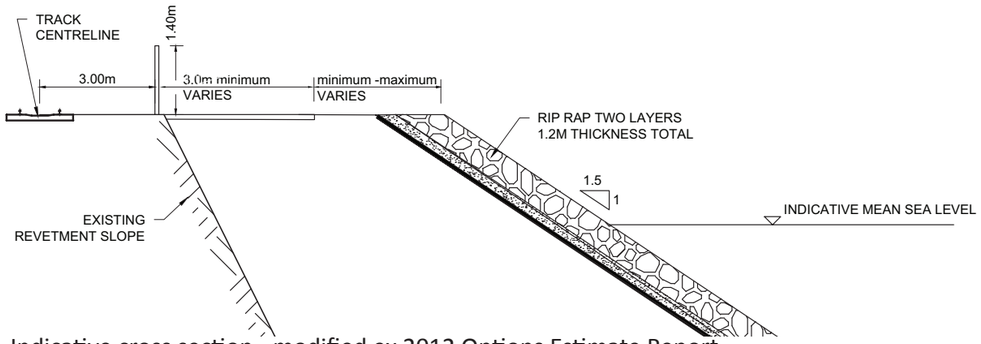
* for cyclist and pedestrians, adjacent residents/properties with an open outlook, motorists & train passengers

LOCATION

1. Set the path back (>800mm) from the edge of the embankment and provide rip rap 'upstand' to increase fall safe areas and protection from sea spray/debris. [ref New Plymouth cycleway standards]
2. Ensure good sightlines to the water i.e. a maximum path setback [ref New Plymouth cycleway standards]
3. Set the path at a level to ensure views from the rail/road corridor are maintained and provide passive surveillance
4. Locate offline facilities and attractions with existing sites of natural or cultural significance. For example, align with existing rock outcrops/beach areas, Paroro- rangi- kainga, Te Ana Puta cave, Horokiwi bridle trail and to provide lookout points to Matiu Island and the city

EXPERIENCE AND ACCESSIBILITY

5. Provide a minimum 3m smooth surface concrete path (4m clearance at handlebar height) with levels and cross fall to assist drainage/natural soakage and maintenance including buildup of debris after a storm event
6. Vary the path section and/or details as part of a coherent route wide treatment and at offline areas to provide visual/sensory interest and in response to adjacent features
7. Provide offline facilities for comfort, safety, views and to enhance experience of the coastal environment (indirect/direct access). This could include shelter structures, seating, jetties and steps etc. Ensure good sightlines/views and passive surveillance from the path and the rail/road corridor.
8. Maximise visual connections with the sea and coastline. Note: all fences (including those under 1m/visually permeable) will have some adverse effects on connectivity. Setback can be used to control fall from height areas and to reduce spray hazard. Fencing along the coastline is also likely to collect debris and is likely to be difficult to maintain after storm events due to damage and debris buildup. Fences will be required in fall from height areas and may add amenity in offline areas e.g. associated with jetty structures/viewing platforms
9. Use visually permeable fencing along the rail corridor (1.4m recommended) to ensure passive surveillance
10. Prioritise pedestrian and cyclist safety and amenity in the design and location of Kiwirail offline areas. Minimise additional construction and maintenance requirements. Laydown areas should be located to the west of the rail fence
11. Provide appropriate night light levels along the path and to enhance amenity and safety around offline areas Avoid light spill and nuisance to adjacent train and road corridor users. These could be LED with sensors and dimmer



Indicative cross section - modified ex 2012 Options Estimate Report

EXPERIENCE AND ACCESSIBILITY (cont'd)

12. Minimise signage through clear sight lines and natural wayfinding. If required, integrate signage and interpretation elements as part of a coherent route wide treatment, to complement other forms and materials and in response to natural and cultural features
13. Ensure all structures and footings are recessed back from the main path to avoid snags and can be cleared of debris
14. Provide simple/safe connections for continued commuting, recreation and other valued destinations e.g. cafe/ museum/retail. Include connections/upgraded paths to Aotea Quay, Hutt Rd- Petone Station-Jackson St, Petone Foreshore (e.g. Stage 1 pave and widen existing gravel path to wharf to avoid roundabout) and Belmont Regional Park (e.g. new GWRC track off McKenzie bridge could link to existing KoroKoro track)

FORMS AND MATERIALS

15. Use robust, long life vandal proof materials including lighting and signage to minimise maintenance and life costs
16. Use a limited palette of materials and forms with reference to adjacent infrastructure and landform patterns. Use clean simple lines and finishes and larger scaled units/structures
17. Use art, colour and feature lighting, paving and fencing as part of a coherent route wide treatment to provide: visual/sensory interest; further amenity around offline areas; and a response to features of the Wellington Harbour. Avoid visual clutter and token motifs
18. Use rip rap or gravel as a typical path edge
19. Use Wellington ecosourced low growing rocky shore species around existing outcrops/offline areas. Note: Appropriate tree species are very limited due to the harsh conditions. Pohutakawa would grow and maintain a reasonable form. However, this species is not indigenous to the Wellington Region and any trees are likely to block sightlines and lift paving
20. Maximise habitat for benthic /coastal edge communities in final formations of reclaimed areas

New Plymouth Foreshore | *Location - Experience and accessibility - Forms and Materials*

Coney Isl - New York |*Location - Experience and accessibility - Forms and Materials*

Lisbon |*Location - Experience and accessibility - Forms and Materials*

Melbourne | *Location - Experience and accessibility - Forms and Materials*

New Plymouth *Location - Experience and accessibility - Forms and Materials*

COASTAL RECLAMATION ROUTE - PRECEDENTS 2

Oriental Bay |*Location - Experience and accessibility - Forms and Materials*

Elwick Bay - Hobart |*Location - Experience and accessibility - Forms and Materials*

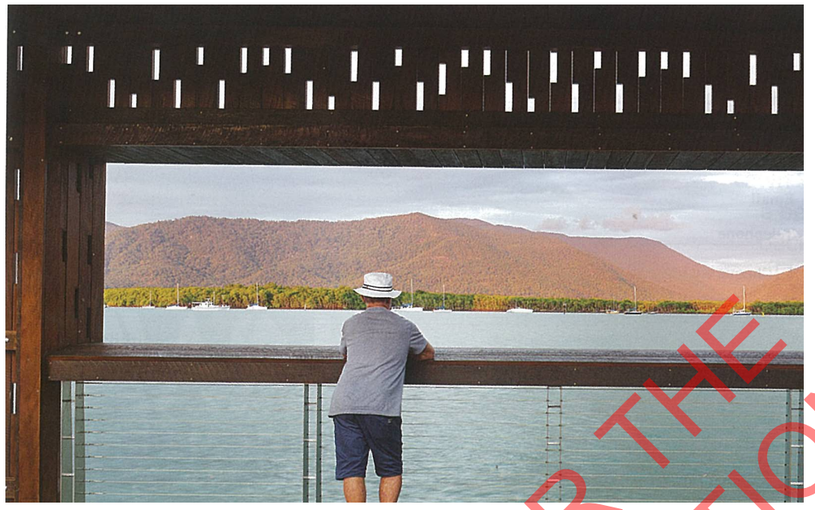
Laperouse - Sydney |*Location - Experience and accessibility - Forms and Materials*

New Plymouth foreshore |*Location - Experience and accessibility - Forms and Materials*

Glenorchy Hobart |*Location - Experience and accessibility - Forms and Materials*

COASTAL RECLAMATION ROUTE - PRECEDENTS 3

Pirrama Park - Sydney |*Location - Experience and accessibility - Forms and Materials*



Cairns Foreshore | *Loction - Experience and accessibility - Forms and Materials*

Cairns Foreshore | *Loction - Experience and accessibility - Forms and Materials*

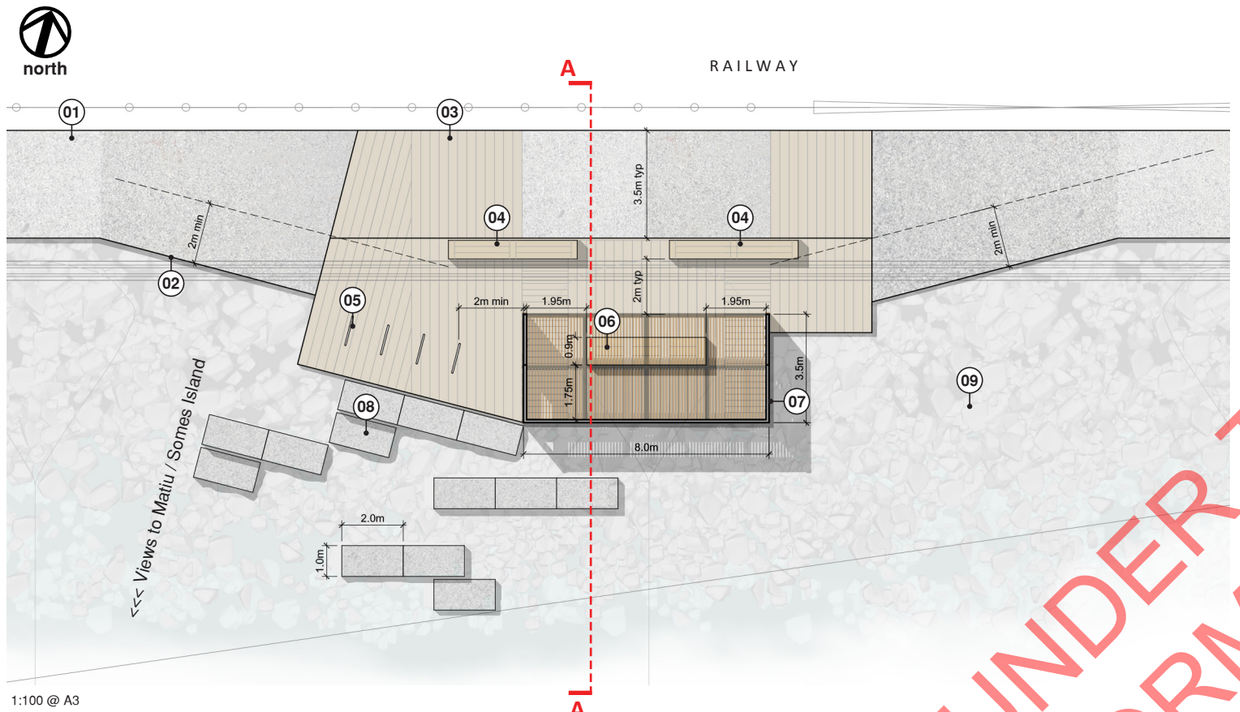
Evans Bay Wellington | *Location - Experience and accessibility - Forms and Materials*

Sydney - Bondi to Cogee | *Location - Experience and accessibility - Forms and Materials*

New Plymouth foreshore | *Location - Experience and accessibility - Forms and Materials*

Sydney cycleways | *Experience and accessibility*

COASTAL RECLAMATION ROUTE - INDICATIVE LANDING + SHELTER



1:100 @ A3

Indicative Plan: Coastal Reclamation landing, with lookout and shelter from wind and sun.

1:100 @ A3

Indicative Cross Section A - A: Coastal Reclamation landing, with lookout and shelter from wind and sun.

01 Proposed 3.5m shared insitu concrete path.

02 7m long transitional splay for cyclists.

03 Reclaimed hardwood wharf timbers set into concrete paving.

04 Hardwood timber and precast concrete seating.
- e.g. 0.6m wide by 4.2m long

05 4no. stainless steel cycle stand
- e.g. Plant mounted Type A cycle stand by Fel Group.

06 Hardwood timber and precast concrete double sided seating.
- e.g. 0.9m wide by 4.0m long

07 Steel and timber lookout shelter with protection from elements.
e.g.
- Hardwood timbers varying in size
- H.D galv painted structural steel work as required.
- H.D galv painted steel panels & 1.0m high balustrade

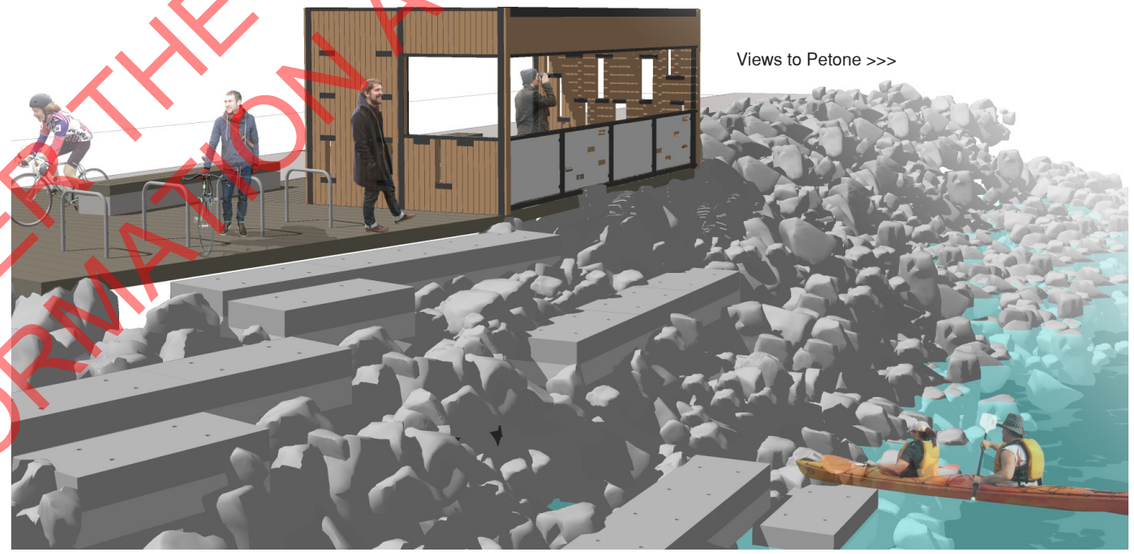
08 Reclaimed wharf pontoons used as stepping stones and access to the water's edge.
- Approx 1m by 2m, 0.6m deep.

09 Reclamation rip rap as specified by engineer.

NOTE:
Possible location @ approximate chainage: 1000, 2850, 3900.
Other pedestrian/cyclist shelter/station options could include cantilevered jetty and terraced steps. (See page 3 for precedents.)

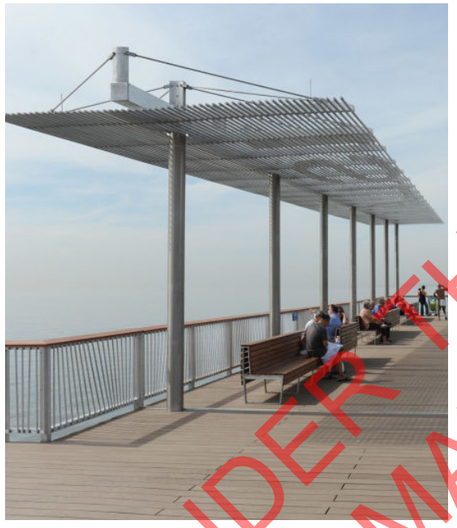
COASTAL RECLAMATION ROUTE - INDICATIVE LANDING + SHELTER

Indicative view from 3.5m shared path looking towards Petone.



Indicative view sea showing reclaimed rip rap and shelter.

New Plymouth foreshore |Location - Experience and accessibility - Forms and Materials



Coney Isl - New York |Location - Experience and accessibility - Forms and Materials

An Turas Tiree - Shetland Islands|Location - Experience and accessibility - Forms and Materials

View towards Wellington City - from near possible pedestrian/cyclist shelter/station @ approximate chainage 4150.

HIGHWAY ROUTE UPGRADE

URBAN AND LANDSCAPE DESIGN PRINCIPLES

To enhance amenity and landscape experience* and as per required and best practice CPTED, traffic and engineering standards:

* for cyclist and pedestrians, adjacent residents/properties with an open outlook, motorists & train passengers

LOCATION

- Set the grade of the path to ensure good views/passive surveillance from the rail/road corridor
- Maximise separation of the cycle path from the carriageway

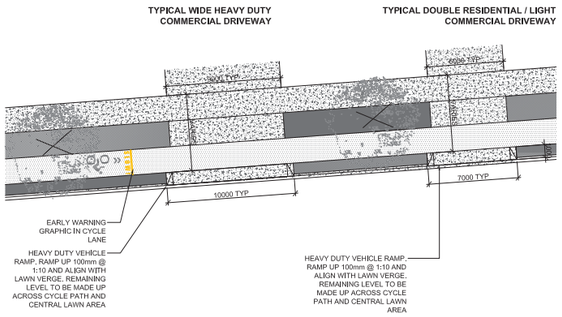
EXPERIENCE AND ACCESSIBILITY

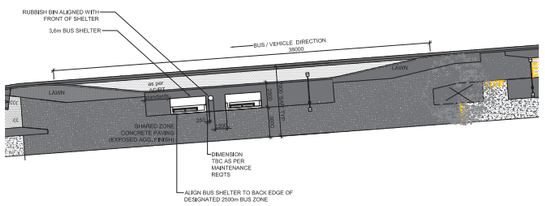
- Provide a typical 3m smooth surface asphalt path (4m clearance at handlebar height) with grade and cross fall to assist drainage and maintenance as part of the road corridor. Avoid additional kerb and channels; these will collect debris
- Use a limited range of alternative path widths (e.g 1.5, 2.0 and 2.5) with consistent transition treatment including changes to paving and supergraphics that reinforce cues for movement/ requirement for reduced speed
- Provide appropriate night light levels along the path and to enhance amenity and safety. Avoid light spill and nuisance to adjacent train and road corridor users
- Minimise signage. Where required, integrate wayfinding signage as part of a coherent route wide treatment Use supergraphics and co-locate signs on existing posts
- Remove vegetation along the edges of the path to improve sightlines and reduce hazards and debris
- Ensure all structures and footings are recessed back from the main path to reduce snag hazards and avoid debris buildup
- Use a consistent guardrail treatment separated from the path by at least 1m or smooth surface to avoid snag hazard
- Use permeable fencing along the rail corridor
- Provide clear/safe connections for continued commuting, recreation and other valued destinations e.g. cafe/ museum/retail. Include connections/upgraded paths to Aotea Quay, Hutt Rd- Petone Station-Jackson St, Petone Foreshore (e.g. Stage 1 pave and widen existing gravel path to wharf to avoid roundabout) and Belmont Regional Park (e.g. new GWRC track off McKenzie bridge could link to existing KoroKoro track)

FORMS AND MATERIALS

- Use robust, long life vandal proof materials including lighting to minimise maintenance and life costs
- Use a limited palette of materials and forms with reference to adjacent infrastructure patterns. Use clean simple lines and finishes and larger scaled units/structures
- Use colour/patterns and/or feature paving/lighting as part of a coherent route wide treatment and to emphasise the natural and cultural context of Ngauranga and Petone. Avoid visual clutter and token motifs

Albany Highway

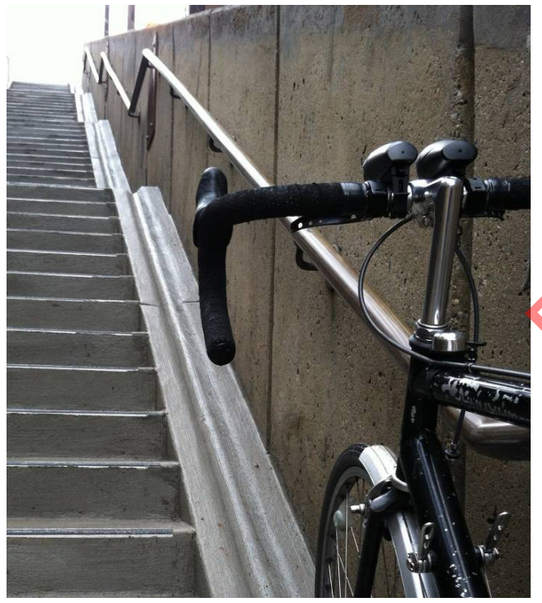




CYCLE INFRASTRUCTURE- PRECEDENTS

Rest rail

Repair station



Stair Rail

Eye level Signals

Racks

Hub storage