8.0 Landscape Design

Planting Palette

PORTALS INDICATIVE PLANTING SCHEDULE					
FRANGIBLE REGENERATION PLANTING					
Botanical Name	**Common Name**	**Mature Height**	**Mature Width**	**Spacing**	**Pot Size**
Shrubs and Groundcovers					
Banksia integrifolia	Coast Banksia	6m	3m	As Shown	300mm
Callistemon 'Captian Cook'	Bottlebrush	3-5m	1.5m	As Shown	300mm
Callistemon viminalis	Weeping Bottlebrush	3-5m	1.5m	As Shown	300mm
Dianella caeruleavar caerulea	Flax-lily	0.3m	0.3m	6/m²	150mm
Dianella caerulea 'Breeze'	Flax-lily	0.5m	0.5m	6/m²	150mm
Grevillea 'Robyn Gordon'	'Robyn Gordon'	1-1.5m	1m	As Shown	300mm
Hakea dactryloides	Broad-leaved Hakea	1-2m	1m	As Shown	300mm
Lomandra longifolia	Mat-rush	1m	1m	4/m²	150mm
Hardenbergia violacea	Purple Coral Pea	.75m	1.5m	4/m²	150mm
Lomandra hystrix	Basket Grass	0.6m	0.6m	6/m²	150mm
Themeda australis	Kangaroo Grass	0.4-0.8m	1m	6/m²	150mm

Banksia integrifolia

Callistemon citrinus 'Captian Cook'.

Themeda australis

Lomandra hystrix

Grevilea.sp

Hakea dactryloides

Dianella caerulea 'Breeze'

Dianella caerulea

8.0 Landscape Design

8.16 Landscape Management Report

Landscape Management Plan

A dedicated maintenance team of qualified landscape contractors would undertake the maintenance for a one year period, required by the SWTC, or as otherwise negotiated with Roads and Maritime/ Transurban.

A detailed Landscape Management Plan would define the goals and objectives of the landscape maintenance, identify specific problems and issues, outline appropriate corrective measures and identify a program of works to complete ongoing maintenance, as well as implementing improvements.

The Landscape Management Plan would include the principles and practices to be adopted in the maintenance of the soft landscape during the construction period and ongoing Maintenance Period to ensure:

- Retention and protection of the existing Sydney Blue Gum and Sydney Turpentine Ironbark forest;
- Revegetation of cleared native bushland areas, the health and vigour of all trees, shrubs and natives;
- Maintenance of grasses;
- Creation of a landscape which remains aesthetically pleasing to motorists and adjacent land owners;
- Ongoing maintenance of safety requirements;
- Control of weeds; and
- A clean and litter free environment.

All works would be undertaken by qualified landscape contractors, experienced in horticultural maintenance and management techniques. Their duties would include weeding, fertilising, pruning, slashing, mowing, replanting and seeding.

Construction and plant establishment period

Although plant establishment and landscape maintenance works would commence during the construction period, establishment maintenance would be undertaken over a 12 month period following completion of each part of the landscape works.

The following works would be undertaken as a minimum during the construction and plant establishment period:

- Seeded areas would be watered, as required, to germinate the seed and maintain healthy growth of the plants;
- Seeded areas showing poor growth or damage would be cleared of dead vegetation and all lost topsoil replaced. The area would then be recultivated and reseeded;
- All new planting would receive watering to ensure that a level of moisture is maintained and that plants are not permitted to dry out. This would be dependent upon natural rainfall levels;
- Mulch would be maintained in a weed free condition and topped up as required;
- All planting areas would be kept free of grass and weed. Grass and weed removal would be carried out at intervals of not more than four weeks. Weeds that cannot be controlled by a glyphosate-based herbicide would be removed by hand and removed from the site area;
- Plants would be sprayed to control disease and insect infestation, as required;
- Tree guards would be maintained around each plant so that the natural plant growth is not impeded or restricted. Damaged and missing tree guards would be replaced;
- Mowing of sightline clear zones would be maintained as per Roads and Maritime requirements;
- Rubbish would be removed and the site kept neat and tidy;
- Stakes and tree guards would be removed at the end of the plant establishment period;
- Failed, damaged or stolen plants in significant locations would be replaced; and
- Maintain healthy weed-free growth.

Ongoing maintenance

The Maintenance Team would include qualified landscape contractors, experienced in horticultural maintenance and management techniques, who would undertake the monitoring, assessment, identification and completion of ongoing maintenance works. In particular, the team would undertake the tasks as outlined in the following table:

Task	Time Frame
Sightlines Ensure vegetation growth is maintained within the required threshold, so as not to restrict safety sightlines within the road corridor. This would include grass cutting and pruning of shrubs and trees, if required.	Monthly
Clear Zones Ensure the removal of regenerated, inappropriate woody species within designated frangible clear zones.	Six Monthly
Weed Control On-going weed control.	Monthly.
Erosion Control Ensure the repair and revegetation of any area where erosion occurs.	Monthly
Pest and Diseases On-going treatment of any infestation of pests and diseases.	Monthly
Fences Removal of tall shrubs, trees and climbers around fences	Six Monthly

Ongoing maintenance, beyond the one year period specified, would be carried out by Roads and Maritime's regular Highway Maintenance team for routine maintenance.

8.0 Landscape Design

8.17 Landscape Topsoil - Principles and Guidelines

Site Topsoil

Site topsoil would be used, as defined in Roads and Maritime Specifications R178 (Vegetation) and R179 (Landscape Planting) and Appendix 22 of the SWTC. Site topsoil shall be collected from site, stockpiled, tested and ameliorated, as required. (Refer Topsoil Area Calculation Table page) The stockpiled topsoil shall be weed free and ensure the following;

- Topsoil general
- Soil testing and any amelioration recommendations would be carried out by a suitably qualified soil scientist.
- Site topsoil identified for reuse shall be stripped and stockpiled on site, following screening and sorting as required.
- Site topsoil must be weed free, where weed free topsoil means topsoil or other growing medium which is free of weeds or other unintended or undesirable species.

Soil testing

A soil paedology survey and analysis would be undertaken with each soil landscape and vegetation community type. Each soil landscape and vegetation community type would be tested in three locations, each with three sampling depths of A1, A2 and B1 horizon. Soil testing would be undertaken by a National Association of Testing Authority (NATA) registered laboratory and would includes Ph, salinity, cation exchange capacity, plant available phosphorous, total organic matter, total nitrogen and carbon/nitrogen.

Soil testing and any recommendations for soil management would be made by an appropriately qualified professional soil scientist.

Topsoil from site

Site topsoil used in landscape planting must be produced from earthworks on the site. If site topsoil is produced, then it must only be taken from soil that is stockpiled on site and that material must be previously identified by the Trans Urban Environmental Manager for stripping and re-use as topsoil. Before use, screen and sort topsoil to remove weeds stumps, roots, clay lumps or stones greater than 50 millimetres in size.

All topsoil re-used within landscape areas must be prepared in the following manner:

- A representative programme of soil sampling of substrate subgrades and proposed weed free topsoils to address any soil deficiencies, including soil pH analysis, has been undertaken during the detailed design period and the results of the tests, together with advice from a qualified professional soil scientist, has been used to determine the requirements for soil improvement and stabilisation to enable the establishment and maintenance of successful long term seed and plant growth and vegetation cover;
- Contain no refuse or materials toxic to plant growth. If so additives must be added during ripping, as required by the Soil Scientist;
- Must be weed free ;
- Be free of any material with a particle size exceeding 50 millimetres;
- Prior to the placement of topsoil, the contractor must continually eradicate weeds to treatment and adjoining areas, until weed growth four (4) weeks after the last spray comprises less than 5% cover, and then eradicate the remaining weeds;
- On all 2:1 cut and batter slopes the contractor must rip the subsoil to depths ranging from 50-100 millimetres using the tynes on a swivelling head excavator bucket, or by some other means to form a loosened or roughened surface suitable for the application of topsoil. During ripping, mix in any materials required by the soil testing into the upper 100 millimetres layer to the rates specified within the soil testing recommendations. Rip parallel to the contour where possible.
- Soil tests shall be arranged by the Trans Urban Environmental Manager once site topsoil stockpiles are produced and the results provided to the Contractor prior to commencement of the Landscape Planting operations.
- Site topsoil shall only be re used when approved by the Trans Urban Environmental Manager.

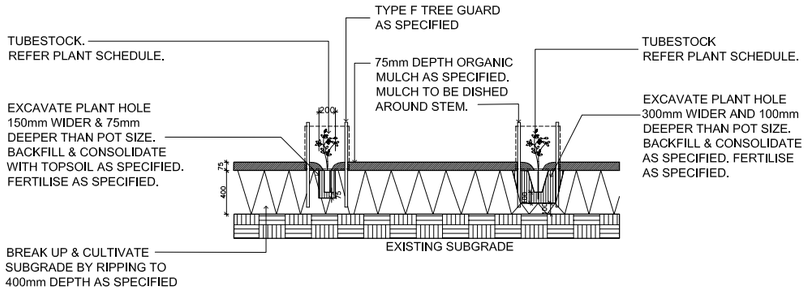
Stockpiles

Place topsoil stockpiles a minimum of five metres from any existing retained vegetation, concentrated water flow, roads and hazards areas.

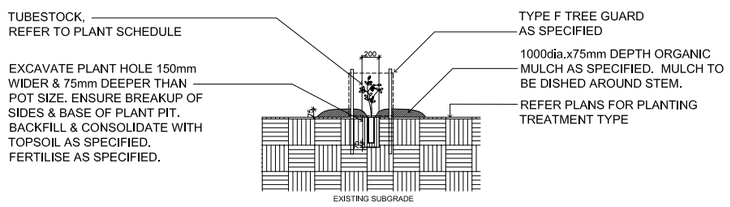
- Construct on the contour as low, flat, elongated mounds.
- Topsoil stockpiles to be less than two metres in height.
- Construct earth banks on the upslope side to divert water around the stockpiles and sediment fences one to two metres down the slope.
- Placement of topsoil on cut and fill batters steeper than 3:1
- Scarify the ground surface along the line of the contour to a depth of 50 millimetres to 100 millimetres to break up any hardsetting surfaces and to provide a good bond between the respread material and subsoil.
- Add soil ameliorants and other recommendations as indicated by soil testing.
- Where possible, replace topsoil to a depth of 75 millimetres on lands where the slope exceeds 3:1 and at least 75 millimetres-150 millimetres on lower gradients.

8.0 Landscape Design

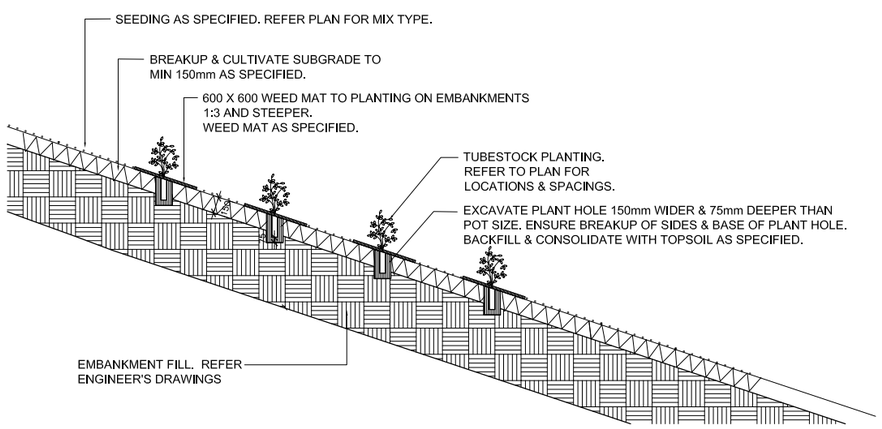
8.17 Typical Landscape Details



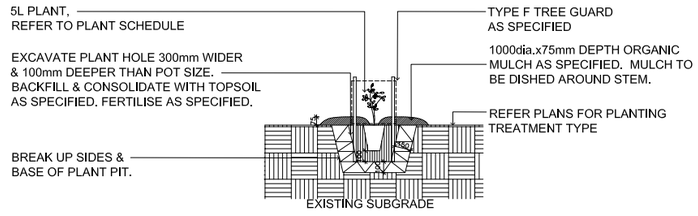
1. TUBESTOCK PLANTING DETAIL



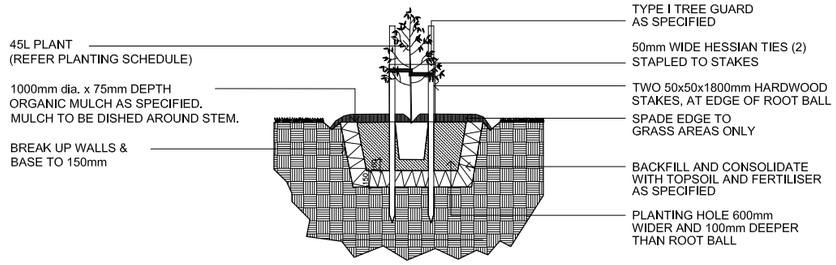
2. TUBESTOCK PLANTING DETAIL



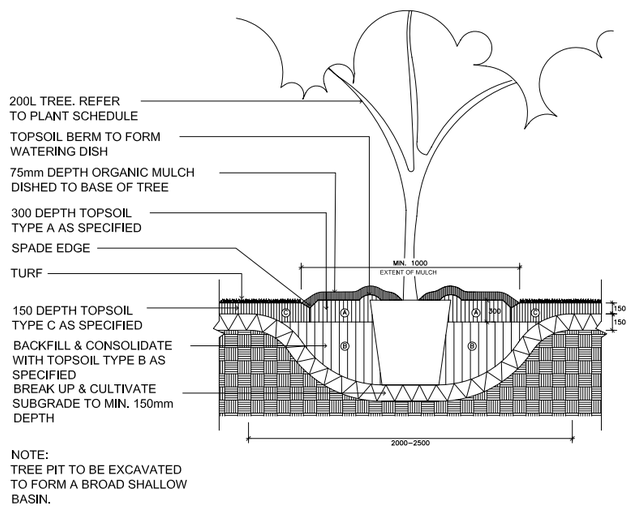
3. TUBESTOCK PLANTING ON 1:3 EMBANKMENT



4. 5L PLANTING DETAIL



5. 45L TREE PLANTING DETAIL



NOTE:
TREE PIT TO BE EXCAVATED
TO FORM A BROAD SHALLOW
BASIN.

6. 200L TREE PLANTING DETAIL

9.0 Sustainability

The project would be supported by a robust sustainability strategy. The strategy would inform decisions on urban design, architecture and landscape design. It is intended that further initiatives can be brought on line during the life of the project.

This approach underscores the project commitment to both the well being of the environment and of individuals working within the project facilities as well as those using the infrastructure for travel.

This includes:

Roadway Users

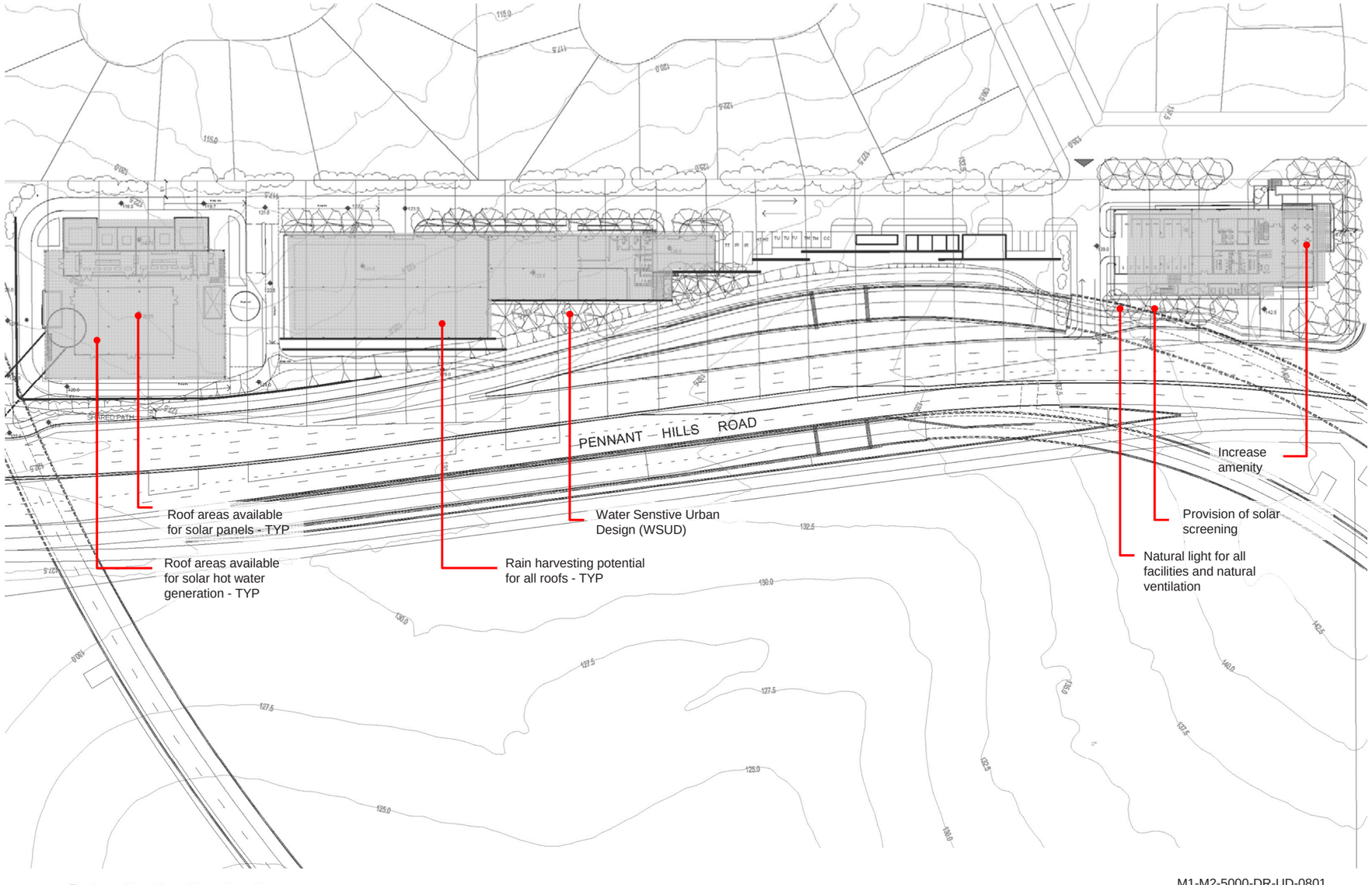
- More efficient fuel consumption due to smoothed traffic flows and elimination of a significant number of traffic lights and stopping points along the journey.

Facility Staff

- Increased amenity in the form of exterior break out spaces; and
- Appropriate landscaped treatments for exterior spaces that encourages use.

Architecture

- Provision for renewable energy generation in the form of solar panel installation;
- Solar hot water generation;
- Low water use fixtures;
- Use of high efficiency appliances;
- Use of LED lighting where practical;
- Rainwater Harvesting;
- Provision for natural ventilation;
- Provision for natural light for all facilities;
- Providing good orientation to the majority of office spaces;
- Provision of solar screening;
- Use of insulated glass in all occupied spaces;
- Use of environmentally compatible materials such as GRC;
  - It consumes less energy and is manufactured from naturally occurring raw materials;
  - The composite consists of natural earth oxides, and the wash water used during manufacturing is alkaline. It is stored in settlement tanks so not released through drainage; and
  - The material is light weight, consumes less energy during transport therefore also contributing to reduced transportation costs.



M1-M2-5000-DR-UD-0801
MOTORWAY OPERATIONS COMPLEX – SUSTAINABILITY FEATURES

9.0 Sustainability

Urban Design Initiatives

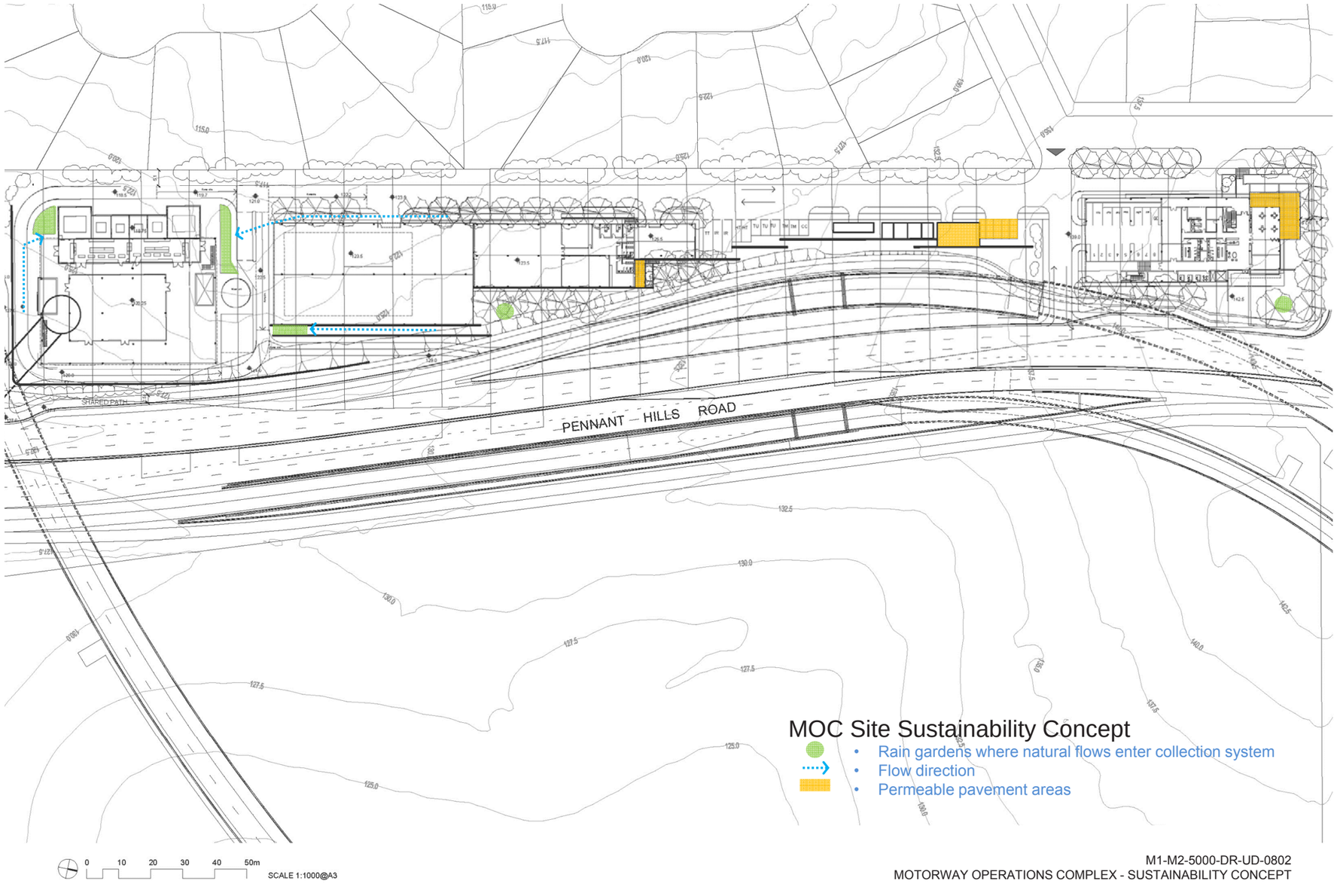
Urban design initiatives include surface treatments, site organisation strategies and water management initiatives.

Water Sensitive Urban Design features:

- Working with the existing drainage pattern to collect site storm water.
- Rain gardens to treat surface runoff prior to entering the drainage collection system;
- Use of permeable pavement in lightly trafficked vehicular areas;
- Use of permeable pavement for terrace areas; and
- A detention basin has been located below the covered service yard.

Landscape

- Use of drought resistant indigenous planting in most places; and
- Restoration of disturbed landscapes



10.0 Noise Barriers

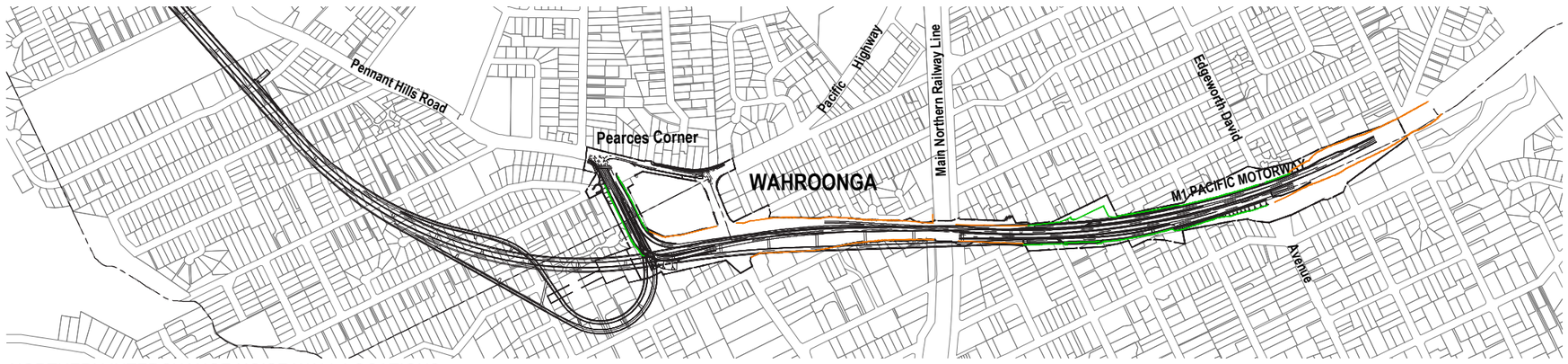
10.1 Introduction

Noise mitigation would be provided by noise walls designed to provide solutions to particular situations along the route.

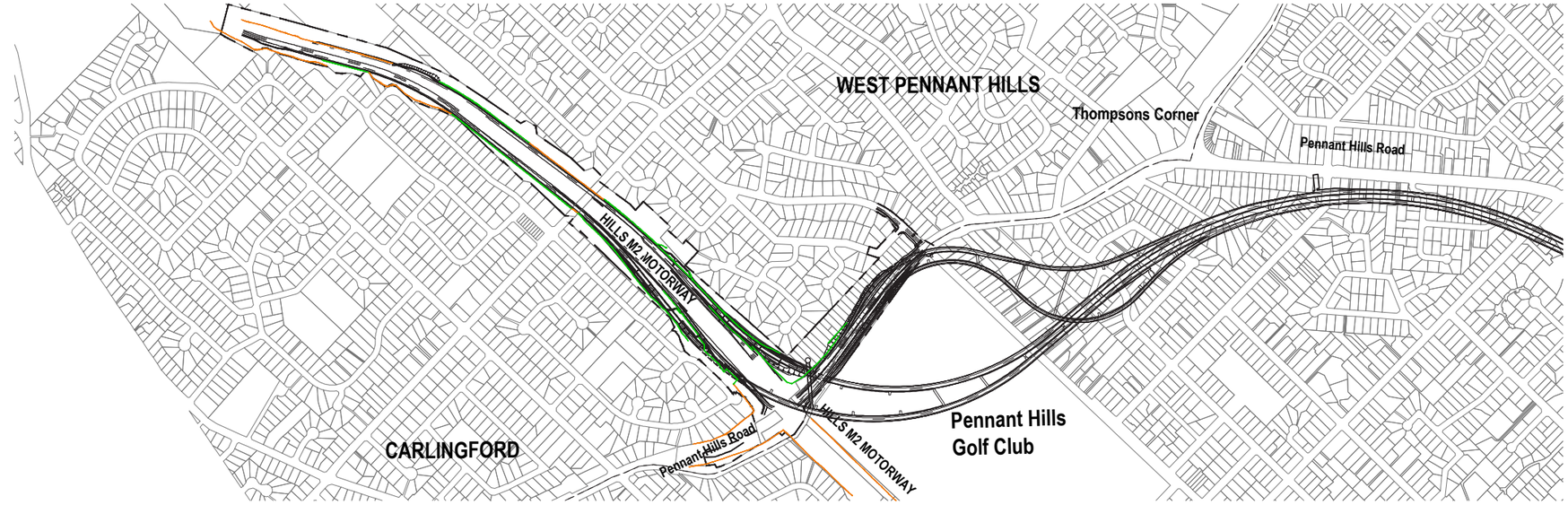
10.2 Principles

The guiding principles in the development of the designs for these elements have been to:

- Achieve maximum noise attenuation for each noise catchment area and related noise wall type;
- Moderate the visual impact of noise walls as much as possible;
- Design noise walls to provide subtle, calm, visual relief, including noise walls as a base for works of art, as a background for planting and to enhance or frame views by use of transparent sections, and
- Implement both the principles of linear identity and lateral integration in the selection of noise wall type and in their placement.



NORTHERN INTERCHANGE NOISE WALL LOCATIONS



SOUTHERN INTERCHANGE NOISE WALL LOCATIONS

LEGEND

Existing Noise Wall to be retained

New Noise Wall

0 50 100 150 200 250m

SCALE 1:5000@A3

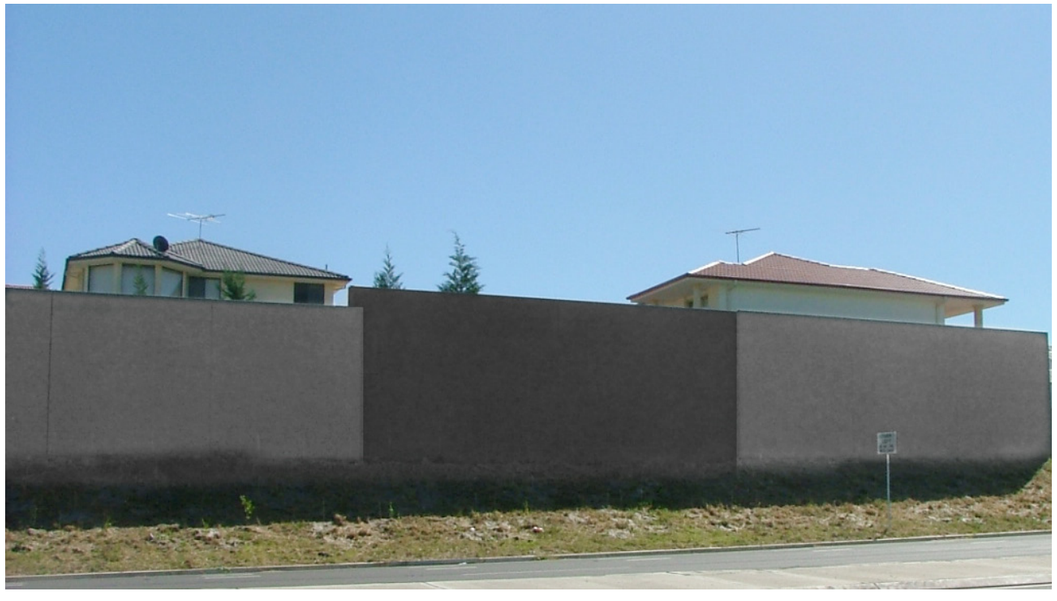
M1-M2-5000-DR-UD-0811
NOISE WALL LOCATIONS - KEY PLAN

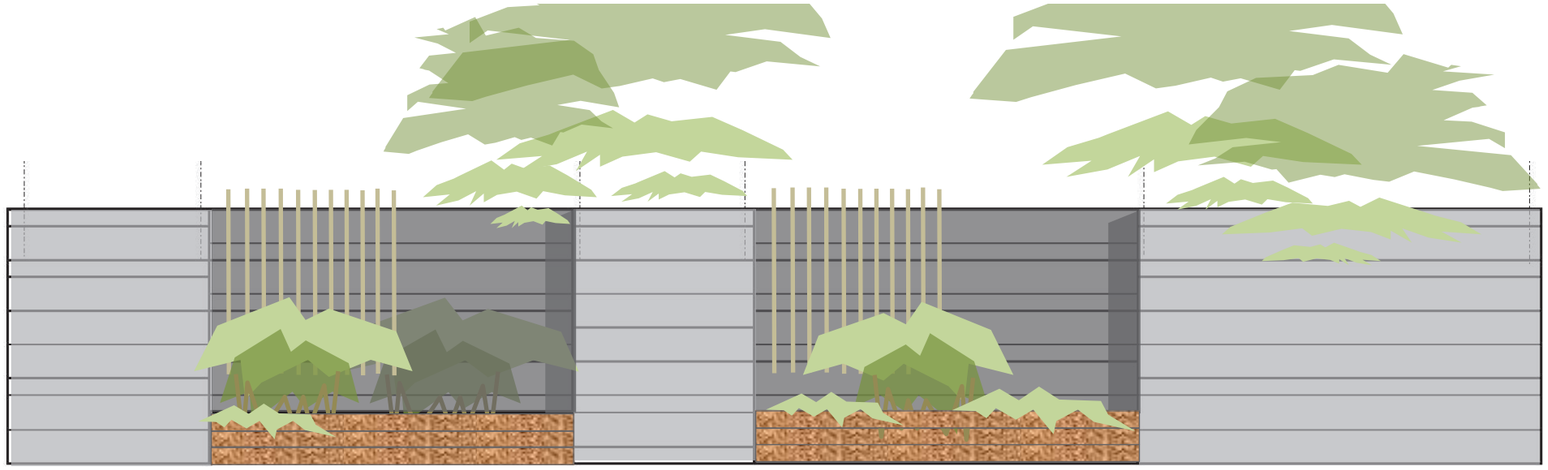
10.0 Noise Barriers

10.3 Strategies

Strategies to ensure the successful application of the guiding principles have been to:

- Design new noise walls to be consistent with existing noise walls, or to be consistent with other project architecture;
- Maintain daylight penetration and reduce the weight of structure;
- Retain existing noise walls as required;
- Relocate existing noise walls, replace damaged panels and re-erect noise walls as directed; and
- Use muted grey colours for noise walls as in the Harbour Bridge, to reduce reflectivity and to complement other design components such as toll gantries along the motorway.



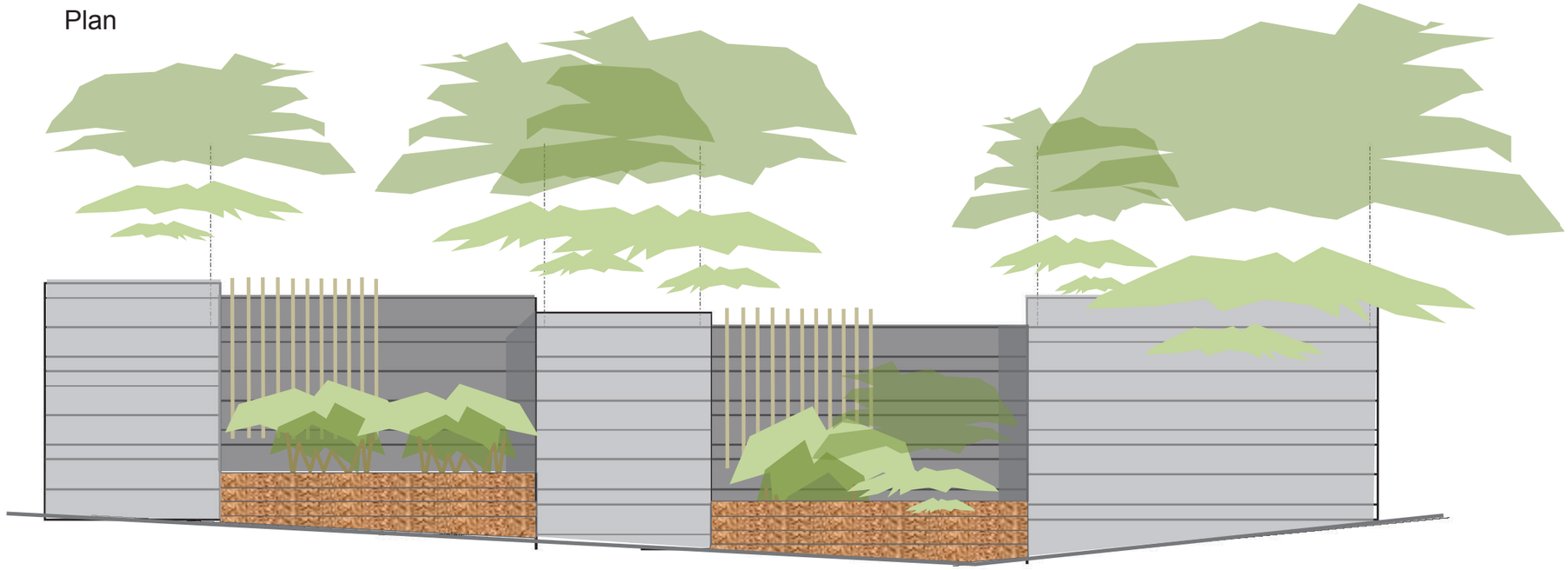


Elevation

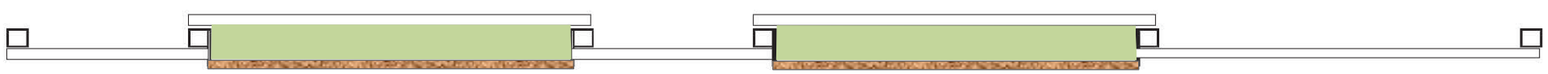
Plan

Elements in the landscape
Northern ventilation facility

- Stepped articulation
- Shadowlines
- Recessive colouring
- Large panel colour format
- Sandstone Planters
- Reconstituted Wood Battens
- Height per Acoustic requirements

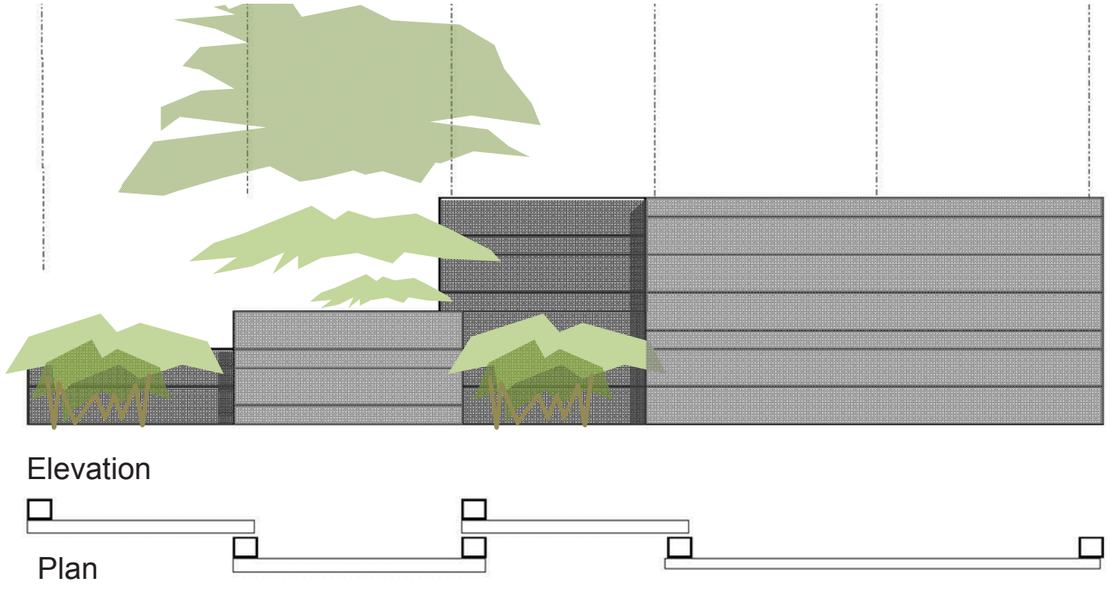


Elevation



Plan

M1-M2-5000-DR-UD-0812
NOISE WALLS – STANDARD CONDITION

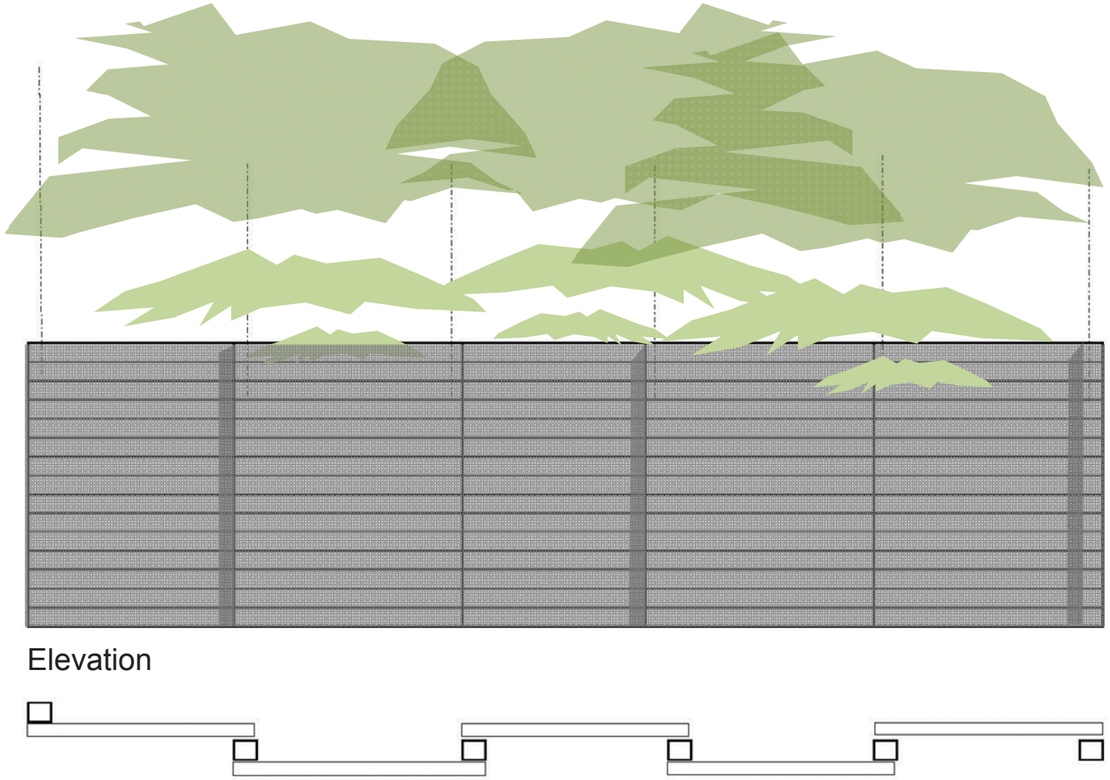


Elevation

Plan

Starting Point

- Stepped starting points
- Shadowlines
- Recessive colouring
- Emerging form



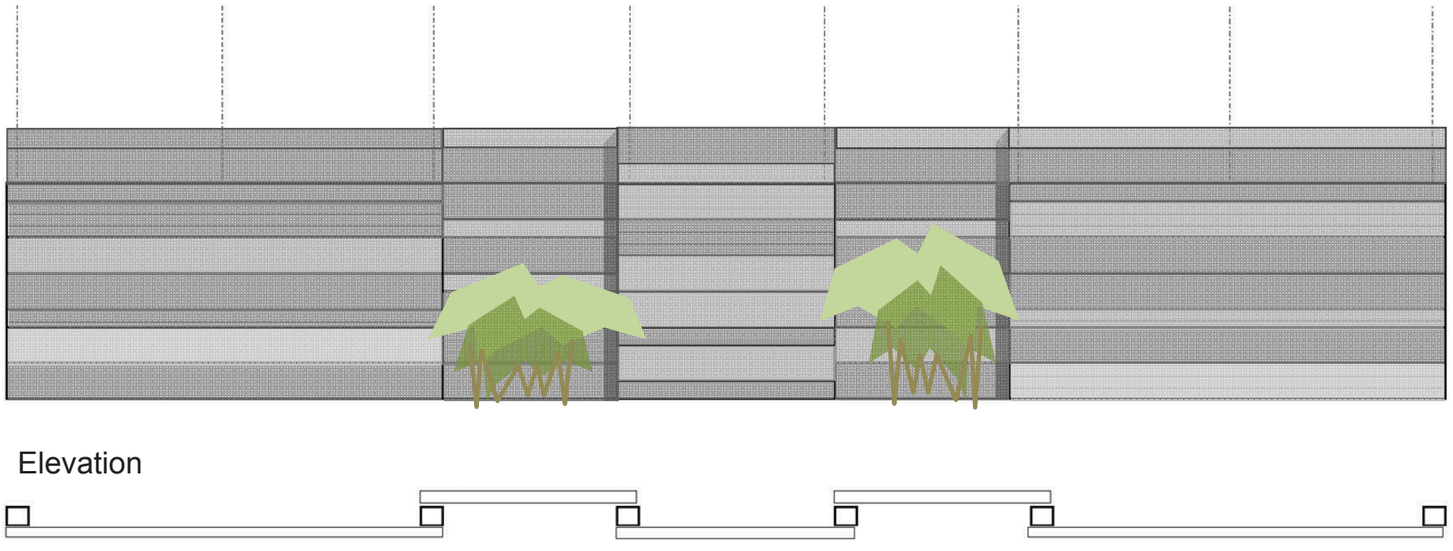
Elevation

Plan

M1 Pacific Highway Replacement Walls

- Uniform colour
- Vertical shadowlines
- Horizontal ‘planking’ effect

M1-M2-5000-DR-UD-0813
NOISE WALLS – SPECIAL CONDITIONS

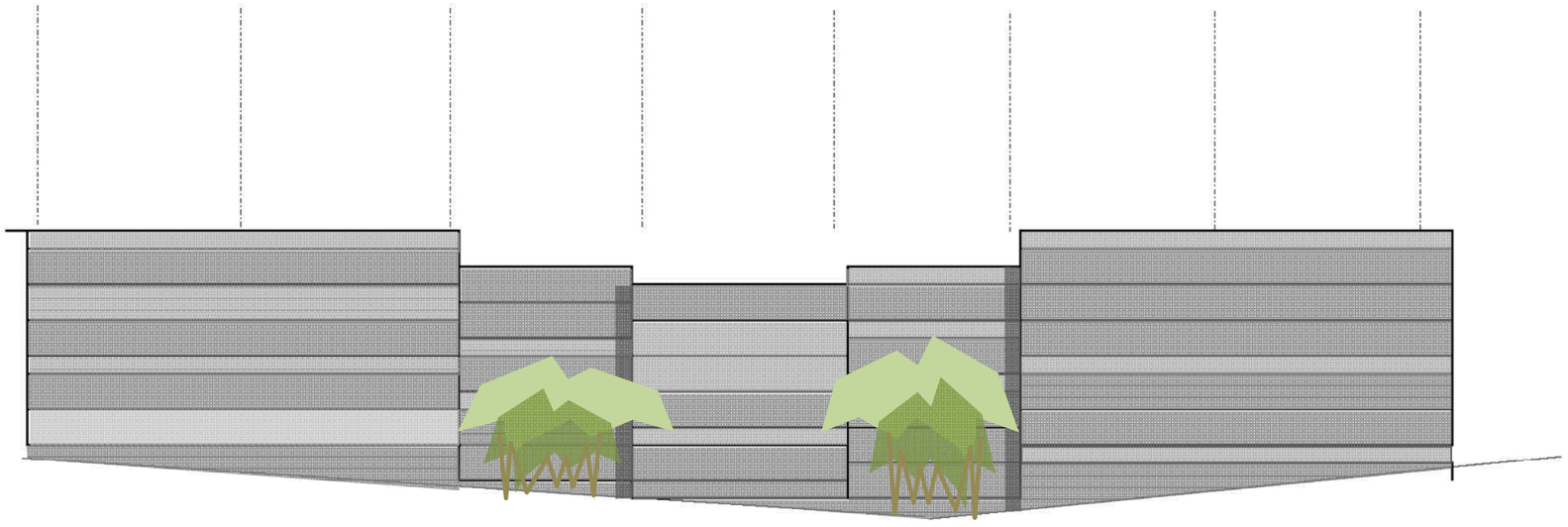


Elevation

Plan

Elements in the landscape
Hills M2 Motorway New Walls
MCC Facility Area New Walls

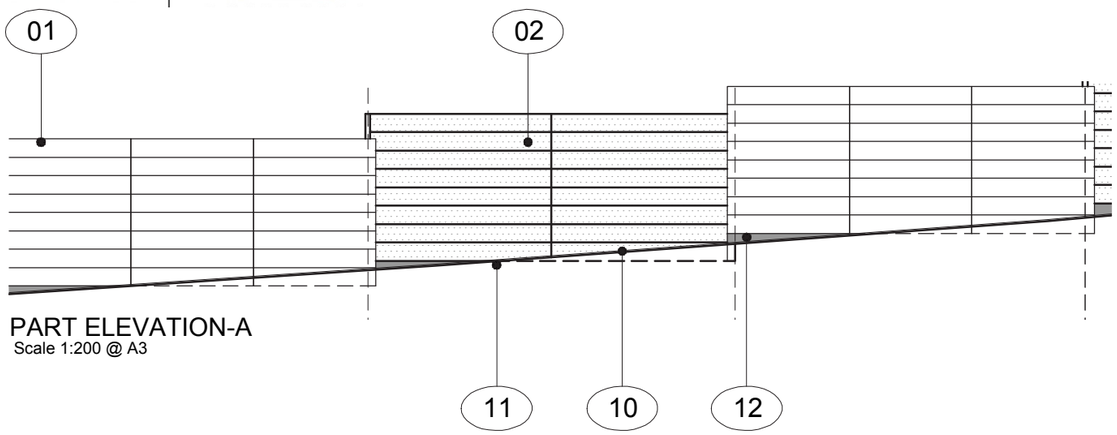
- Stepped articulation
- Shadowlines
- Scale patterning – M2
- Solid patterning – MCC Facilities
- Landscape integration
- Height per Acoustic requirements



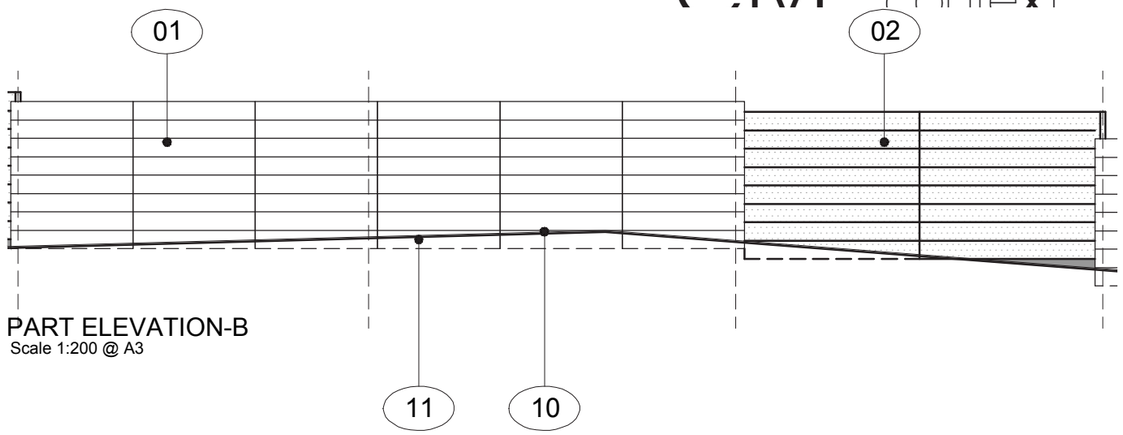
Elevation

Plan

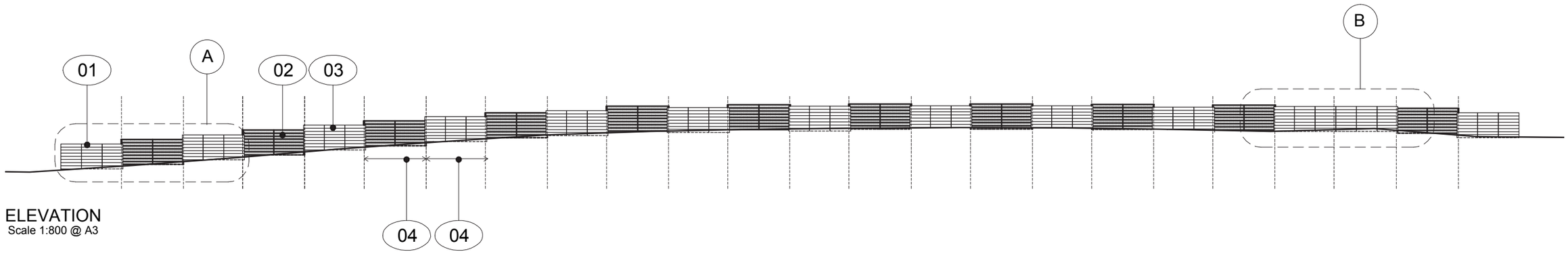
M1-M2-5000-DR-UD-0814
NOISE WALLS – EVENT CONDITIONS



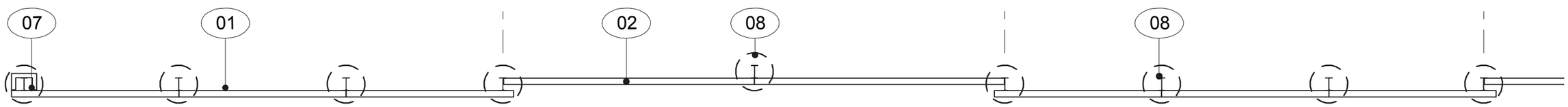
PART ELEVATION-A
Scale 1:200 @ A3



PART ELEVATION-B
Scale 1:200 @ A3



ELEVATION
Scale 1:800 @ A3



PART DETAIL PLAN OF NOISE WALL
Scale 1:800 @ A3

DRAWING INFORMATION IS INDICATIVE ONLY

01	FRONT PANEL S	09	GALVANISED MILD STEEL UB'S TO ENG. SIZING	11	GROUND LINE
02	REAR PANEL	10	DRANAGE GAP TO BE CO-ORDINATED	12	INFILL PANEL

M1-M2-5000-DR-0815
NOISE WALLS - AUTOCLAVED AERATED CONCRETE TYPICAL DETAILS

11.0 Bridges

11.1 Introduction

This section describes new bridges, modifications and widening to existing bridges, bridge abutments to be cut back, viaducts and underpasses. Retaining and cladding panels are generally specified as precast concrete or GRC to assist in reducing construction time and maintaining the quality of finishes.

11.2 Principles

The guiding principles in the development of the designs for these elements have been to:

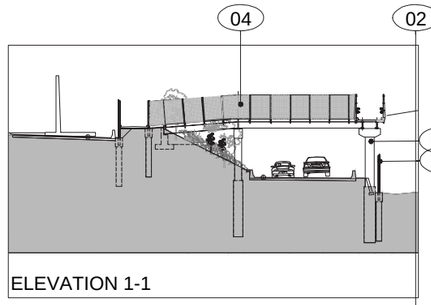
- Ensure bridges, viaducts and underpasses consistently address all safety issues;
- Ensure bridges, viaducts and underpasses contribute to the desired character of the project;
- Implement the principles of both linear identity and lateral integration in the design of these components; and
- Maximise consistency in design and detailing of these components.

11.3 Strategies

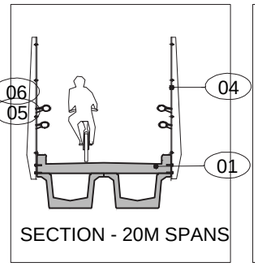
Strategies to ensure the successful application of the guiding principles have been to:

- Ensure that stitching of new work into existing work is as physically seamless as possible;
- Match new street furniture related to bridges and underpasses to that of existing wherever possible;
- Provide suitable sight lines, maximised height and width to underpasses;
- Provide safe and vandal resistant lighting;
- Provide vandal resistant cladding with integrated art to all underpasses;
- Make underpasses and related trough structures aesthetically pleasing and safe;
- Incorporate artistic programs into pedestrian underpass cladding; and
- Provide anti-graffiti treatment to all new concrete structures.

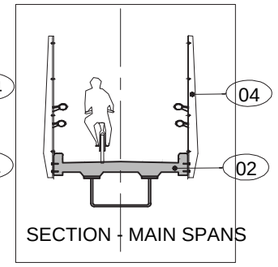
PLAN - WESTBOUND BRIDGE



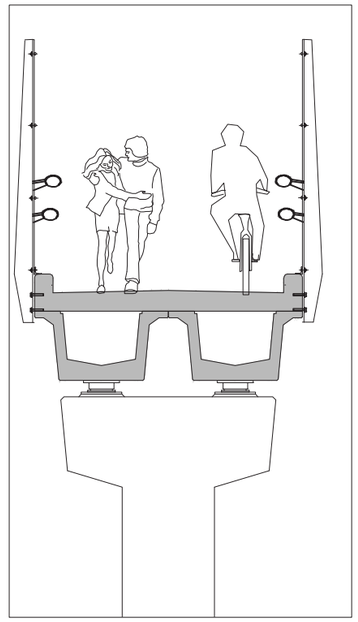
ELEVATION 1-1



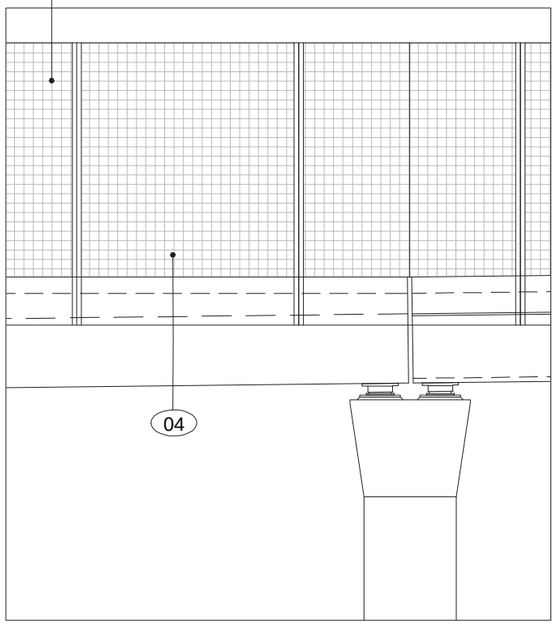
SECTION - 20M SPANS



SECTION - MAIN SPANS



TYPICAL SECTION - 20M SPANS



TYPICAL SECTION - 20M SPANS

01 CONCRETE SUPERSTRUCTURE

02 STEEL COMPOSITE SUPERSTRUCTURE

03 TYPE F CONCRETE BARRIER

04 THROWSCREEN

05 NEW NOISE WALL

06 1000DIA PIER

0 50 100 150 200 250m

SCALE 1:5000@A3

M1-M2-5000-DR-UD-0821
BRIDGE - WESTBOUND OVER HILLS M2 MOTORWAY

12.0 Miscellaneous Items

12.1 Introduction

This section includes discussion and drawings of throw screens, retaining walls and gantries. It encompasses cladding, finishes, materials and colours related to all retaining structures. The structural systems related to each retaining wall are not included in this report.

The guiding principles in the development of designs for these elements have been to:

- Ensure that the use of standard road elements contributes to the enhancement and desired future character of the project;
- Ensure that fences and balustrades are appropriate to the location; and
- Reduce the visual impact of fences, balustrades and throw screens or make design features of these elements.

Strategies to ensure the successful application of the guiding principles have been to:

- Ensure that visual impact of all standard road elements is minimised;
- Create uniformity of detailing within the various road furniture suites;
- Ensure proliferation of standard road elements is avoided; and
- Make certain that all standard road elements are integrated with both engineering and landscape design.

12.2 Throw screens

Throw screens comprise tapered galvanised mild steel T framing sections with 50 x 50 x 3 millimetres panels bolted to concrete structures. Throw screens are positioned in the following locations:

- Pedestrian underpass trough structures; and
- Special throw screens with blades, are located as a design feature at all portal faces.

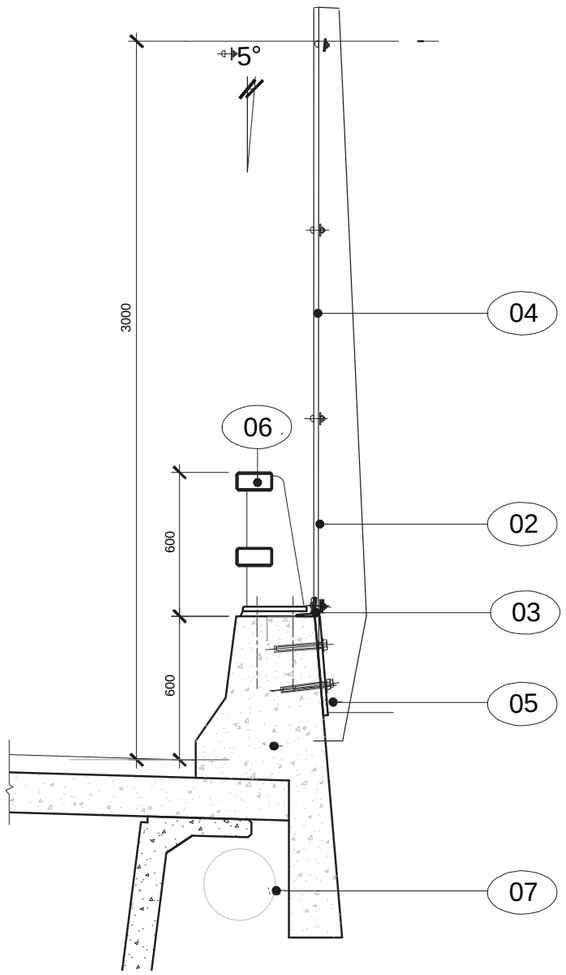
12.3 Retaining Structures

The guiding principles in the development of the designs for these elements have been to:

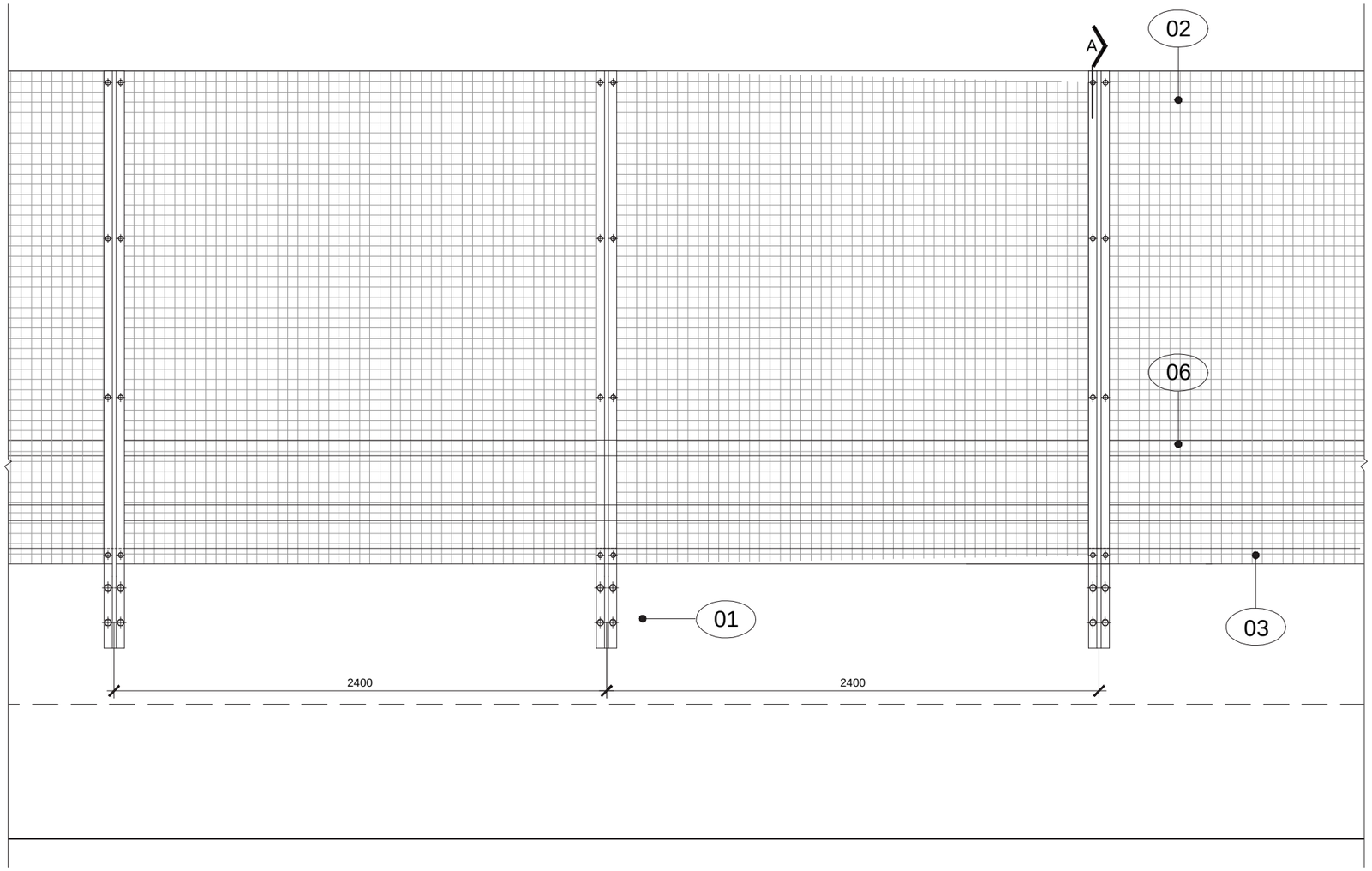
- Minimise the physical and visual intrusion of earthworks and retaining structures upon the existing situation;
- Minimise the disturbance of existing flora, particularly significant tree stands;
- Maximise enhancement of the project by the sensitive design of earthworks and retaining structures;
- Implement the principle of linear identity to maintain continuity and consistency along the length of the route, and
- Implement the principle of lateral integration at interchanges and key nodes.

Strategies to ensure the successful application of the guiding principles have been to:

- Ensure the applied finishes to retaining structures whether architectural ribbed concrete panels, stone faced concrete panels, GRC or brick are appropriate to their context;
- Ensure design detailing of applied finishes to the retaining walls is a refined enhancement and consistent along the length of the route;
- Integrate landscape design to mitigate visual impacts;
- Ensure that the cladding system is suitable to the structure; and
- Ensure detailing is of highest standard.



SECTION AT TUNNEL PORTAL
OF THROW SCREEN - TYPICAL
Scale 1:20 @ A3



ELEVATION OF THROW SCREEN
Scale 1:25 @ A3

01 PRECAST CONCRETE STRUCTURE

02 50 x 50 GALVANISED STEEL MESH

03 GALVANISED STEEL ANGLE

04 TAPERED GALVANISED STEEL T-SECTION @ 2400 CRS

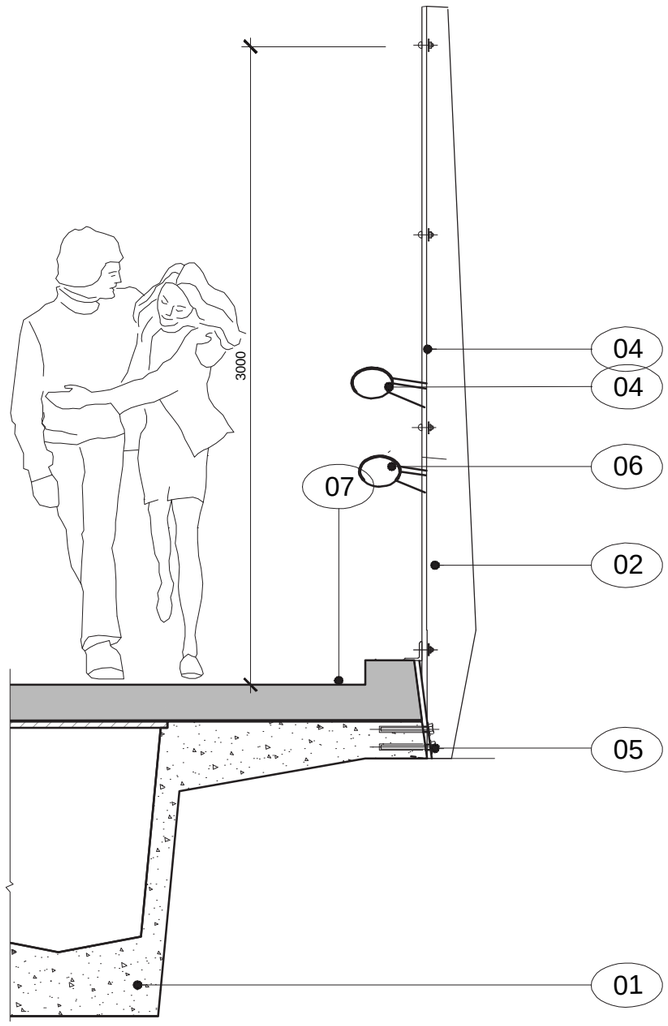
05 BOLT FIXING INTO BARRIER TO ENGINEER'S DETAIL

06 TWIN HANDRAIL

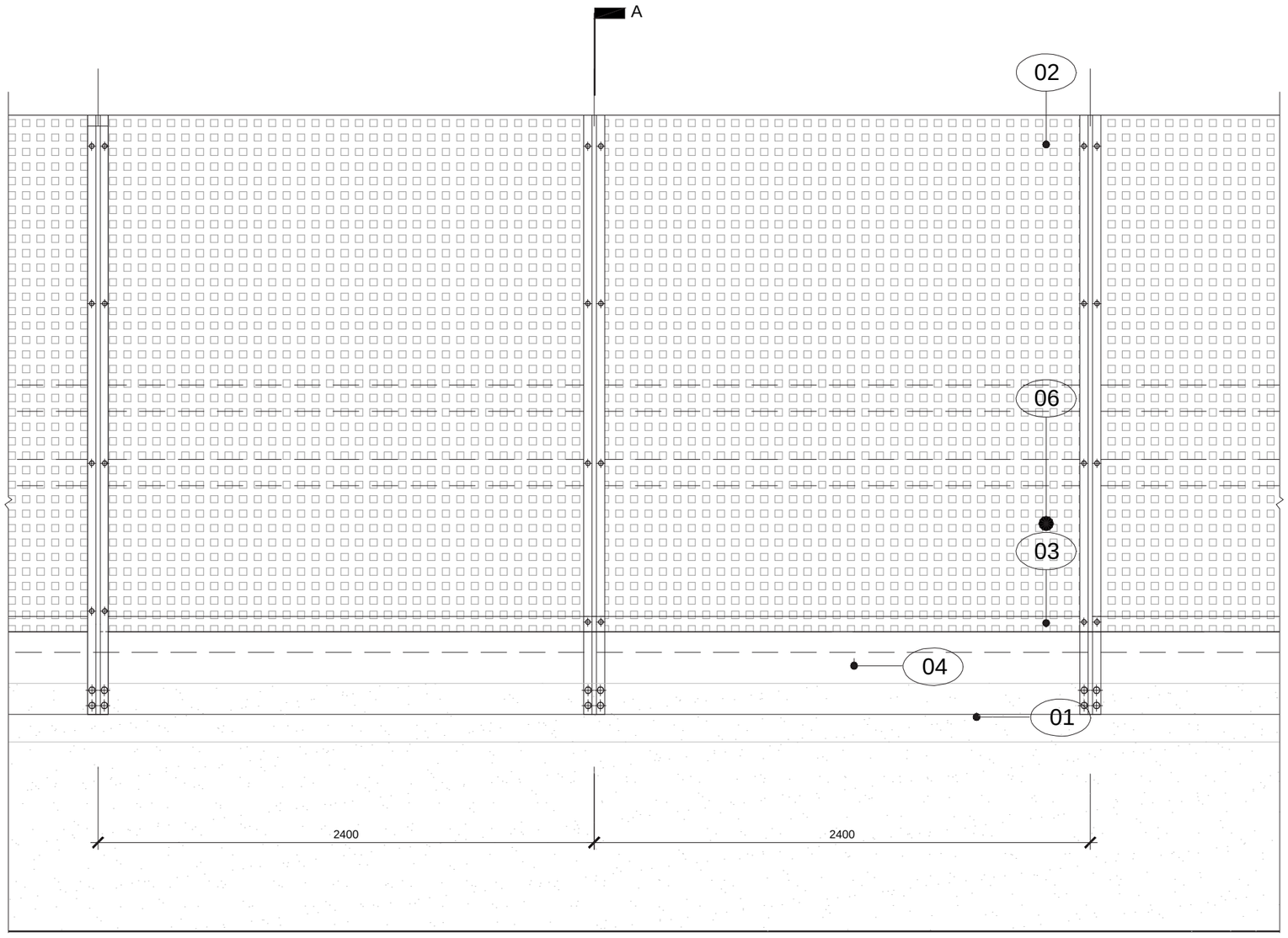
07 Ø300 DRAIN PIPE

0 0.5 1m
1:25 @ A3

M1-M2-5000-DR-UD-0831
THROW SCREEN TO TYPICAL TYPE F BARRIER



SECTION A
Scale 1:25 @ A3



ELEVATION
Scale 1:25 @ A3

01 PRECAST CONCRETE STRUCTURE

02 GALVANISED STEEL PERFORATED METAL FOR PRIVACY SCREEN OR GALVANISED MESH FOR THROWSCREEN

03 GALVANISED STEEL ANGLE

04 GALVANISED STEEL T-SECTION @ 2400 CRS

05 BOLT FIXING INTO BARRIER TO ENGINEER'S DETAIL

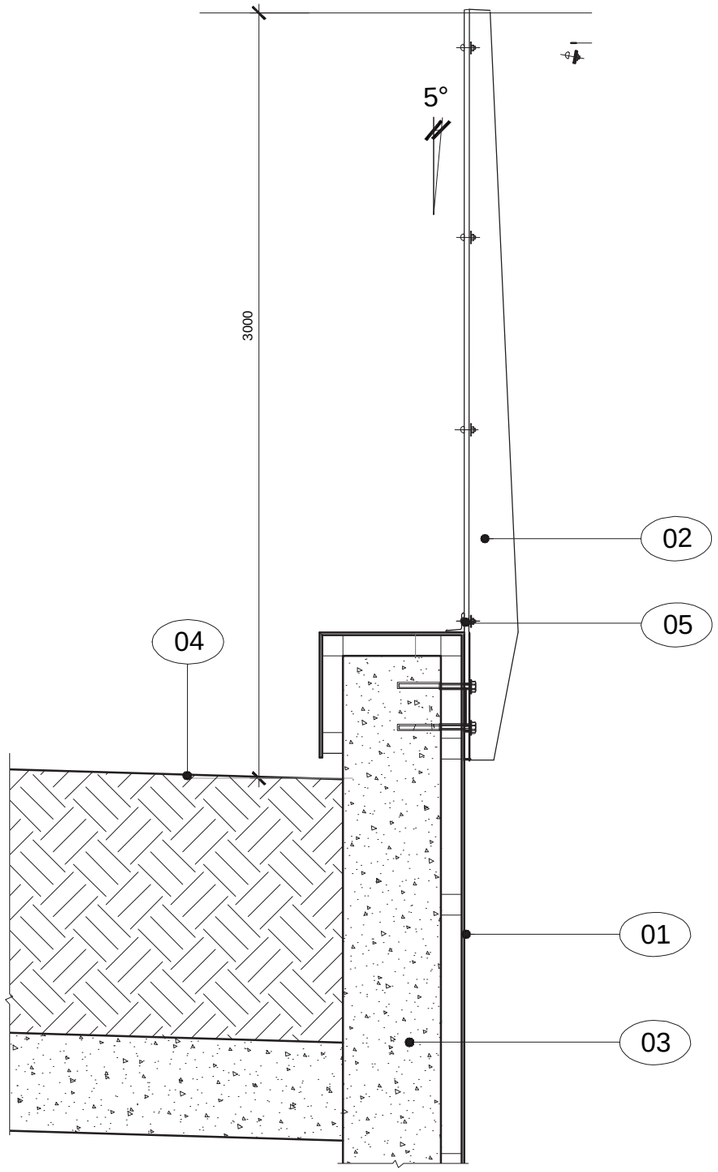
06 METAL HANDRAIL (PEDESTRIAN)

07 CONCRETE FOOTPATH

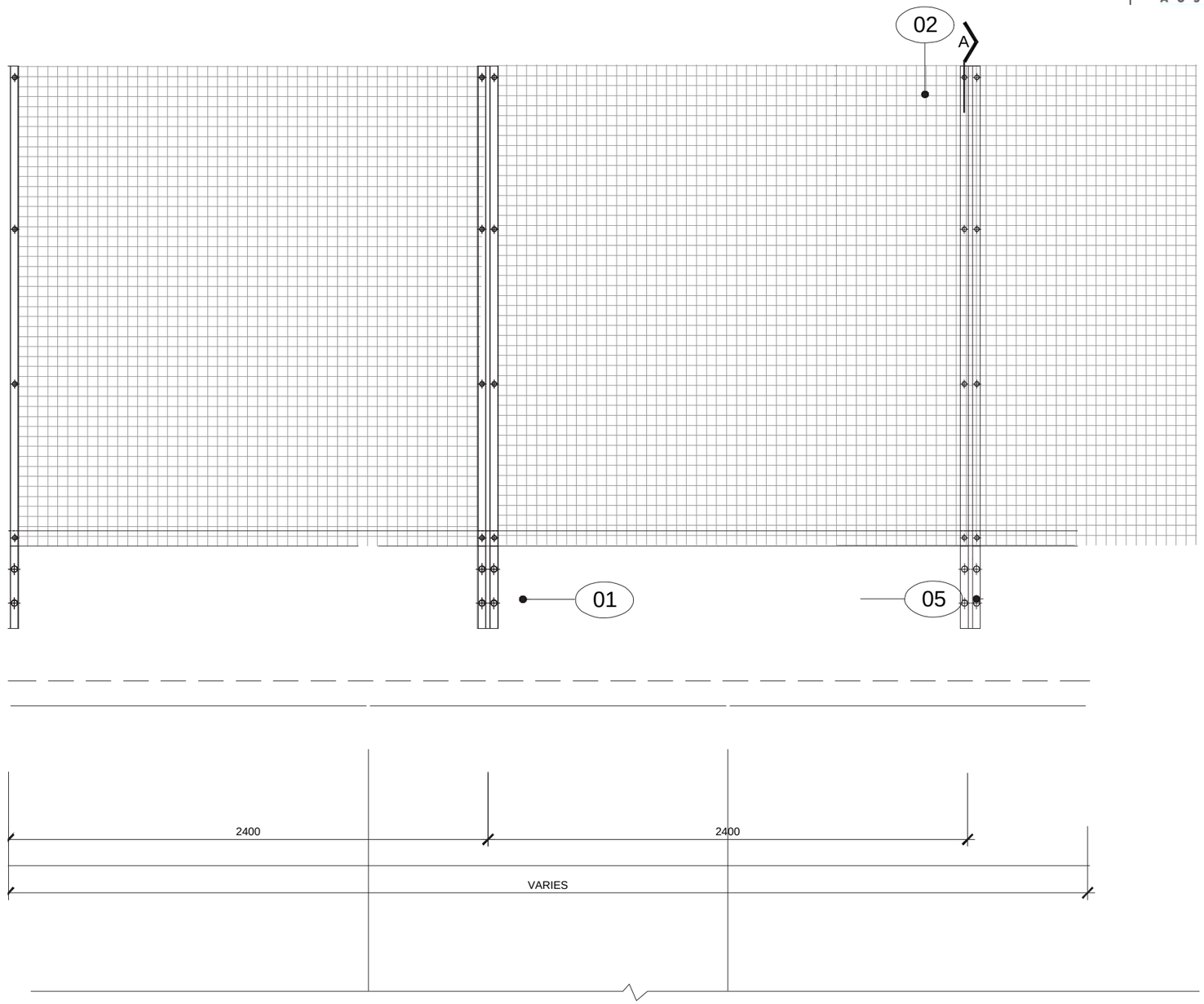
06 METAL HANDRAIL (CYCLIST)

0 0.5 1m
1:25 @ A3

M1-M2-5000-DR-UD-0832
PRIVACY SCREEN / THROWSCREEN - TYPICAL



SECTION OF THROW SCREEN
TO TUNNEL PORTAL
Scale 1:25 @ A3



ELEVATION OF THROW SCREEN
Scale 1:25 @ A3

01 PORTAL WALL TREATMENTS

02 GALVANISED STEEL PERFORATED METAL FOR PRIVACY SCREEN OR GALVANISED MESH FOR THROWSCREEN

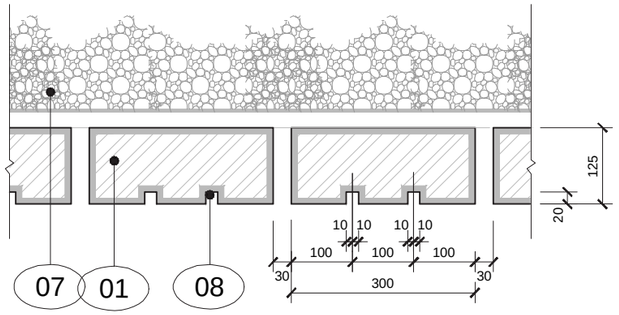
03 CONCRETE PORTAL OPENING TO ENGINEER'S DETAIL

04 TOP OF PAVEMENT

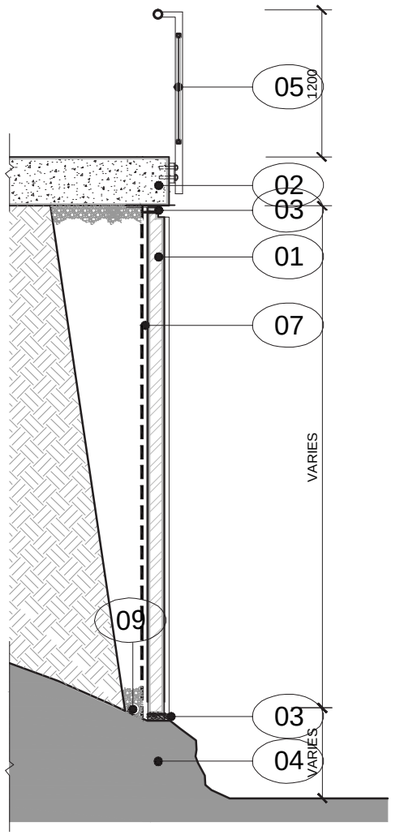
05 GALVANISED STEEL ANGLE

0 0.5 1m
1:25 @ A3

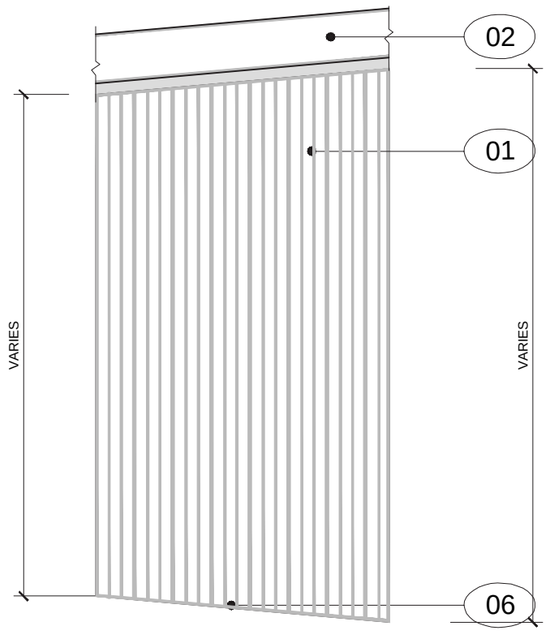
M1-M2-5000-DR-UD-0833
THROW SCREEN TO TUNNEL PORTALS



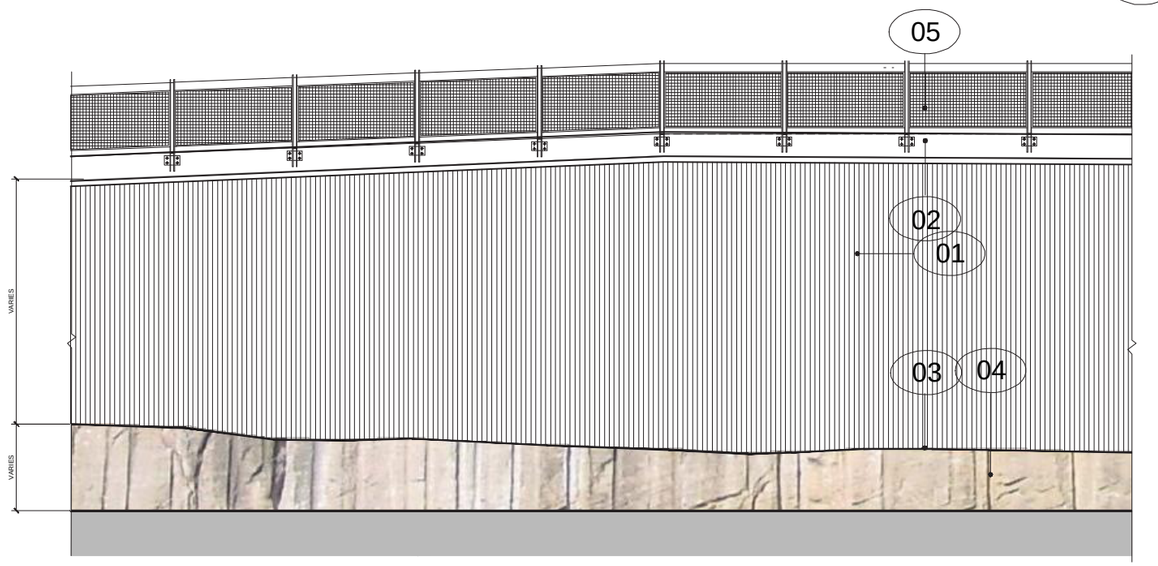
PLAN DETAIL
Scale 1:10 @ A3



SECTION
Scale 1:50 @ A3



ELEVATION DETAIL OF PANEL
Scale 1:50 @ A3



TYPICAL ELEVATION
Scale 1:100 @ A3

01 ALUMINIUM ABSORPTIVE ACOUSTIC PANEL

02 CAST IN-SITU REINFORCED CONCRETE CAPPING BEAM

03 MORTAR BED

04 SANDSTONE BASE

05 HANDRAIL (OPTIONAL)

06 ANGLE VARIES WITH SITE CONDITIONS ON SANDSTONE BASE

07 STRUCTURE BEHIND TO ENGINEER'S DETAIL

08 20 WIDE x 20 DEEP GROOVES CAST IN PANEL

09 DRAINAGE SYSTEM TO ENGINEER'S DETAIL

NOTE: This drawing indicates the architectural treatment to the retaining structure

M1-M2-5000-DR-UD-0846
RETAINING WALL - TYPICAL FOR EXPOSED SANDSTONE ROCKFACE

13.0 Materials and Finishes

13.1 Principles

The choice of materials, finishes and colours are related to the principles of the project:

- Longitudinal consistency to form a family of elements when associated with the road and its infrastructure; and
- Lateral integration when associated with the precinct in which the material or colour is related to achieve a contextual harmony.

13.2 Drawings and Tables

- The precinct sample boards indicate both consistent colour, materials and finishes associated with the road, as well as materials especially selected for the precinct to achieve a contextual integration.
- The table of materials is provided for the provision of known Australian Standards for materials and finishes selected in the sample boards shown.

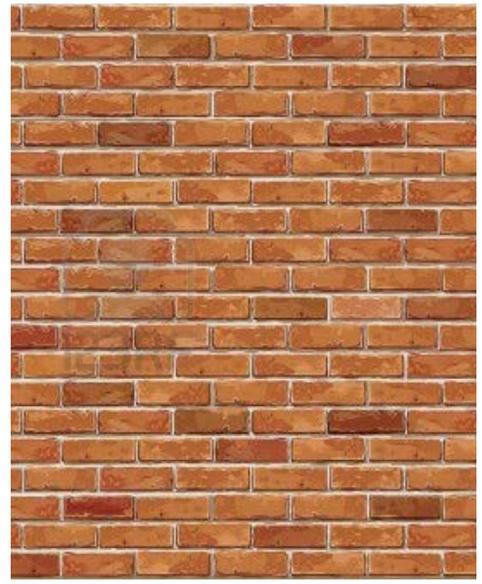
NorthConnex Surface Finishes And Applicable Standards			
Element and Type	**Material: Class/AS**	**Finish: Class/AS**	**Notes**
Retaining Walls			
Precast concrete panels	Class 2 Concrete/ AS 3610 - 1995	Natural off-form colour & clear anti-graffiti coating	Off-form plain and ribbed panels
Pigmented precast concrete panels	Class 2 Concrete/ AS 3610 - 1995	Sandstone aggregate and pigment and clear anti-graffiti coating	Off-form plain and mildly ribbed panels
Facebrick cladding to concrete retaining walls		AS 1617.1-5/AS 1618	Red brick to match existing
Noisewalls/Feature Walls			
Hebel precast concrete panel	Class 2 concrete/AS3610 - 1995	Exterior acrylic paint AS23111-2000 & clear anti-graffiti coating	Smooth finish both faces
Glass Reinforced Concrete (GRC)	Per manufacturer's recommendations		Various colours
Metal Structures			
Galvanised Mild Steel (hot dipped)		AS2312 - 1994/Pre-painted	No additional treatment
Steel surfaces on bridges		Protective Treatment of Steelwork DCM B220	Covers galvanizing and painting
Steel roof decking (insulated)	Stramit Longspan Colour coated/AS 2728	Zinc aluminium alloy coated/AS 1397	
Steel wall cladding	Stramit Longspan Colour coated/AS 2728	Zinc aluminium alloy coated/AS 1397	For miscellaneous buildings
Aluminium solar screens (100x40mm)	Aluminium grating/AS 1657	Powder coated	White
Wall Panels			
Glass Reinforced Concrete (GRC)	Per manufacturer's recommendations	Integral colour	Various colours
Sandstone Panels	Acrogem or approved equivalent	Saw cut finish - exposed grain	Sizes as per drawings.
'Timber–look' battens	As per manufacturer's specification	Natural wood grain	Exact colour to be confirmed
Tunnel Claddings			
CFC cladding (Proprietary Vitra Panels)	Various testing	AS 2908.2:1992 ISO 8336:1993	Feature coloured panels at visual event locations.
Glass			
Glass units	AS 1288		Single or double glazed

Vitra panels

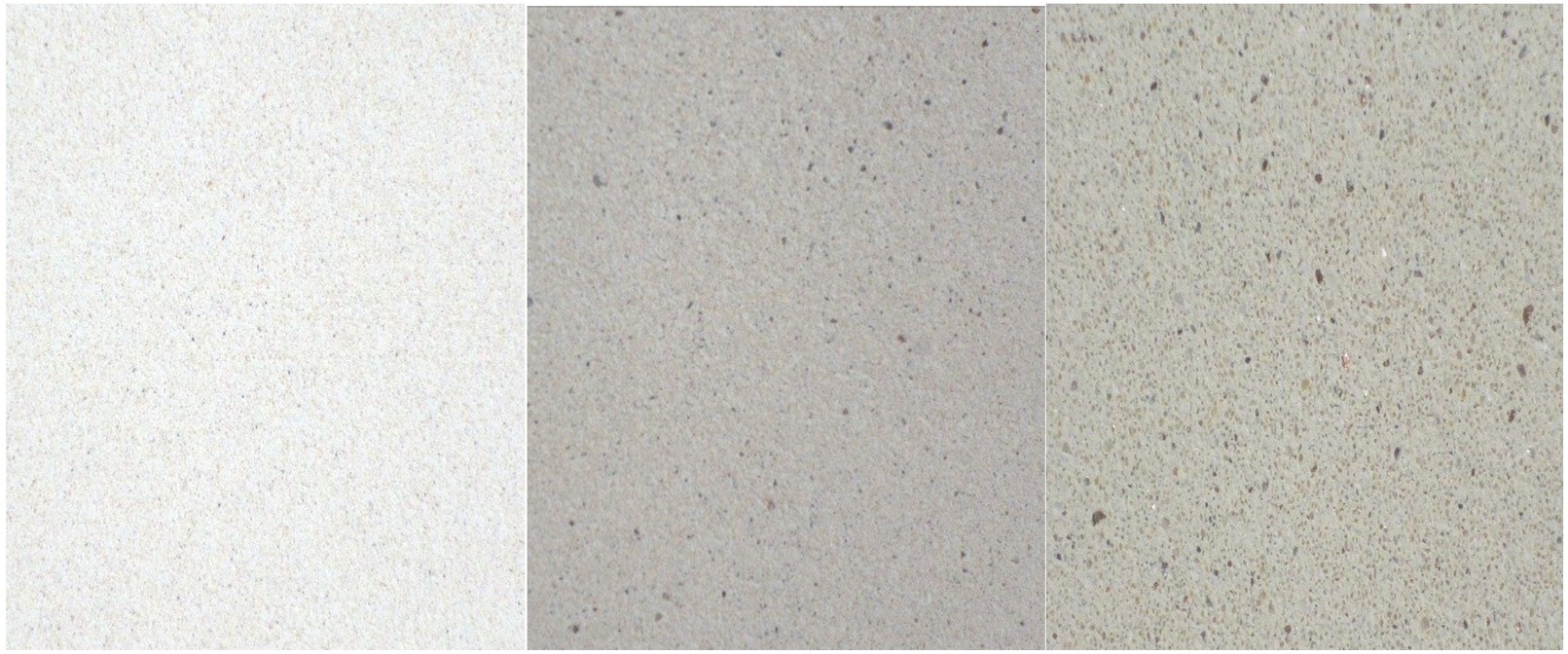
Painted rendered concrete

Exposed concrete

Glass



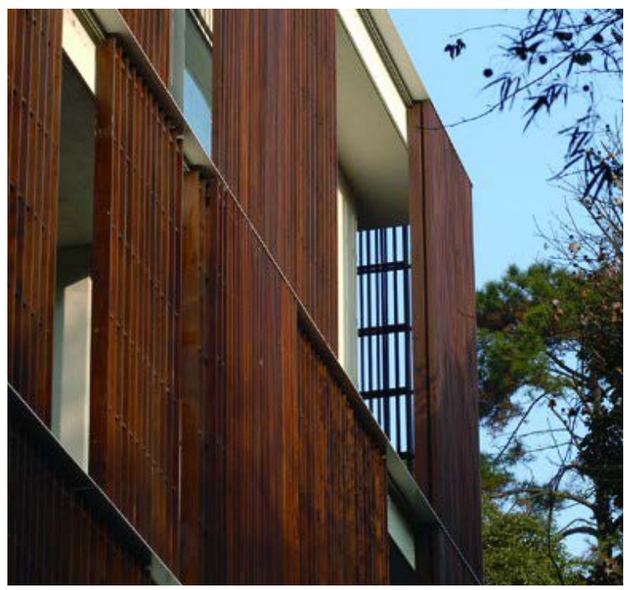
Brick



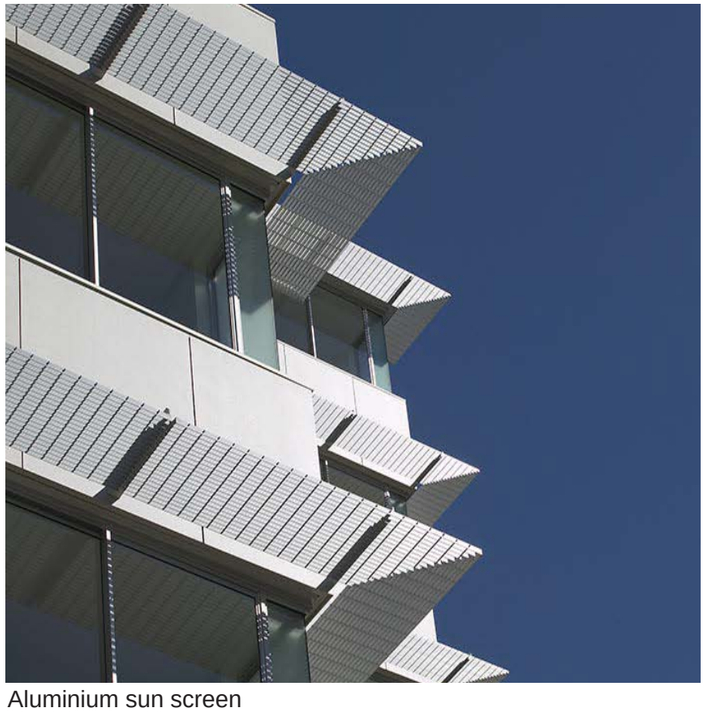
Glass reinforced concrete panels

M1-M2-5000-DR-UD-0851
MATERIALS AND FINISHES

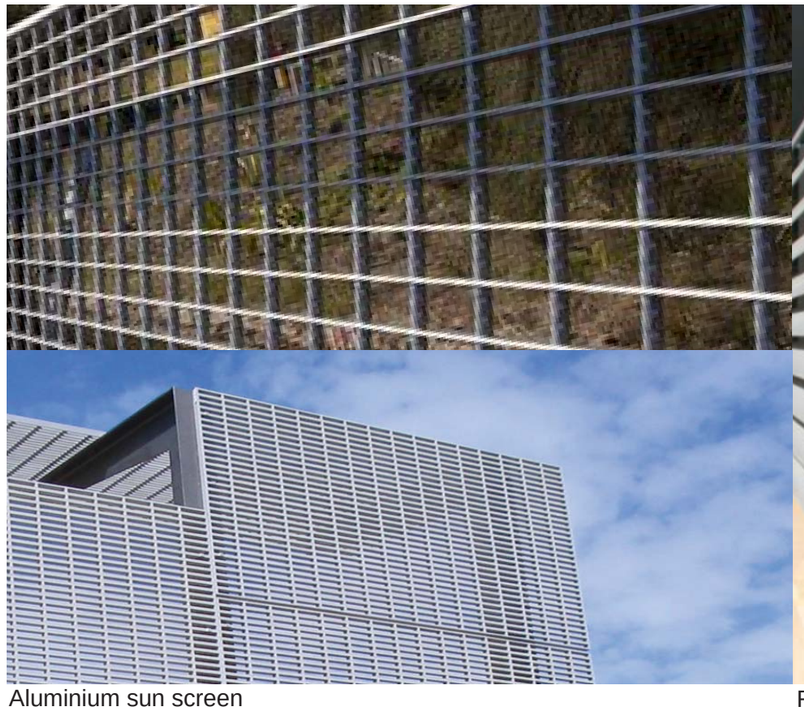
Roofing



Wall Cladding



Aluminium sun screen



Aluminium sun screen

Removable aluminium louvres

M1-M2-5000-DR-UD-0852
MATERIALS AND FINISHES

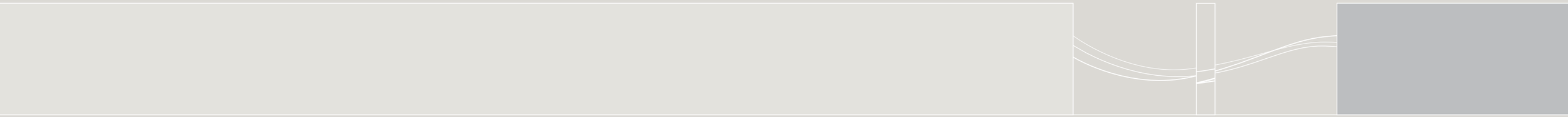
14.0 Conclusion

The design of the project has been built on an integrated approach to the urban design engineering and functional requirements of the project.

The design outcome supports a positive driver experience, allowing drivers to comprehend the route, easily navigate between motorways, and to ‘enjoy the ride’.

Key aspects of the driving experience such as establishing reference points, feeling a sense of progress towards a destination and having an enjoyable visual environment have been brought to bear on the design of the project to ensure that the new motorway is well received by the public and will provide real value in the years to come.

Tunnel interior - ‘visual events’ special feature - in curved alignment.



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