

Open Space, Connectivity and Landscape Design



Open space, connectivity and landscape design

6.1 Open Space

The inclusion of publicly accessible open space is a key benefit of the project's design. The project is being constructed mostly within existing motorway reservations and efforts have been made to minimise the footprint with every surface intervention.

Residual lands (mostly as a result of construction) would be returned as open space for most sites where there are no ongoing operational requirements. As detailed in this section, open space areas would be created as the preferred method for dealing with surplus lands. A number of existing urban renewal areas already surround the corridor. It is considered that provision of open space as part of the New M5 project would support such current and future urban renewal opportunities.

In the western reaches of the corridor, connectivity between existing areas of open space would be reinstated through upgraded shared paths of the M5 Linear Park. The shared path would be enhanced by new landscaping which would assist in screening the motorway and associated noise walls. The upgraded shared paths and landscaping would integrate with similar upgrades being undertaken for the King Georges Road Interchange Upgrade project.

In the eastern parts of the corridor significant new areas of open space would be created around the St Peters interchange. A master plan solution has been developed that encompasses the entire interchange site, ensuring its integration with surrounding areas (see Figure 59). The majority of the open space to be provided by the master plan would be completed as part of the New M5 project.

The New M5 would extend the parklands of Sydney Park further south, providing much needed open space for a growing population. Featuring 'landscape mounds,' the design of the interchange parklands, would continue the language of Sydney Park and the philosophy of the site's evolution- brickpit-rubbish dump-open space. The space would be accessed from shared paths in the east connecting to Sydney Park or via a dedicated entrance at the corner of Canal Road and Princes Highway. The existing service station on the corner of Canal Road and Princes Highway, the 'Dynamo' building would provide a new gateway into the park. By retaining this heritage listed item, the layers of history within the park would be exposed. For a visitor accessing the site through the Dynamo building, their interaction with the site's history starts upon entry.

In total over 6 hectares of new open space will be provided upon completion of the New M5. The design of this space is restrained, featuring a mixture of open turf interspersed with garden beds and large trees. The landscape mounds will have sufficient height to enable park users to take advantage of views to the Sydney CBD, airport and surrounding neighbourhoods. The restrained design will allow future interventions to meet the needs of the community in a similar manner to the ongoing evolution of Sydney Park.

6.2 Cycling and Pedestrian Connectivity

In addition to vehicular connectivity, the New M5 would provide improved and upgraded connectivity for cyclists and pedestrians. In the western reaches of the corridor, the existing M5 Linear Park shared path would be upgraded to provide a 3 metre wide surface for the majority of its length. This would be complemented by new landscaping along the length of the Linear Park. In total over 2km of the shared pathway would be upgraded.

In the east of the corridor a number of local street amendments would provide the opportunity to improve pedestrian and cyclist connectivity around the St Peters Interchange. In total over 12km of new and

upgraded cycleways, shared paths and pedestrian footpaths would be provided.

Bridges over the Alexandra Canal would provide new connections between Mascot/Alexandria and St Peters. These connections would increase access for a growing residential population to Sydney Park and the additional parklands to be created as part of the New M5 project. As shown in Appendix D, dedicated cycleway upgrades would provide:

- A new east-west route connecting the existing Bourke Road and proposed Alexandra Canal cycleways in the east to the corner of Campbell and May Streets in the west
- Separated cycleway access to Sydney Park and its network of off-road cycleways.

A number of shared-paths would also be provided to ensure maximum connectivity and ease of navigation around the interchange site and Sydney Park. New shared paths would be provided:

- On the northern side of Campbell Road between Barwon Park Road and Bourke Road.

- On the western side of Euston Road adjacent to Sydney Park, between Campbell Road and Sydney Park Road.
- Within the interchange parklands connecting the new Campbell Road dedicated cycleway with Canal Road in the south.

For intersections that include dedicated cycleways, 'cycle signals' would be provided to ensure cyclist safety and promote ease of access.

Pedestrian permeability to Sydney Park and the open space created by the New M5 would also be improved. All dedicated footpaths would terminate in either signalised or zebra crossings. The provision of street trees and landscaping would further improve pedestrian amenity along these new paths.



Figure 82 Artist impression cycling and pedestrian connectivity

6.3 Landscape Design- Kingsgrove, Bexley and Arncliffe

Design Intent

The landscape design incorporates the fundamental objectives of landscape design outlined in the RMS guide 'Beyond the Pavement':

Safe- All required clear zone and safe sight distance setbacks to avoid the creation of hidden public places whilst maximising passive surveillance opportunities.

Integration with local setting- The design maintains and enhances existing landscape character and vegetation patterns.

Ecologically sound- The design uses local species from existing and adjoining plant communities and assists in protecting and recovering local biodiversity.

Add character and value- The design responds to and draws upon the existing landscape patterns of the area

Low maintenance and cost effective- The design utilises existing site soils and local robust and durable plant species in a bold and simple way without unnecessary fussiness. Revegetation across the project would be achieved through direct planting of containerised plant stock into prepared

planting areas. This would facilitate rapid establishment of new landscape installations.

Where buildings such as ventilation and workshop facilities are located, the landscape intent is to screen as much of the built form as possible. Furthermore landscaping is used above the western portals to provide relief within the 10 lane roadway, effectively disguising the width of motorway in this location.

Locating the maintenance facilities and workshop at Kingsgrove allows preservation of the Wolli Creek bushland. This would allow future extension of the Wolli Creek Regional Park.

Species Selection

A preliminary species list for the western reaches of the corridor is provided in Appendix C. The species have been chosen based on surrounding endemic vegetation. During detailed design further consultation would be undertaken with local government authorities and the King Georges Road Intersection Upgrade project to ensure seamless integration of all new planting for New M5.



Figure 83 Artist impression- landscape concept, Kingsgrove

6.4 Landscape Design- St Peters

Design Intent

The design intent for landscaping of the St Peters interchange follows the principles outlined for the remainder of the corridor. A clear distinction exists however for the scale of the interchange site and the resulting parklands that require a bespoke design philosophy. The intent is to develop an 'urban forest' within the interchange site, providing a tree canopy that competes with the scale and magnitude of the road infrastructure.

The dominant landscape design driver for the St. Peters interchange is the restoration of a vibrant and healthy landscape throughout the interchange site. It would extend the character of Sydney Park making a significant contribution to the liveability and greening of this growing part of southern Sydney.

Public access to new parkland areas would be maximised where possible, with a new shared user path network provided through the interchange. The new path network would open up opportunities for expansive views across the interchange to the airport, Botany Bay and the Sydney CBD.

The landscape intent for local streets surrounding the St Peters interchange is to improve pedestrian amenity through provision of a continuous tree canopy. The regularity of the street trees would define the local street network and ensure a buffer between pedestrians/cyclists and traffic. The continuous canopy would provide shade and contribute to Sydney's urban ecosystem.

Species Selection

The St Peters interchange site previously supported Turpentine– Ironbark Forest on the elevated western areas of the site on Wianamatta Shale soils. The lower eastern areas of the interchange around Alexandra Canal and Burrows Road were saltmarsh and wetlands on Botany Sands.

The current interchange landscape has been completely modified. It is not intended to take a 'purist' approach to landscape restoration, rather the new landscape development would draw from the characteristics and species profile of the plant communities that once occupied the site.

A range of landscape character types would be established ranging from traditional parkland with open lawn areas, shade tree planting for passive recreation through to urban forest areas.

Bioretention basins would be located in the lower eastern part of the site where saltmarsh and wetlands along Sheas Creek may have once occurred.

Street trees matching the respective local government palette would be included as well as shrubs and grasses on all medians and verges.

A preliminary species list is provided in Appendix D.



Figure 84 Artist impression of Campbell Road bridge

6.5 Landscape Infrastructure and Features

6.5.1 Noise Walls

The requirement for noise barriers provides an opportunity to enhance the driver experience and contribute to a considered and choreographed journey along the New M5. As a highly visible element, noise walls and headlight screens play an important role in orientating the driver along the route and connecting them to the surrounding context. The final resolution of noise walls would be further developed during detailed design.

Design intent

The design of noise walls and headlight screens is characterised by the following:

- Simple, uncomplicated and consistent treatments
- Well resolved detailing that integrates the various road elements and topography
- Calm and gradual transitions
- Consistent alignment with tops generally running parallel with the road alignment, (no stepping)
- Providing sufficient space for screen planting to both sides where possible

- A fine detail that is integral to the screen rather than explicitly applied
- Durable
- Ease and simplicity of construction
- A design complementary to existing noise barriers

Typology

1. Transparent walls

Transparent noise walls are proposed on the northern side of the Western Surface Works to tie into the proposed KGRIU noise walls.

Transparent noise walls are designed to allow views out over the adjoining Canterbury Golf Course and Beverly Grove Park. The walls are comprised of inclined posts and transparent acrylic panels to be supported to the back of the traffic barrier walls.

2. Vertical concrete panel walls

Vertical concrete panel walls are located throughout the Western Surface Works to the southern edge of the corridor. These

would tie into the proposed KGRIU and run adjacent to Beverly Grove Park to an approximate point adjacent to the westbound tunnel exit portal.

The walls comprise of vertical, precast concrete wall panels to be supported on cast-in-place piles behind the road safety barriers. They would have Class 2 patterned finish to both sides of the panels. The walls have been designed to match noise wall treatments proposed for the KGRIU. Screen planting would also be provided at locations where space permits.

6.5.2 Noise mounds

The existing noise mounds surrounding the western surface works would be removed to allow construction of the New M5.

There is a strong desire within the community to reinstate noise mounds at the completion of construction. During the detailed design phase work would be undertaken in consultation with the community to determine the feasibility of reinstating noise mounds in this location.



Figure 85 Noise walls

6.5.3 Retaining walls

Design Intent

The key design principles for retaining walls along the corridor are:

- All retaining walls must be designed to be a suite of elements
- Neutral in colour with non-reflective finishes
- Wall tops are to form continuous smooth flowing lines with no stepping
- Wall plan layouts are simple, with straight or large radius curved alignments, without sharp changes of direction
- Where space permits, provide screen planting to minimise scale and impact of wall faces.

As with the bridges, the fundamental urban design approach for retaining walls is simplicity and refinement without any unnecessary detailing or decoration. The retaining walls have been considered as part of the wider family of road infrastructure elements including the bridges and noise walls.



Figure 86 Design precedents for retaining walls

6.5.4 Kindilan underpass extension

The existing Kindilan underpass at Kingsgrove would be extended north under the widened motorway alignment. The underpass width would remain at 12 metres.

The alignment design at this location allows for three large voids between east and westbound movements permitting sunlight into the underpass, breaking up the monotony and sense of enclosure for pedestrians and cyclist users.



Figure 87 Artist impression of Kingsgrove portals

6.6 Water quality basin

There is a water quality basin located at adjacent to the Burrows Road within the St Peters interchange.

The urban design objective is to create water quality basins that are an asset to the visual and ecological amenity of the area, as well as ensuring adjacent areas are not adversely affected by runoff during the construction and operational phases of the project. Rectangular ponds would be avoided and an emphasis would be placed on a shape that is informal and responds to local conditions. Where possible, margins of basins would be graded to blend with existing adjoining landform. Basins would be revegetated by direct planting with selected native grasses and sedges, with planting of containerised trees and shrubs at selected locations.

An illustration showing the shape, form and landscape treatments of typical operational water quality basins is shown opposite.

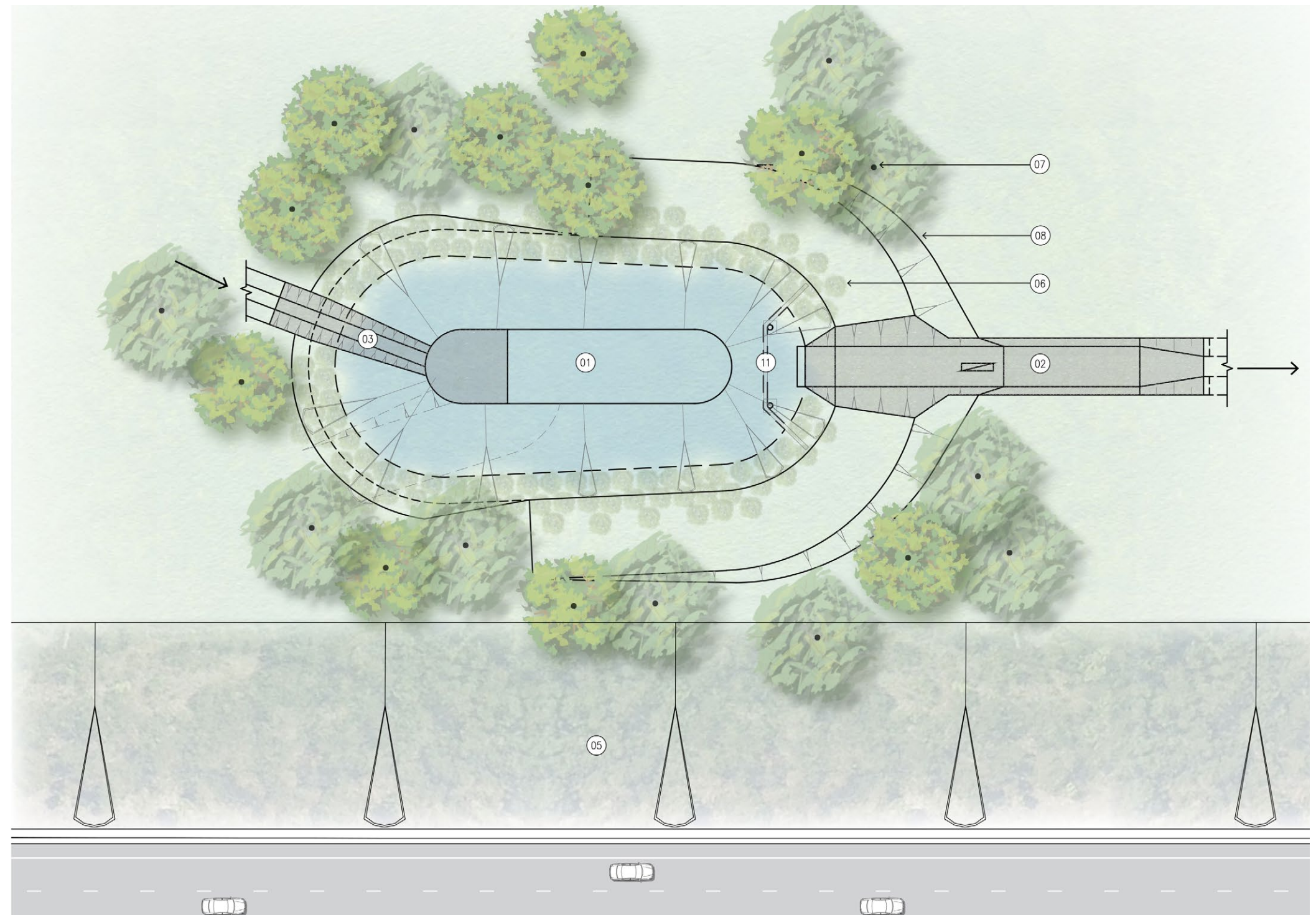


Figure 88 Typical detail of water quality basin

Lighting, Art and Interpretation



Lighting, Art and Interpretation

7.1 Strategy

Art has the ability to invigorate and enliven any journey. If used well, it can provide points of delight which can strengthen the relationship between motorists, pedestrians, cyclists and their journey. It can engage with communities and is vital in improving designs and creating a valued sense of place. In the context of the New M5, art, interpretation and lighting would be considered holistically to ensure the result is complementary, inclusive of many pieces and elements that create an intriguing whole.

The following sites have been identified as providing potential for artwork, lighting or interpretation installations:

- Kindilan underpass
- Tunnel interior
- St Peters interchange

Art and interpretation within these locations needs to respond to context and ensure it enriches the place, rather than merely form an add-on. For the local community, art offers the chance to celebrate their specific social history, distinguished local identity and flourishing artistic scene. For visitors and travellers passing through, art has the ability to transform the journey, creating a unique experience of arrival, transition and emergence. The integration of iconic artistic pieces into a site can deliver a lasting sense of place - enlivening it with image and spirit.

In addition to interpretation and lighting elements, a significant budget has been allocated to the commissioning of public artworks for New M5. An art panel would be established by Sydney Motorway Corporation to oversee this commissioning process.



Figure 89 Street art Kindilan Underpass



Figure 90 Melbourne Eastlink - Emily Floyd sculpture

Photo credit: Rory Hyde

7.2 Kindilan underpass

The Kindilan underpass is one of many pedestrian and cyclist connections providing north-south links within the existing M5 corridor. These underpasses are characterised by their colourful street art mural walls that activate what could be hostile environments. The street art promotes a feeling of care for the public domain environment and provides a canvas for telling local stories. In addition, street art installations have other positive social benefits in acting as a deterrent to graffiti vandalism.

The extension of the Kindilan underpass from 26 metres to 77 metres would provide the opportunity to commission further street art murals. With the above motorway featuring separated carriageways light would permeate through three main shafts into the underpass (see figure 103). Furthermore this would provide the opportunity for separate walls or 'canvases' to feature distinct artworks.

During detailed design a strategy for the commissioning of artwork within the Kindilan underpass would be developed. This would include ways in which community involvement in the commissioning or delivery of the artwork can be achieved.

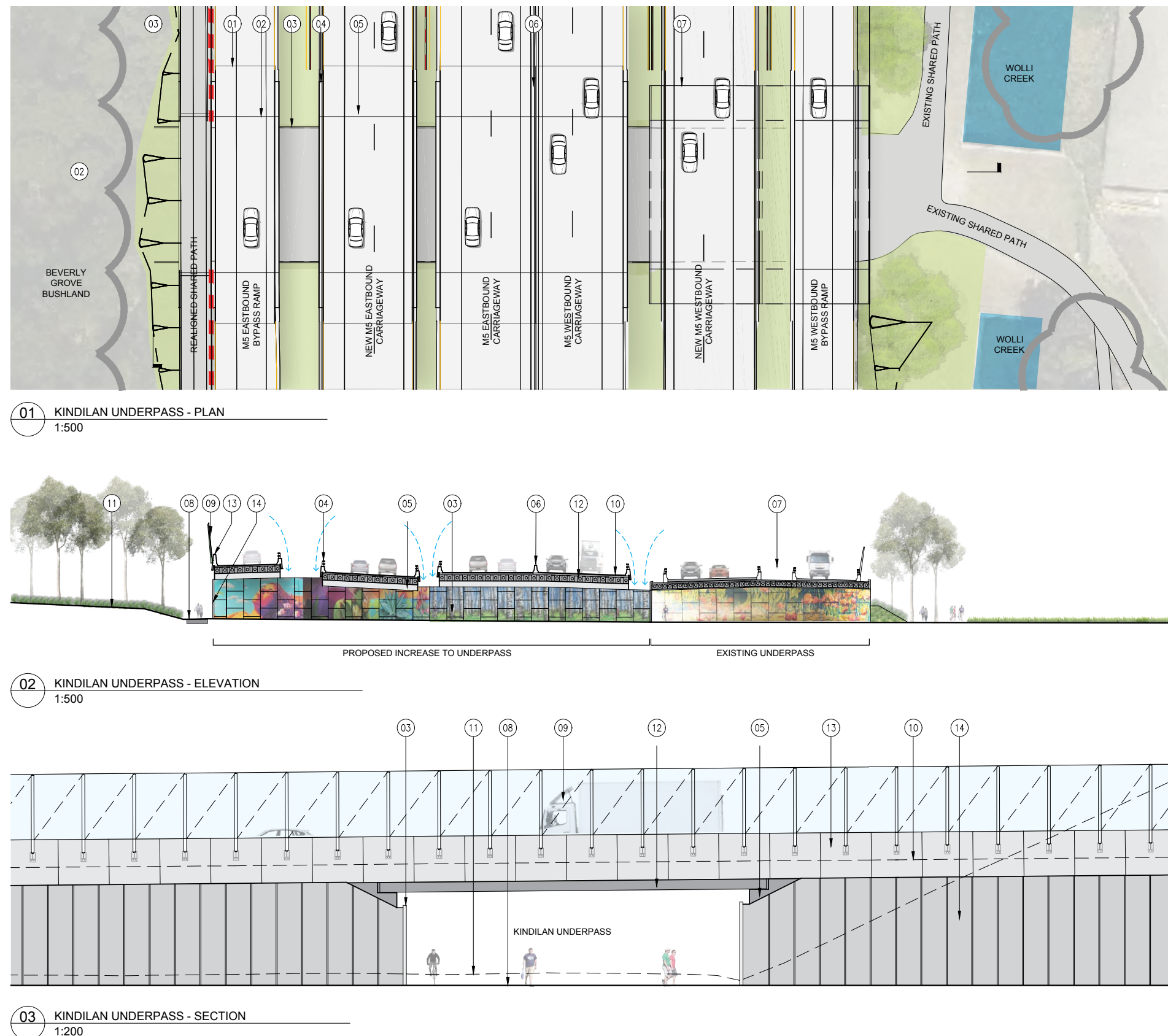


Figure 91 Kindilan Underpass

7.3 Tunnel Interior

The tunnel interiors provide the opportunity to develop a new paradigm for tunnel infrastructure in NSW. As detailed in section 4.5, feature lighting and interpretive elements would be included that would mark a difference from existing monotonous tunnel interiors. The composition of programmable LED lighting and subtle variations in lining panels would provide interest along the tunnel journey.

Detailed design would further inform the programming and detailing of tunnel lighting and panel composition in a manner that complements the overall lighting art and interpretation concept for New M5.

7.4 St Peters interchange

The St Peters interchange provides the opportunity for large scale public artworks to support the activation of newly created open space. The large expanses of turfed areas as well as the proposed landscape mounds provide possible sites for installation works that could become an attractor within the interchange site. A number of potential themes could be explored in public artwork for the interchange.

Geology

The St Peters Brickpit is used extensively as a teaching resource for students wishing to observe the shale and siltstone of the Ashfield formation and Botany Bay shoreline sediment deposits. These sediments provide important evidence of the extent to which the waters of Botany Bay rose at the end of the last glaciation and are known to contain a rich source of fossils of upper Triassic Age.

The site is of historic interest for the way it demonstrates part of the geographical spread of the St Peter's brick-shale deposits and is vital to the art strategy as it establishes a connection to the restored Bedford Brickworks located to the north of Sydney Park.

Fossils

The site has been of archaeological interest - an excellent specimen of the species *Paracyclotossaurus davidii* - similar to the modern day crocodile and around 2.3 metres long - was found in one of the brickpits.

Archaeologists have also discovered interesting examples of flora buried beneath the mud. The remains of an ancient forest of *Eucalyptus robusta* below the brickpit site indicate a period of much lower sea level and significantly different vegetation.

Landscape

The original owners of the land - the Cadigal and Wangal people had lived along the Cooks River for thousands of years prior to European settlement, and for much of this time the area around the brickpits comprised of mudflats, mangroves and salt marshes associated with the Gumbaramorra Swamp. These saltwater swamps extended east as far as the tidal Sheas Creek, and contained a mixture of Sandstone woodland and transitional Turpentine Ironbark Forest.

Referencing local heritage

The art strategy places a large importance on aligning and integrating with the existing design language of Sydney Park. The scale of the brick kiln chimneys at the north west corner of Sydney Park make them the dominant feature of the local skyline. Listed as a heritage site, the former Bedford and later Austral Brickworks buildings have influenced design decisions throughout the park. The simplicity and elegance of reclaimed clay bricks have been used throughout the park to add detail to many of the basic urban elements as well as to create unique artistic features, such as the brick bird baths.

In addition to public art there are significant opportunities for interpretation within the interchange site. Together with feature lighting, the St Peters interchange would be highly layered, reinforcing the need for a cohesive approach. Interpretation, art and lighting would be developed in tandem to ensure the best outcome for the interchange site that is engaging and lively, celebrating the site and its history.

Assessment against Design Objectives



Assessment against design objectives

Objective	Western surface works	Bexley	Arncliffe	St Peters interchange	Tunnel
Leading edge environmental responsiveness	Landscape concept recognises the importance of landscape to soften views and create habitat within and along the corridor. Upgrade of shared path within M5 Linear Park would support access to active recreation opportunities Location of maintenance facility at Kingsgrove allows for preservation of Wolli Creek bushland.	Landscaping would create a green gateway to the M5 Linear Park in this location. Tree canopy addition would improve streetscape amenity	Landscape concept would ensure facilities recess into existing golf course landscaping, and improve biodiversity, including maintaining the Green and Golden Bell Frog habitat.	Landscape concept would create an 'urban forest.' New open space to be created for community enjoyment. New pedestrian and cycling links increase active transport connectivity.	Potential use of LED lighting would reduce energy consumption
Connectivity and legibility	Portal treatment (that is analogous to M4 East) would begin/ end Westconnex language at the southern extent. Transparent noise walls allow views to surrounds orientating the motorist Shared path upgrade provides active transport connectivity for local communities Built form utilises project-wide material palette commencing this language in the southern extent of the corridor.	Completion of the M5 Linear Park (western side) with a green gateway reinforces landscape setting for the motorway and the shared path of the park.	Location of facilities would ensure pedestrian and cyclist accessibility is maintained	Interchange site forms main connector between stages and with the southern reaches of the CBD- denoted by its green appearance and unique portal design marking it as a major decision point within the journey. Local street upgrades would improve pedestrian and cyclist connectivity and access to open space.	The motorway would increase connectivity regionally within Sydney. Locational identifier markers and other tunnel linings (break-down bays and emergency access points) would be the same as M4 East, providing visual stimuli, and a recognisable identity within the journey.

Objective	Western surface works	Bexley	Arncliffe	St Peters interchange	Tunnel
Place making	Kindilan underpass provides opportunity to engage with community to increase street art concept. Upgrade to M5 Linear Park and shared path provides opportunities to reinforce the 'green corridor' and provide an improved landscape setting. Location of built form (maintenance and ventilation facilities) recesses into landscape and limits overshadowing of public open space.	Built form recesses into surrounds with its 'residential' appearance complemented by landscape around its perimeter.	Landscape setting would be retained and enhanced allowing motorway facilities to recede.	Creation of open space would provide essential active and passive recreational facilities for the community. Transformation to an 'urban forest' would create a new chapter in the interchange site's history. Definition of local streets through planting and paths would support active transport for local communities.	N/A
Urban renewal and liveability	Upgraded shared path with lighting would improve amenity residents along the M5 Linear Park.	Location of facilities on isolated site reduces impacts on surrounding residential lands.	Location of facilities within golf course site reduces impacts on surrounding residential lands.	Utilisation of land fill site for interchange repurposes a site unsuitable for many other uses. Creation of open space and active transport connections would support existing urban renewal occurring in Mascot and Erskineville and provide opportunities for further renewal in the future.	N/A

Objective	Western surface works	Bexley	Arncliffe	St Peters interchange	Tunnel
Memorable identity and a safe enjoyable experience	Portal design would match that of the M4 East portals-creating identity. Landscape concept would significantly green the corridor in this location. Inclusion of public art concept has the ability to reinforce the street art that characterises underpasses	Landscape concept would support green corridor concept within this location.	Landscape concept would ensure facilities recess into existing golf course landscaping.	Distinct portal design creates an identity for the interchange Heavily treed landscape reinforces urban forest identity of interchange Open space proposal for mounds creates a memorable landscape and continues language of Sydney Park Public art inclusion has the ability to activate parklands and provide a distinct talking point along the journey.	Tunnel lining design matches the proposed M4 East tunnel, reinforcing the Westconnex identity.
A new quality benchmark	Material selection is durable and easy to maintain. Composition of materials is restrained ensuring facilities sit within their surrounds.	Material selection is durable and easy to maintain. Composition of materials is restrained ensuring facilities sit within their surrounds.	Material selection is durable and easy to maintain. Composition of materials is restrained ensuring facilities sit within their surrounds.	Material selection is durable and easy to maintain. Composition of materials is restrained ensuring facilities sit within their surrounds.	Outcomes to be reviewed throughout design development by Urban Design Review Panel. Material selection is durable and easy to maintain. Composition of materials is restrained ensuring facilities sit within their surrounds.

Mitigation Measures



Mitigation Measures

The following mitigation measures are recommended for the urban design components of the project:

Develop a final landscape and urban design plan with input from the local community and local government authorities.

Continue to develop the urban and landscape design in consultation with the New M5 Urban Design Review Panel to ensure the requisite design quality is achieved.

Undertake a Safety in Design review of the developed urban and landscape design.

9.1 Kingsgrove

- Develop concepts for noise attenuation (noise mounds and noise walls) with further input from the local community to balance provision of accessible open space with a green landscaped outlook.
- Develop the final plant species to be utilised with the local community and local government authorities.
- Develop the artwork strategy for Kindilan underpass with input from the community and local government authorities.

9.2 Bexley

- Develop the landscape plan to complement the existing topography of the site and complement the adjacent Wolli Creek bushland.
- Develop the final plant species to be utilised with the local community and local government authorities.

9.3 Arncliffe

- Further develop the design of the ventilation facility to minimise intrusion in the landscape.
- Develop the landscape plan to ensure maximum screening of the built form for residential areas to the west.
- Develop the final plant species to be utilised with the local community and local government authorities.

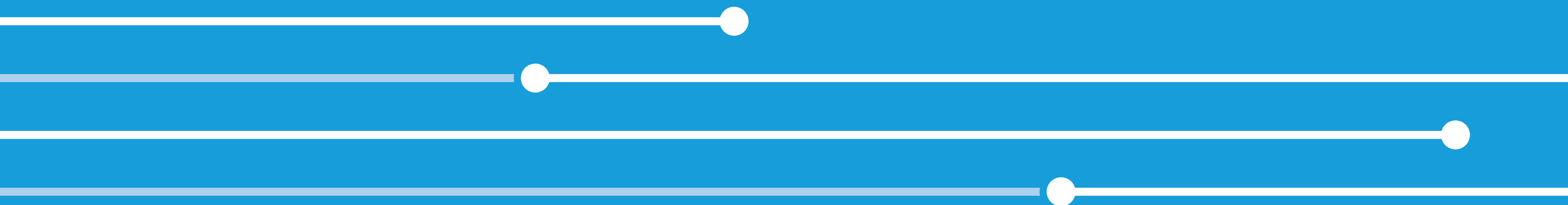
9.4 St Peters

- Work with local government authorities to ensure connectivity of pedestrian and cycleways proposed provides maximum benefits for community users.
- Develop the design of open space in consultation with the local community and local government authorities.
- Develop the final plant species to be utilised with the local community and local government authorities.
- Investigate opportunities to further maximise the green canopy throughout the local road network with tree planting in medians where safety barriers and/or speed limits permit.

A

Appendix A

Urban Design Review Panel Member Biographies



Appendix A- Urban Design Review Panel Member Biographies

Peter Poulet

Peter Poulet is NSW Government Architect and General Manager of the Government Architect's Office. He has over 30 years' experience in Australia and Japan in both private and government architectural offices.

Peter has been involved in all phases of architectural services including brief preparation, feasibility studies, design and documentation. His current emphasis is on design management and advocating for quality design and sustainable built outcomes.

Peter provides strategic and independent advice to Government on the built environment and provides Government Agencies with design review and advice on specific projects through commissions, boards and committees.

His projects have received numerous awards including the Horbury Hunt, the Blackett Award and an Australian Institute of Architects' commendation for Public Building.

Yvonne von Hartel AM

Yvonne is a Founding Principal of the award-winning national architectural and urban design practice, peckvonhartel.

She is a Council member of La Trobe University and a Member of the La Trobe University Council Infrastructure and Estates Planning Committee, a Trustee of the Melbourne Convention and Exhibition Centre and chair of the Capital Works Committee, a Board member of the Queen Victoria Market Pty Ltd and a Commissioner of the Victorian Building Authority. She holds many concurrent design advisory roles including Member, University of Wollongong, SMART Infrastructure Advisory Council, Member, Mornington Peninsula Design Advisory Panel, Member of the Design Review Panel of the Sydney International Convention, Exhibition and Entertainment Precinct, and a Member of the Capital Metro Agency Design Advisory Panel. From 2005 – 2011 Yvonne was a Director of the ConnectEast Management Limited and was responsible for the selection and installation of Public Art along the 40 km Eastlink toll road.

In 2007, Yvonne was awarded a Member of the Order of Australia for 'services to architecture, design and building through involvement with a range of professional organisations, to the promotion of women in business, and to the community'.

Kim Crestani

Kim Crestani has over 30 years experience as an Architect and was a Senior Executive in the NSW Public Sector from 2009-2014. Kim was formally the Director of Architecture at Sydney Metro and Principal Manager of Architecture and Station Precincts on the North West Rail Link.

Kim was a member of the Design Review Panel for Transport for NSW for a period of 8 years until 2014. Whilst a principal at her award winning architectural practice, she was appointed to the NSW Premiers taskforce on housing and was a member of six Local Government SEPP 65 Panels.

In 2006 Kim won the prestigious Marion Mahoney Griffin Award for her contribution to Architecture.

In 2015 Kim, as Director of Order Architects was appointed to the Government Architect's Strategy and Design Excellence Prequalification Scheme. Kim has also recently been appointed as a Panelist for City of Sydney Design Excellence Competitions.

In July 2015 Kim was appointed to Liverpool City Council's Design Excellence Panel.

Gareth Collins

Gareth Collins is the Principal Manager of the Centre for Urban Design in RMS. His experience includes airport, rail, bus transitway and road projects in the UK and Australia. Recent projects include the Pacific Highway Upgrade, the CBD Light Rail project, the Albert Tibby Cotter Bridge and the WestConnex Motorway. Gareth was the author of Bridge Aesthetics and 'Beyond the Pavement Urban Design Policy Procedures and design Principles' which won the Australia Award for Urban Design in 2010. He is a landscape architect and urban designer and the current NSW President of the Australian Institute of Landscape Architects.