

6.2 Operation landscape character impacts

6.2.1 Western surface works

Refer to Urban Design Report for full description of works associated with western surface works.

At operation, the built structures and infrastructure on site would comprise the following:

- The Kingsgrove motorway operations complex (MOC1) would be situated at Beverly Grove Park South, consisting of:
 - Bulky equipment storage area
 - Local maintenance facility, workshop and offices
 - Car parking area
 - Substation (including disaster recovery system)
 - Deluge tanks
 - Ventilation station
 - Access road to the facility and hardstand area
 - Reinstated shared path for pedestrians and cyclists running adjacent to the southern boundary of the park along to Wolli Creek
 - A five metre high noise barrier along the southern boundary of the M5 East Motorway between Kooemba Road and Beverly Grove Park, of which the top two to three metres would be transparent (subject to detailed design).
- Beverly Grove North:
 - A 6.5 metre high, transparent noise barrier adjacent to the M5 East Motorway between Garema Circuit and the eastern corner of Canterbury Golf Course
 - Reinstated shared path for pedestrians and cyclists, which would generally run along the northern boundary of Beverly Grove Park North.
- M5 Motorway corridor, which would include the realigned M5 East Motorway and the project:
 - Western tunnel portals
 - Two new through lanes to bypass the project
 - Two new through lanes from the M5 East Motorway to the project
 - One new lane connecting King Georges Road Interchange to the existing M5 East Motorway, which bypasses the project.
 - Tolling gantries.

The tallest of the structures at the western surface works would be the ventilation facility located at the Kingsgrove motorway operations complex, which would be around 30 metres tall.

6.2.1.1 Landscape Character Impact Assessment

Five Landscape Character Zones have been identified for the western surface works site area (refer **Figure 4-2**). For a description of LCZs within this area, refer **Section 4.2.4**.

The assessment is provided in **Table 6-31**.

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Table 6-31 Operational landscape character impact assessment for the western surface works site

Landscape Character Zone	Impact Assessment Sensitivity	Magnitude	Rating
LCZ 1: Residential	The sensitivity of the Residential Landscape Character Zone is Moderate due to the following: - The LCZ is compartmentalised in nature due to regular bisection by roadways, which visually contains elements of change within designated blocks and lots. Residential areas are in some way designed to endure change within each lot / block boundary, as individual houses / blocks are developed over time as housing requirements change. - The land to the north of the M5 East Motorway is zoned Medium Density, so some form of change is to be expected over time as the existing low density housing is 'updated' to match the zoning (with the exception of the land within the urban heritage conservation areas). - Areas of higher cultural sensitivity lie within this LCZ (e.g. the Kingsgrove East and West Urban Conservation Areas and the Pallamana Parade Urban Conservation Area). Housing within Urban Conservation Areas is expected to resist change to development outside of that sympathetic to the existing urban form and fabric. However it is noted that the anticipated changes are not sited on or near any Urban Conservation Area within the study area. - Views within the LCZ are limited by a combination of mature vegetation, built elements and the flat to gently sloping topography. - The edges of this LCZ within the study area address the edges of other LCZs with varying degrees of integration, but generally boundaries are treated with screening and fencing.	The magnitude of change due to the project is Low, due to the following: - The anticipated changes due to the project are very isolated, and fall outside of this LCZ. - Although the two other LCZs within which changes due to the project fall (Transport Corridor and Recreational LCZs) share a boundary with the Residential LCZ in certain places, neither share a boundary with this LCZ in the location of major proposed changes. Minor proposed changes that may exist in adjacent LCZs close to the boundary with the Residential LCZ are considered in character with the LCZ they fall within, and therefore do not threaten to change the character of this LCZ. - Overall, there is no loss of view, major change to views, backdrop or outlook from this LCZ that affect its character.	Moderate - Low

Landscape Character Zone	Impact Assessment Sensitivity	Magnitude	Rating
LCZ 2: Industrial	The sensitivity of the Industrial Landscape Character Zone is Low, due to the following: - This LCZ is compartmentalised in nature due to regular bisection by roadways and lot boundaries, which can visually contain elements of change within designated blocks and lots. As per the Residential LCZ, changes within this LCZ are contained and somewhat mitigated by this compartmentalisation. - Mature street tree vegetation within the streetscapes also limits views within the LCZ. Views out of and into this LCZ are limited generally due to built structures. - The LCZ has a utilitarian character due to the nature of the land use. It is characterised by large, utilitarian industrial buildings and signage and heavy vehicle movement on the roads.	The magnitude of change due to the project is Low, due to the following: - No permanent changes are due to occur in this LCZ within the study boundary. - There is no major loss of view, major change to views, backdrop or outlook from this LCZ that affect its character. - The LCZ is utilitarian in function and character, and as such, views from or to this LCZ are not highly valued.	Low
LCZ 3: Recreational	The sensitivity of the Recreational Landscape Character Zone is Moderate, due to the following: - This LCZ is generally a simple, informal landscape of turf and trees with some screening vegetation, and as such can readily be restored (ie the character is easy to reinstate after disturbance) - Visual amenity is important within this LCZ, views to and from recreational areas are highly valued, with some parks providing important district views - This LCZ contains an Endangered Ecological Community (EEC): the Cooks River / Castlereagh Ironbark Forest, within Beverly Grove Bushland which has a distinctive visual character and rare within the study area. This area does not have the capacity to absorb change, nor can it be easily reinstated.	Although the main permanent changes within the LCZ are primarily isolated to one park within the M5 Linear Parkland (Beverly Grove Park South), the magnitude of this change is High, due to the following: - The scale and character of the MOC1 comprises a dominant new element within the LCZ - The addition of this feature would change the character of the LCZ within its immediate surrounds - The park is very narrow and long, set beside the low amenity concrete channel of Wolli Creek - The loss of district views - The loss of EEC within the M5 Linear Park, north of the M5 East Motorway near Canterbury Golf Course.	High - Moderate

Landscape Character Zone	Impact Assessment		
	Sensitivity	Magnitude	Rating
LCZ 4: Transport Corridor	The sensitivity of the Infrastructure Landscape Character Zone is Low. The M5 East Motorway is a highly contained, linear element, with a utilitarian character as a transport corridor. Although views from transport corridors to the landscape can be valued, in the case of the M5 views are generally highly contained to within the road corridor, channelled between noise walls, noise mounds and screening vegetation. Due to the contained, linear nature of this LCZ, changes within it have a high capacity to be substantially visually screened from adjoining LCZs.	The magnitude of change is rated as Moderate. This LCZ is made up of a number of corridors (including the M5 East Motorway, the rail corridor and a one major road). Most of the changes due to the project are contained within the linear M5 East Motorway corridor. Although the addition of a tunnel portal and motorway operations complex comprise of a series of quite large structural elements, these changes are in keeping with the existing character of the M5 East Motorway. They are also an isolated change to the greater linear element of the M5 East Motorway. The quality of the landscape architecture / urban design would play a significant part in mediating the visual impact of this development within this LCZ.	Moderate - Low
LCZ 5: Urban Centre	The sensitivity of the Urban Centre Landscape Character Zone is High. This LCZ is a highly visited area with gathering areas, places of cultural significance, and community facilities contained within a relatively small area. As such, the inherent landscape value of this area is high. The commercial and community facilities are activated by the near-by train station, which puts emphasis on this LCZ as a gateway to the surrounding areas (residential, industrial and recreational). The LCZ is visually contained by built form, mature planting (including street trees) and landform.	The magnitude of change to this LCZ due to the development is Negligible, as the proposed development cannot be seen from this location. This LCZ, while relatively close to the site of the changes, is visually isolated from the changes by landform, planting, and built form.	Negligible

Summary of potential impacts

Within the study area, the LCZs are generally visually compartmentalised from one another due to the flat or gently sloping landform, the structure of the roads (including two main transport corridors which substantially isolate the landscape on either side of them, those being the M5 East Motorway and the rail corridor), and the built form of the development. This limits the impact on the proposed development on the surrounding landscape.

The permanent changes due to the project are contained within the M5 East Motorway corridor (Transport Corridor LCZ), but spill out into the neighbouring Recreational LCZ at Beverly Grove Park South (due to the MOC1) and North (with loss of the vegetated noise mound and Cooks River / Castlereagh Ironbark Forest at Beverly Grove Bushland due to M5 East Motorway widening). The visibility of the infrastructure at these locations within the Recreational LCZ has created a High to Moderate visual impact for this LCZ.

6.2.2 Bexley Road South motorway operations complex

Refer to Urban Design Report for full description of works associated with Bexley Road South motorway operations complex.

At operation, the Bexley Road South motorway operations complex (MOC2) would comprise the following (refer **Figure 6-61**):

- A supply substation (4.0 metres tall)
- A ventilation (smoke extraction) station (4.0 metres tall)
- Entry driveway (from Bexley Road) and hardstand area
- Landscaping.

The northern portion of the ramp to the footbridge (west of Bexley Road) would be modified. The buildings on the site would be approximately five metres high and slightly taller on the southern side of the substation where the ground level slopes down to Wolli Creek.

6.2.2.1 Landscape Character Impact Assessment

Four Landscape Character Zones have been identified for the Bexley Road South motorway operations complex (MOC2) site area (refer **Figure 4-23**). For a description of LCZs within this area, refer **Section 4.3.4**.

The assessment is provided in **Table 6-32**.

Table 6-32 Operational landscape character impact assessment for the MOC2 site

Landscape Character Zone	Impact Assessment		Rating
	Sensitivity	Magnitude	
LCZ 1: Residential	The sensitivity of the Residential Landscape Character Zone is Moderate due to the following: - The LCZ is compartmentalised in nature due to regular bisection by roadways, which visually contains elements of change within designated blocks and lots. Residential areas are in some way designed to endure change within each lot / block boundary, as individual houses / blocks are developed over time as housing requirements change - Views within the LCZ are limited by a combination of mature vegetation, built elements and the flat to gently sloping topography, although some elevated areas would get local and district views - The edges of this LCZ within the study area address the edges of other LCZs with varying degrees of integration, but generally boundaries are treated with screening and fencing. This LCZ does not abut the MOC2 site boundary.	The magnitude of change due to the project is Low, due to the following: - The anticipated changes due to the project are isolated, and fall outside of this LCZ. - The locations of the proposed changes lie away from the boundary of the Residential LCZ. This limits views from the Residential LCZ to the proposed changes, and therefore limits the visual impact on this LCZ. Overall, there is no significant loss of view, major change to views, backdrop or outlook from this LCZ that affects its character.	Moderate - Low

Landscape Character Zone	Impact Assessment	Magnitude	Rating
LCZ 3: Recreational	The sensitivity of the Recreational Landscape Character Zone is Moderate, due to the following: - This LCZ is generally a simple, informal landscape of turf and trees with some screening vegetation, and as such can readily be restored (i.e. the character is easy to reinstate after disturbance) - Visual amenity is important within this LCZ, views to and from recreational areas is highly valued, with some parks providing important district views.	Although the permanent changes within the LCZ are isolated to one park within the M5 Linear Parkland (the area bounded by the M5 East Motorway to the north, Bexley Road to the east, and Wolli Creek to the south), the magnitude of this change is High, due to the following: - The scale and character of the proposed emergency smoke extraction facility is in contrast with that of the overall LCZ - The addition of this feature would change the character of the LCZ within its immediate surrounds - The park is narrow in width and elevated at this location - This park comprises a minor gateway to the M5 Linear Park at Bexley Road - The extent of accessible parkland within the M5 Linear Park in this area is relatively limited. - The facility would be overlooked by receivers using the pedestrian overpass, and the relocated ramp would pass very close to the facility. No screening is provided between the new ramp and facility. Views would include the roof of the facility and a large expanse of vehicle access pavement.	High - Moderate
LCZ 4: Transport Corridor	The sensitivity of the Infrastructure Landscape Character Zone is Low (refer Table 6-31).	The magnitude of change is rated as Low. The changes to the landscape at this location are in close proximity to Bexley Road, the M5 East Motorway and the rail corridor, all of which fall under the Transport Corridor LCZ. However due to the compartmentalised nature of the rail corridor and the M5 East Motorway, Bexley Road would be the most affected by the changes. Bexley Road is a major road corridor with a utilitarian character. Although at this location the road passes through residential and recreational areas, the proposed smoke extraction facility falls just south of the intersection with the M5 East Motorway, which is a major intersection with additional road infrastructure (e.g. a pedestrian overpass) adding to the utilitarian character of the area.	Low

Landscape Character Zone	Impact Assessment		Rating
	Sensitivity	Magnitude	
LCZ 5: Urban Centre	The sensitivity of the Urban Centre Landscape Character Zone is High (refer Table 6-31).	The magnitude of change to this LCZ due to the development is Negligible, as the proposed development cannot be seen from this location. This LCZ, while near to the site of the changes as the crow flies, is visually isolated from the changes by landform, planting, and built form.	Negligible

Summary of Potential Impacts

As per the western surface works site, the greatest affected LCZ is the Recreational LCZ, due to its Moderate sensitivity, the contrast between the proposed changes to the existing situation, and that the changes occur almost exclusively within this LCZ. In addition, the M5 Linear Park at this location comprises a minor gateway to the rest of the M5 Linear Park, which places emphasis on the landscape value of this area within the greater LCZ.

6.2.3 Arncliffe motorway operations complex

Chapter 5 of the EIS and the New M5 Urban Design Report provides a full description of works associated with Arncliffe motorway operations complex. However, in summary, the Arncliffe motorway operations complex (MOC3) would include:

- Ventilation facility (35 metres in height)
- Air intake facility (10 metres in height)
- Distribution substation (around 5 metres in height)
- Water treatment plant
- Water treatment wetland
- Car parking

Vehicle access is provided from Marsh Street at the intersection with Flora Street and pedestrian access is maintained adjoining the site.

6.2.3.1 Landscape Character Impact Assessment

Three LCZs have been identified surrounding the Arncliffe motorway operations complex (refer **Figure 4-43**). For a description of LCZs within this area, refer **Section 4.4.4**.

The assessment is provided in **Table 6-33**.

Table 6-33 Operational landscape character impact assessment for the Arncliffe motorway operations complex site

Landscape Character Zone	Impact Assessment		Rating
	Sensitivity	Magnitude	
LCZ 1a: High Density Residential	The sensitivity of this LCZ to the proposed change is considered to be Low due to the following: - The changes due to the MOC3 fall outside this LCZ. This LCZ does not share a common boundary with the MOC3 site (they are separated by the Transport Corridor LCZ). Notwithstanding that the MOC3 is about 200 metres distant from this LCZ, it is clearly visually distinguished from this LCZ, as it also is from the adjacent low scale and relatively open Recreation – Open Space LCZ within which the MOC3 is located, and both the adjoining Low Density Residential LCZ, and the Infrastructure – Transport Corridor LCZ.	The magnitude of change due to the project is considered to be Low, due to the following: - The tall vertical elements of the ventilation facility are broadly similar in form, massing and scale with the tall residential buildings of the High Density Residential LCZ, but these vent elements comprise a distinct, locally concentrated grouping, contained within the above described low scale, relatively open setting which is in sharp contrast to the character of this LCZ.	Low
LCZ 1b: Low Density Residential	The sensitivity of this LCZ to the proposed change is considered to be Moderate due to the following: - The relatively homogenous, low scale character of this LCZ would not readily visually absorb the proposed highly contrasting change along the edges of this LCZ with regard to the visually prominent, tall massed, modular forms and contrasting materials of the ventilation facility.	The magnitude of change due to the project is considered to be Moderate, due to the following: - The anticipated changes due to the project are isolated, and fall outside of this LCZ - A concept landscaping plan has been prepared and would be confirmed during detailed design. However due to the increased proximity of the facility to Marsh Street, the extent of screening vegetation may be limited between the buildings and the roadway.	Moderate

Landscape Character Zone	Impact Assessment Sensitivity	Magnitude	Rating
LCZ 3a: Recreation - open space	The sensitivity of this LCZ is High, due to the following: - Recreational land is generally available in large blocks, and within the study area much of this is open (often turfed with scattered shade trees), with mature vegetation fringing the sites. As such, good visibility is available within this LCZ. - Visual amenity is important within this LCZ, views to and from recreational areas are highly valued - Due to its relatively open, homogeneous nature (eg in relation to line, form, colour and texture), the landscape is not readily able to easily visually absorb uncharacteristic changes in scale such as the ventilation facility.	The MOC3 lies within this LCZ. The magnitude of change due to this development is Moderate, due to the following: - The scale and character of the proposed development is strongly contrasting with this LCZ (particularly the ventilation facility) - The addition of ventilation and motorway operations infrastructure would change the character of the LCZ within the vicinity of the development	High - Moderate
LCZ 3b: Recreation - Waterways	The sensitivity of this LCZ to change from the proposed development is considered to be Moderate, due to the following: - Great value is placed on the visual amenity of recreational waterways, lakes and the Cooks River is adjoined in some locations by recreational areas of substantial scenic amenity, as well as heritage listed items - Visibility within and around this LCZ tends to be high due to the low lying nature of the adjoining land and the open views obtained along and across the waterways - Changes to LCZ from the adjacent LCZs are sometimes difficult to observe due to the low lying land surrounding waterway recreation areas, coupled with often fringing vegetation. - However, the character of the waterway is also substantially that of a canal with a mix of adjoining land uses including Sydney Airport, reclaimed land and a shipping container storage area.	The magnitude of change due to this development is Negligible. Views from this LCZ would not be available to the MOC3, and the site does lie within or share a common boundary with this LCZ.	Negligible

Landscape Character Zone	Impact Assessment Sensitivity	Magnitude	Rating
LCZ 4a: Infrastructure – Transport Corridor	The sensitivity of the Infrastructure Landscape Character Zone is Low. The M5 East Motorway is a highly contained, linear element, with a utilitarian character as a transport corridor. Although views from transport corridors to the landscape can be valued, in the case of the M5 East Motorway views are generally highly contained to within the road corridor, channelled between noise walls, noise mounds and screening vegetation. Due to the contained, linear nature of this LCZ, changes within it have a high capacity to be substantially visually screened from adjoining LCZs. Marsh Street is at grade, and therefore more susceptible to changes to surrounding areas. However the street has a utilitarian character that reduces the sensitivity of the corridor to adverse effects on character due to changes to surrounding areas.	The magnitude of change is rated as Low. The MOC3 is contained within another LCZ adjacent to this LCZ. The scale and character of the MOC3, although in contrast with the general landscape character within the Recreation – Open Space LCZ, is not uncharacteristic of what may be experienced in the land surrounding the Infrastructure – Transport Corridor LCZ. Landscaping to the MOC3 would potentially screen much of the development from Marsh Street, with the exception of the ventilation facility.	Low
LCZ 4b: Infrastructure - Airport	The sensitivity of the Infrastructure Landscape Character Zone is Low. Although this LCZ is highly visible from the surrounding areas, it is characterised by distinct land use, flat topography, and a lack of built infrastructure other than turf, runway edges, parked aircraft, sheds and hangars, and the terminal buildings. Views to and from this LCZ are only available from directly adjacent the area, which within the study area would be from the Cooks River (the Recreation - Waterways LCZ) and the eastern edge of the Kogarah Golf Course (Recreation - open space LCZ). It has a utilitarian character, driven by specific needs of land use.	The magnitude of change to the character of this LCZ due to the project is Negligible. The changes lie outside this LCZ and would comprise a minor element of any view from the Airport site.	Negligible

Summary of Potential Impacts

Overall, the MOC3 would have a limited impact on the surrounding LCZs due to the small size of the site, the potential screening and softening effect of landscaping surrounding the built elements of the project, and the limited visual integration of adjacent LCZs due to road corridors and boundary conditions.

6.2.4 St Peters Interchange and surrounds

Chapter 5 of the EIS and the New M5 Urban Design Report provides a full description of works associated with the St Peters Interchange and surrounds. However, in summary, the St Peters interchange would include the following built structures and infrastructure:

- The St Peters motorway operations complex (MOC4), located on the corner of Princes Highway and Canal Road, consisting of:
 - Ventilation facility including exhaust fan room and exhaust stacks (around 20 metres in height)
 - Supply air intake building
 - Distribution substation building
 - Plenum building
 - Fire pump room (below ground)
 - Car parking and vehicle access via Canal Road
 - Deluge tanks
- The Burrows Road motorway operations complex (MOC5), located on the corner of Campbell Road and Burrows Road, consisting of:
 - The motorway control centre building (8.5 metres in height)
 - Distribution substation
 - Car parking at ground level below motorway control centre
 - Incident response parking and vehicle access via Burrows Road
- Car parking
- Leachate treatment plant
- Seven interchange bridges
- Pedestrian and cycleway bridge over Campbell Road
- Pedestrian and cycleway bridge over northern ramps
- Campbell Road bridge over Alexandra Canal
- Gardeners Road bridge over Alexandra Canal
- Two water quality basins
- One park area, pedestrian and cycle paths, with the remaining park to be delivered as part of the M4-M5 Link.

The 'Dynamo' heritage building would be retained at the corner of the Princes Highway and Canal Road.

Refer Section 6.4.5 for details and assessment of upgrades to local roads.

6.2.4.1 Landscape Character Impact Assessment

Five Landscape Character Zones have been identified within the St Peters interchange study area (refer **Figure 4-51**). For a description of LCZs within this area, refer **Section 4.5.4**.

The assessment is provided in **Table 6-34**.

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Table 6-34 Operational landscape character impact assessment for the St Peters interchange site

Landscape Character Zone	Impact Assessment Sensitivity	Magnitude	Rating
LCZ 1: Residential	The sensitivity of the Residential Landscape Character Zone is High due to the following: - The residential areas within the study area are well established, with residential housing dating back to the mid1800s. Much of the original housing has been retained, giving the area its strong, identifiable character - The homogenous character of housing within the study area, comprising mainly one and two story brick or rendered terrace housing with tight building setbacks, and Victorian, Edwardian and Federation style detached or semi-detached cottages - Areas of higher cultural sensitivity lie within this LCZ (e.g. Churches and many heritage listed items, including housing) - Mature trees and vegetation within the streets and pocket parks, including large figs, eucalypts, and melaleucas characterising the area - However, the LCZ is compartmentalised in nature due to regular bisection by roadways, which visually contains elements of change within designated blocks and lots - Views within the LCZ are limited by a combination of mature vegetation, built elements and the flat to gently sloping topography - Residential housing generally addresses the streets, but where this LCZ meets other land uses the boundaries are treated with screening and fencing.	The magnitude of change within this LCZ due to the St Peters interchange is Low. The St Peters interchange itself does not share a boundary with this LCZ, with the exception of one small row of terrace housing Campbell Road. However, this stretch of housing is an outlying example of this LCZ. The St Peters interchange I is broadly contained between four road corridors: the Princes Highway, Canal Road, Burrows Road and Campbell Road. Existing views into the site are limited to glimpses through surrounding development and opaque fencing, and do not positively contribute to the character of the surrounding areas. Changes to some local roads due to the St Peters interchange would affect the character of the adjacent residential area due to the widening of the roads and increase in traffic, but these changes are considered minor, localised changes and would not affect the overall character of this LCZ. Changes due to local road upgrades are assessed separately within Section 5.4.5. Overall, there is no loss of view, major change to views, backdrop or outlook from this LCZ that affect its character due to the project.	Moderate

Landscape Character Zone	Impact Assessment Sensitivity	Magnitude	Rating
LCZ 2: Industrial	The sensitivity of the Industrial Landscape Character Zone is Low, due to the following: - This LCZ has a utilitarian character due to the nature of the land use. Industrial buildings, sites and complexes range from tidy, contained industrial buildings and complexes with mature street trees, to visually cluttered plots of land littered with industrial debris and vehicles - Landscaping to individual lots within this LCZ is minimal, and where it exists is often unmaintained - The LCZ is compartmentalised in nature due to regular bisection by roadways and lot boundaries, which visually contain elements of change within designated blocks and lots. As per the Residential LCZ, changes within this LCZ are contained and somewhat mitigated by this compartmentalisation. - Mature street tree vegetation within the streetscapes limit views within the LCZ. Views out of and into this LCZ are limited generally due to built structures.	The magnitude of change due to the project is High. The development of the St Peters interchange would constitute a significant change in character to the landfill site, and in addition would visually open up the site to the surrounding landscape, particularly to the south along Burrows Road and to the north-east along Campbell Road. However these changes would not necessarily be negative within the context of the surrounding industrial area. Areas of parkland, as well as new built form and associated landscaping that would address the surrounding streets would be new elements within the existing, utilitarian landscape. The St Peters interchange would also provide pedestrian pathways and passive recreation spaces within the previously inaccessible industrial site. As this LCZ is utilitarian in character, views from or to this LCZ are not highly valued. Overall, there is no major loss of view or outlook from this LCZ, but there is a change in character that would have an impact on the surrounding industrial LCZ. However this change may be a positive change to the visual amenity of the area.	Moderate

Landscape Character Zone	Impact Assessment Sensitivity	Magnitude	Rating
LCZ 3: Recreation	The sensitivity of the Recreational Landscape Character Zone is High, due to the following: - Recreational land is generally available in large blocks, and within the study area much of this is of open (often turfed with scattered shade trees), with mature vegetation fringing the sites. As such, visibility within this LCZ is often extreme - Small pocket parks scattered through residential areas are often highly valued by the community, and generally have limited screening to allow views into and out of these spaces (e.g. Simpson Park) - Visual amenity is important within this LCZ, views to and from recreational areas are highly valued, with some parks (e.g. Sydney Park) providing important district views - Due to its open, homogeneous nature (in relation to line, form, colour and texture), the landscape is not able to easily visually absorb out of character changes.	The magnitude of change due to the St Peters interchange is Low. Changes due to the St Peters interchange occur outside of the LCZ. The St Peters interchange lies directly opposite Sydney Park, but the changes along this boundary comprise a general greening and softening of the character of this site (with residential and industrial development demolished and replaced with parkland and landscaping along the widened Campbell Road). Although this is a change in character from the existing situation, these changes may visually strengthen the character of the Recreation LCZ. The Recreation LCZ within Sydney Park is internally focussed, with mature trees and vegetative screening at the edges of the park assisting to minimise the influence of change outside the park boundaries on the experience within the park. Changes to some local roads due to the St Peters interchange would affect the character of the adjacent residential area due to the widening of the roads and increase in traffic, but these changes are considered minor, localised changes and would not affect the overall character of this LCZ. Changes due to local road upgrades are assessed separately within Section 5.4.5. Overall, there is no major loss of view or outlook from this LCZ. Although the character of the boundary between the St Peters interchange site and Sydney Park would change, this would not result in a change in character to the Recreational LCZ.	Moderate

Landscape Character Zone	Impact Assessment Sensitivity	Magnitude	Rating
LCZ 4: Infrastructure – Transport Corridor	The sensitivity of the Infrastructure Landscape Character Zone is Low. The larger of the two Transport Corridors within the study area is the Princes Highway. Canal Road is a more minor corridor that flanks the St Peters interchange site. Although views from transport corridors to the landscape can be valued, in the case of the Princes Highway, views are generally highly contained to within the road corridor, channelled between built elements and occasional street trees. The road has a utilitarian character with limited scenic amenity. Canal Road lies at grade, and is therefore more susceptible to changes to the surrounding area. However this street also has a utilitarian character (primarily due to the industrial development that flanks it) that reduces its sensitivity to adverse effects due to changes in the surrounding area. These roads that form the Transport Corridor LCZ within the study area are long (particularly the Princes Highway). Only a proportion of them occur within the study area and even a smaller portion in direct contact with the St Peters interchange site. Therefore changes to the St Peters interchange site would only comprise a small proportion of the greater LCZ, which limits the influence that changes on the site would have on their overall character.	The magnitude of change is rated as Moderate. Most of the changes due to the project are contained within the Industrial LCZ. Along the Pacific Highway, much of the change to the St Peters interchange site is buffered by a strip of commercial land which lies in between the two LCZs. Where the St Peters interchange site does run directly adjacent to the Highway, the existing character of the site is one of temporary industrial development. The change in character of this edge would be a positive change, with landscaping forming an interface between the two LCZs. Although the addition of the MOC4 (including a tall ventilation stack) would comprise a changes in character to the site, these changes are broadly in keeping with the industrial character of the site and would not impact significantly in the overall character of this LCZ. They are also isolated changes to the greater linear elements of these road corridors. The quality of the landscape architecture / urban design would play a significant part in mediating the visual impact of this development within this LCZ.	Moderate - Low
LCZ 6: Commercial Corridor	This LCZ flanks the Princes Highway within the study area. Although much of the zone could be assessed as having a low sensitivity, it contains a number of more sensitive point source locations (such as the St Peters Anglican Church and a number of hotels, including the heritage listed Southern Cross Hotel). For this reason, the sensitivity of this LCZ is Moderate. The LCZ broadly follows the low ridgeline either side of the Princes Highway. Views to and from this zone are most often internally focused or address the road corridor, but with a couple of high points from which longer views to the surrounding landscape could be seen, particularly at the St Peters Anglican Church, or views from taller buildings such as the Ibis Budget Hotel. Much of the development has a utilitarian character, and include small factory units surrounding internal car parking areas or fronting onto the Princes Highway.	The magnitude of change to character due to the St Peters interchange is Low. Although the St Peters interchange lies directly adjacent to this LCZ, the development along the common boundary does not visually address the St Peters interchange. The commercial development on the northern side of the Princes Highway would be unlikely to see any changes to the St Peters interchange due to screening by built structures. If glimpses to the site are seen, the changes would comprise a general 'greening' of the site as the trees associated with the landscaping adjacent to the roadways and in the strips of parkland surrounding the interchange mature. This change may be viewed as a positive change to the character of the site as seen from this LCZ.	Moderate - Low

Summary of Impacts

The St Peters interchange lies within the Industrial LCZ. The changes to the site would comprise a significant change to the character of the site, and therefore a High change to the LCZ within the study area. However, the changes to the site itself would not be negative within the context of the surrounding industrial area. Areas of parkland, as well as new built form and associated landscaping that would address the surrounding streets would be new elements within the existing, utilitarian landscape.

These changes to the site would impact the surrounding LCZs to varying degrees. Although the impact rating for the surrounding zones lies between Moderate to Moderate – Low, these ratings have a lot to do with the sensitivity of the individual LCZs. The greatest magnitude of change would be experienced by the Industrial LCZ (as discussed above), and the Transport Corridor LCZ, both of which lie partly within or adjacent to the St Peters interchange site.

6.3 Future character / context assessment

6.3.1 Western surface works

Refer **Section 6.2.1** for a brief outline of permanent changes to the western surface works site.

The majority of the area within which permanent changes due to the western surface works lie is zoned SP2 Infrastructure under both the Hurstville LEP 2012 and the Canterbury LEP 2012, which reflects the anticipation of maintenance of accessibility, supporting of economic activity and efficient freight movement. However, some changes spill over into land zoned RE1 Public Recreation and a strip of unzoned land (refer **Figure 6-47**).

The unzoned land to the south of the M5 East Motorway comprises Beverly Grove Park South, which is used as public recreational space within the M5 Linear Park. The land surrounding the western surface works area is zoned as R3 Medium Density Residential, IN2 Light Industrial, R2 Low Density Residential, with some pockets of RE1 Public Recreation under the Hurstville LEP 2012 and the Canterbury LEP 2012. This zoning anticipates the maintenance of the existing low-medium density residential character and suburban setting of the area, with pockets of bushland.

The changes within the western surface works area visually comprise a general widening of the M5 East Motorway and associated new noise walls, as well as the western tunnel portal, a collection of built elements associated with the ventilation structure, ancillary infrastructure and operational facilities for electronic tolling, and a widened Kindilan Underpass.

The widening of the Motorway and the associated ancillary elements (noise walls, tolling gantry, signage and landscaping) are visually consistent with the existing and anticipated character of the area within the SP2 Infrastructure zoned land. The western surface works area is predominantly flanked by RE1 Public Recreation zoned land, which visually buffers the residential (and to some extent the industrial) land beyond. As such, the project has a minimal visual impact on these areas, and therefore the overall character of 'a suburban setting with pockets of bushland' would not be significantly affected.

The change within Beverly Grove Park South (from public open space to the MOC1) does constitute a significant character change from the existing condition, but as the land is unzoned, no assessment regarding the impact on the future character of the space can be made (assuming no changes to zoning). Using other areas within the M5 Linear Park as a bench mark, the narrowed pedestrian and cycle access around the edge of the widened portion of M5 East Motorway would not be out of character for this park.

6.3.2 Bexley Road South motorway operations complex

Refer **Section 6.2.2** for a brief outline of permanent changes to the Bexley Road South motorway operations complex (MOC2) site.

Changes to the MOC2 site lie within land zoned SP2 Infrastructure under the Canterbury LEP 2012, which reflects the accessibility would be maintained which would support economic activity and efficient freight movement (refer **Figure 6-48**).

The MOC2 is bounded by the M5 East Motorway to the north and Bexley Road to the east, both of which are zoned SP2 Infrastructure. These two road corridors to the north and east of the site visually buffer the site from the residential zoned land to the north and east. As such, the Project has a minimal visual impact on these areas, and therefore the overall character of 'low-medium density residential character and bushland setting of the area' would not be significantly affected.

The MOC2 shares a boundary with the M5 Linear Park. Although this narrow parkland is used for public recreation, the land is zoned SP2 Infrastructure and is closely associated with the M5 East Motorway, having been created as a legacy project for the construction of the motorway. The change within the MOC2 site (from public open space to the MOC2) does constitute a significant character change from the existing condition, but as the zoned SP2 Infrastructure, this change is acceptable within the anticipated character of the site considering the current zoning. Using other areas within the M5 Linear Park as a bench mark, the narrowed pedestrian and cycle access around the edge of the MOC2 would not be out of character for this linear park.

The land on the southern side of Wolli Creek to the south of the MOC2 is zoned RE1 Public Recreation. The MOC2 does not encroach on this land, and is visually buffered by the mature vegetation associated with the Wolli Creek riparian corridor and recreational land adjoining it, therefore the character of this recreational land would not be affected by the MOC2.



Figure 6-47 Western surface works overlaid over a LEP map

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Figure 6-48 Bexley Road South motorway operations complex overlaid over a LEP map

6.3.3 Arncliffe motorway operations complex

Refer **Section 6.2.3** for a brief outline of permanent changes to the Arncliffe motorway operations complex (MOC3) site.

The MOC3 lies within the Kogarah Golf Course, which is subject to the *Sydney Regional Environmental Plan No. 33 – Cooks Cove* (SREP 33), a deemed State Environmental Planning Policy. SREP 33 zones the golf course for future infrastructure (special uses), employment (trade and technology) and open space uses (refer **Figure 6-49**). Action has not been taken at this time to give effect to these proposed future uses. This deemed SEPP contains the current land use zonings for the site and includes:

- Special Use Zone. Uses within this zone are to accommodate the existing South West Sydney Ocean Outfall Sewer and M5 corridor. The zone will provide for the development of a transport corridor or other public infrastructure.
- Trade and Technology Zone. Uses within this zone are to encourage economic activity and trade-focussed businesses that benefit directly from the proximity of land within the zone to Sydney Airport and Port Botany and transport links to Sydney's CBD. The zone will promote the establishment of export and other trade enterprises, and advanced technology.
- Open Space Zone. Uses within this zone are to provide for active sporting, recreational land uses and club facilities. The zone also provides public access along the Cooks River and Muddy Creek foreshores, while also providing protection of significant wetland and vegetated riparian areas.

It is however understood that Department of Planning and Environment is investigating the site as a potential priority precinct, which may result in changes to current land use zonings. Future development of land (including re-zonings) in the vicinity of the ventilation facility that involves multi-story buildings would need to consider the air dispersion performance of the New M5 facilities.

Nevertheless a number of design responses could be implemented for any future development on the Cooks Cove site that would ensure these impacts are mitigated. Ongoing liaison with Department of Planning and Environment during detailed design would assist in determining the magnitude of impacts.

The MOC3 is bounded on two sides by major road corridors: to the north by Marsh Street, which is zoned SP2 Infrastructure, and to the west by the M5 East Motorway, which also lies within unzoned land. The MOC3 site is visually buffered by the M5 East Motorway, which provides a visually impenetrable barrier between the MOC3 and areas to the west. The MOC3 would therefore have no impact on the anticipated character of these areas based on the current zoning.

North of Marsh Street, the land is zoned R2 Low Density Residential, B4 Mixed Use, R4 High Density Residential and a small pocket of RE1 Public Recreation under the Rockdale LEP 2011. The MOC3 is most visually exposed to the R2 Low Density Residential zoned and B4 Mixed Use land, but it is buffered somewhat by Marsh Street, which is a busy four lane road. At operation, and particularly when the landscaping associated with the MOC3 has matured, the development would have minimal impact on the overall character of these areas to the north (although the ventilation facility would be seen, and would visually contrast with the surrounding, low lying development), particularly considering the limited visual accessibility that these areas share. The 'residential character with integrated business development and recreational areas' would not be affected by the development.



Figure 6-49 Arncliffe motorway operations complex overlaid over a LEP map

6.3.4 St Peters Interchange

Section 6.2.4 provides a brief outline of permanent changes to St Peters interchange site.

The St Peters interchange site (refer **Figure 6-50**), roughly bounded by the Princes Highway, Canal Road, Burrows Road and Campbell Road/Street, is predominantly zoned IN1 General Industrial and SP2 Infrastructure, with pockets of IN2 Light Industrial. Within this context, the MOC4, MOC5, eastern portals and associated roads fulfils the anticipated character of the space based on the current zoning to 'maintain access and connectivity between local centres of employment and economic activity'.

The St Peters interchange site lies to the east of a band of land zoned B6 Enterprise Corridor, B4 Mixed Use and IN2 Light Industrial. The St Peters interchange is visually detached from these areas, as these complexes either front onto the Princes Highway, or open out onto internal courtyards and parking areas. The St Peters interchange would not impact on the existing or anticipated character of these areas based on the current zoning.

To the north-east, the St Peters interchange is bounded by Sydney Park; a regional park zoned RE1 Public Recreation. The recreational spaces and landscaping within the St Peters interchange would assist in integrating the project with the land use of this site, and would provide additional open space for adjoining neighbourhoods (which include land zoned R1 General Residential, R2 Low Density Residential and R3 Medium Density Residential).

Road upgrades to the land surrounding the St Peters interchange include major widening of Campbell Road, Campbell Street and Euston Road, as well as new bridges spanning the Alexandra Canal and adjoining Campbell Road and Gardeners Road. The widening of Campbell Road and Campbell Street would contribute to visually significant character changes within these road corridors. Where the widened road passes through land zoned SP2 Infrastructure, B4 Mixed Use and IN2 Light industrial, the change in character would be in keeping with the anticipated character to 'maintain access and connectivity between local centres of employment and economic activity'. Where the road widening passes through land zoned RE2 Low Density Residential and adjacent to RE1 Public Recreation (ie Campbell Street), the character of the new road is in contrast with the desire to maintain the residential character of the area. However, this is a small portion of the overall change.

The two bridges spanning the Alexandra Canal pass through land zoned IN1 General Industrial and SP2 Infrastructure. They would constitute a different element within the existing visual setting, but the character of these bridges and road extensions would not significantly change the character of the surrounding land uses at either location.

Overall, the changes at the St Peters interchange and surrounding areas are in keeping with the character of the existing low to medium density development, whilst also continuing to encourage business development within the enterprise corridor and mixed use areas and industrial development contained within the existing industrial areas.

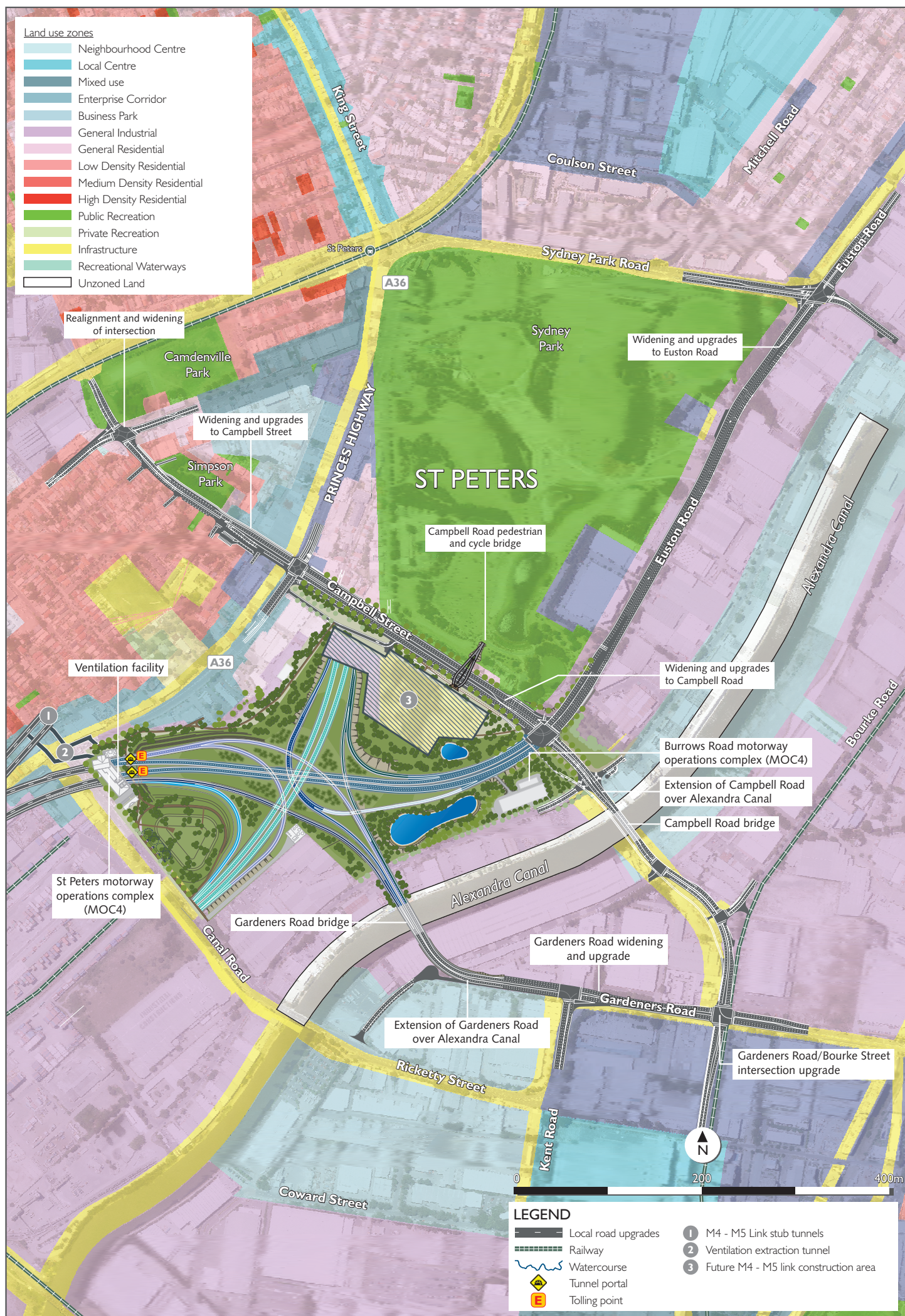


Figure 6-50 St Peters interchange and upgrades to local roads overlaid over a LEP map

6.4 Operational visual impacts

6.4.1 Western surface works

6.4.1.1 Visual envelope mapping

Figure 6-51 illustrates the potential visibility of the project from the surrounding areas. The VEM is taken from the top of the ventilation facility at MOC1 at a height of around 30 metres above existing ground level, and illustrates the locations from which views of the project would potentially be obtained.

Views from the north-west are effectively screened by the Canterbury Golf Course perimeter planting. The New M5 planting and noise walls at Beverley Grove Park would continue to provide screening for residential properties bordering the park. These receivers are unlikely to have substantial visibility of the project elements except for the top of the ventilation facility.

From the north-east, industrial complexes adjoining the M5 East Motorway may have views to the top of the ventilation facility. These are likely to be generally restricted to areas within the Garema Circuit road corridor.

Similarly, views from the south and south-west are generally buffered by the large industrial complexes fronting The Crescent and Vanessa Street. The ventilation facility would be likely to be visible for a significant distance from the south-east, east and north-east. This is largely due to the smaller built form of industrial complexes along Commercial Road. A gentle rise in topography towards Kingsgrove Road provides an elevated position with likely views of the top of the ventilation facility from these locations.

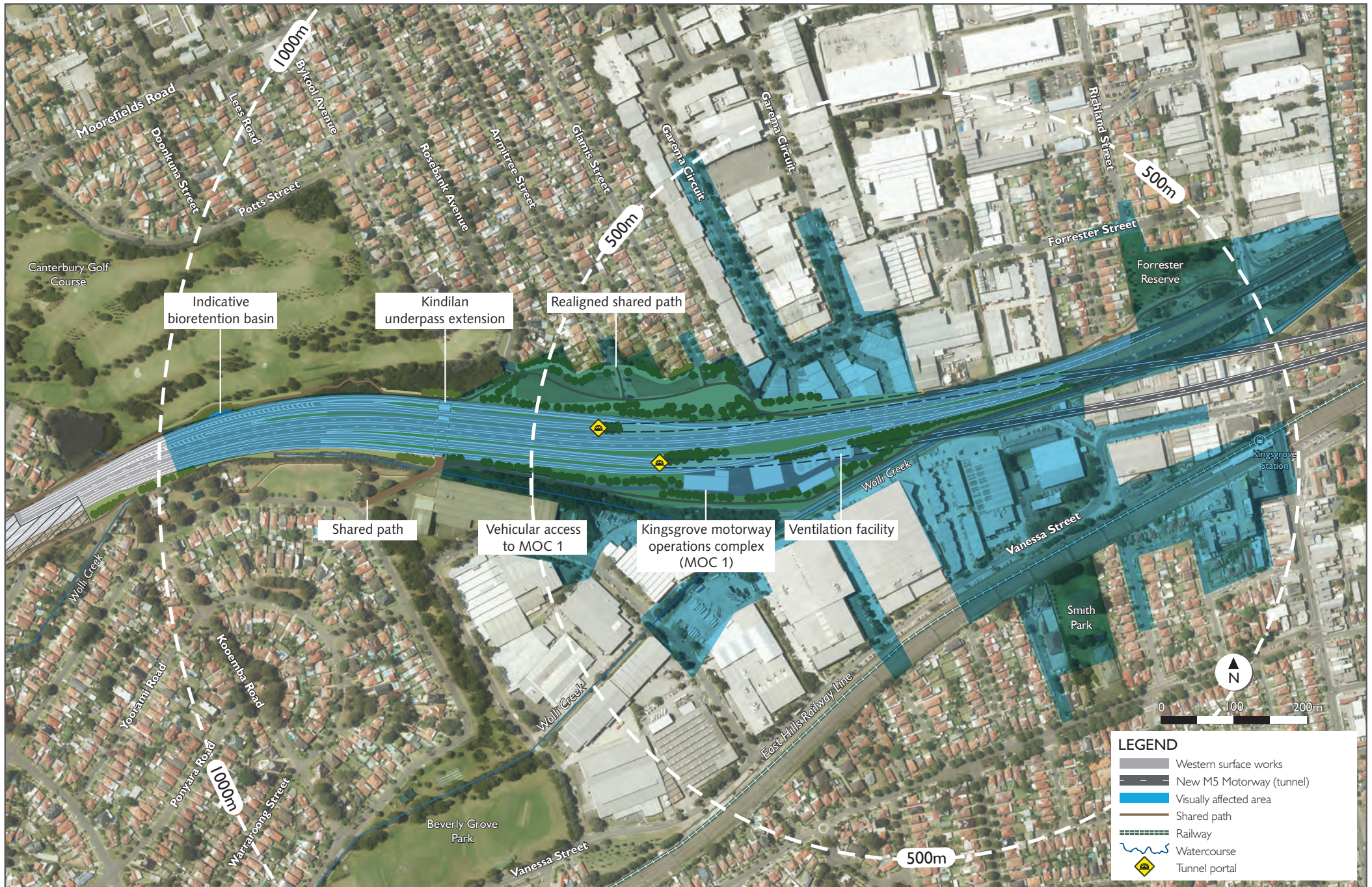


Figure 6-51 Visual envelope map for Western surface works

6.4.1.2 Key Viewpoints

Refer **Section 6.2.1** for a brief outline of permanent changes to the western surface works site.

Five Receiver Locations have been assessed for this site (refer **Figure 6-52**):

A) Glamis Street, southern end

- This Receiver Location assesses the impact of the changes on residents living at the southern end of Glamis Street, but also approximates the visual impact on residents living along the northern boundary of Beverly Grove Park on Armitree Street and Rosebank Avenue.
- Receivers comprise residential neighbours and recreational users of the park at the end of the street (active [pedestrians / cyclists] and passive recreational users of the park).

B) M5 Linear Park - Kindilan underpass

- This Receiver Location assesses the impact of the development on users of the M5 Linear Park at the Kindilan Underpass.
- Receivers comprise pedestrians and cyclists

C) M5 East Motorway

- This Receiver Location assesses the impact of the development on users of the M5 East Motorway heading both east and west through the western surface works area.
- Receivers comprise road users, which may be motorists or cyclists, but within the context of the M5 East Motorway cyclists would be assessed as commuters rather than recreational users and therefore grouped within 'road users' for assessment.

D) Vanessa Street Industrial Compounds

- This Receiver Location assesses the impact of the changes on workers in the industrial compounds to the south of Beverly Grove Park South
- Receivers comprise industrial neighbours.

E) Beverly Grove Park South

- This Receiver Location assesses the impact of the changes on recreational park users of Beverly Grove Park South.
- Receivers comprise pedestrians and cyclists.

F) Tallawalla Street

- This Receiver Location assesses the impact of changes at operation on residents on the northern side of Tallawalla Street
- Receivers comprise residential neighbours.

The assessment is provided in **Table 6-35** and **Table 6-36**.



Figure 6-52 Receiver locations for the Western surface works

Impact Assessment

Table 6-35 Visual Impact Assessment of changes at the western surface works site at operation

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
A. Glamis Street, southern end Refer Figure 6-53 , Figure 6-54 and Figure 6-55	Residential neighbours	The sensitivity of residential receivers is Moderate due to: - The close proximity of the residents at the southern end of Glamis Street to the site - Receivers would be seeing the view from their primary places of residence (eg front and back yards or from inside their homes), a view in which the receivers would have a proprietary interest - However the scale and character of the changes are in keeping the existing situation - Low numbers of receivers viewing the site at close proximity.	The magnitude of the change would be Moderate. The changes comprise: - The realignment of the path within the park - The size of the park reduced to accommodate the widening of the M5 East Motorway, however the park landscaping would be reinstated - Part-transparent noise barriers and traffic may be visible until screening vegetation matured (infrastructure), unlike the existing situation with the vegetated mound - The extent of the Beverly Grove Bushland would be substantially reduced. The new pedestrian path would be realigned closer to the motorway corridor.	Moderate

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Pedestrians / cyclists	The sensitivity of pedestrians and cyclists using the M5 Linear Park pathway near the end of Glamis Street is Moderate due to: - The importance of the quality of the view to recreational users - The moderate to high number of users who would use the pathway / parkland - The slow speed at which the receiver would move through the site, allowing time for the surrounding landscape to be viewed in great detail (especially true of pedestrians) - The receiver would be moving through / past the site, therefore the view seen would only be part of a larger journey - The close proximity from which the viewer would see changes to the site - However the scale and character of the changes are broadly in keeping with the existing situation (although the size of the park has been reduced).	The magnitude of the change would be Moderate. As listed above, the changes comprise: - The realignment of the path - The size of the park reduced, with park landscaping would be reinstated - Transparent noise walls and traffic may be visible until screening vegetation matured (infrastructure), unlike the existing situation with the vegetated mound - The extent of the Beverly Grove Bushland substantially reduced.	Moderate
A. Glamis Street, southern end (continued)	Passive recreational users	The sensitivity of passive recreational users is Moderate due to: - The importance of the quality of the view to recreational users - The user may sit within the park, viewing the landscape in great detail for moderately prolonged lengths of time - However the scale and character of the changes are in keeping with the existing situation - The low number of users who would use the parkland (there are no public toilets, BBQs, picnic facilities or seating that may draw passive recreational users to the site).	The magnitude of change would be Low. Although the park would be reduced in size, the character of the new reinstated park would be similar to that of the existing situation. The alignment of the path would be unimportant to the passive recreational user, and the quality of the screening and shade vegetation would be important. Planting within the park would be reinstated to the current cover and quality, although it may take a number of years to mature. The vegetation along the noise walls to screen the M5 East Motorway would be important due to the removal of the existing noise mound within the park.	Moderate - Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
B. M5 Linear Park - Kindilan underpass	Pedestrians / cyclists	The sensitivity of pedestrians and cyclists using the Kindilan underpass is Moderate due to: - The importance of the quality of the view to recreational users - The close proximity from which the viewer would see changes to the site - The moderate to high number of users - The slow speed at which the receiver moves through the site (although the view would only be part of a greater journey). - However the scale and character of the changes are in broadly keeping with the existing situation.	The magnitude of the change would be Moderate. The underpass itself would be longer in order to span the widened M5 East Motorway road pavement area, which has the potential to create a feeling of unsafe passage, and attract graffiti. The changes to the path realignment on the north of the M5 East Motorway are minor, with a similar path reinstated. The extent of Beverly Grove Bushland is reduced. South of the M5 East Motorway, the pedestrian path would lie adjacent to the vehicular entry to the MOC1 sited on the former Beverly Grove Park South. The change to a situation where the space is shared with vehicular movement reduces the recreational character of the open space.	Moderate
C. M5 East Motorway	Road users	The sensitivity of road users is Low due to: - The limited views afforded to road users within the M5 East Motorway corridor, with views predominantly along the roadway itself but not to the surrounding landscape - The small portion of road affected by the changes compared to the motorists greater journey - The speed at which road users would view the landscape would preclude any detailed views - The utilitarian nature of the M5 East Motorway road corridor as an infrastructure element - Most receivers would be travelling as part of a work journey or otherwise as a quick measure of reaching a destination and as such are considered to have a relatively low level of sensitivity to the corridor. Considering that the M5 is not a tourist route or scenic drive, the presence of these road users (cyclists) do not alter the sensitivity rating for this location.	The magnitude of change would be Low. The addition of the tunnel portals and lanes within the M5 East Motorway, and the glimpse views of the ventilation facility to the south of the road corridor, is in character with the existing utilitarian transport corridor. The M5 East Motorway already has a number of tunnel portals, the closest being at Bexley, to the east of the western surface works site, therefore the addition of the portals would be a new but familiar view within the road corridor. The proposed landscaping to the adjacent Beverly Grove Park North, coupled with the part-transparent noise barriers would constitute a positive change within the road corridor. The quality of the urban design, the architecture of the portal design and landscaping of the corridor would be an important determinant of the quality of the experience for the road user as they travel into or past the tunnel at this location.	Low

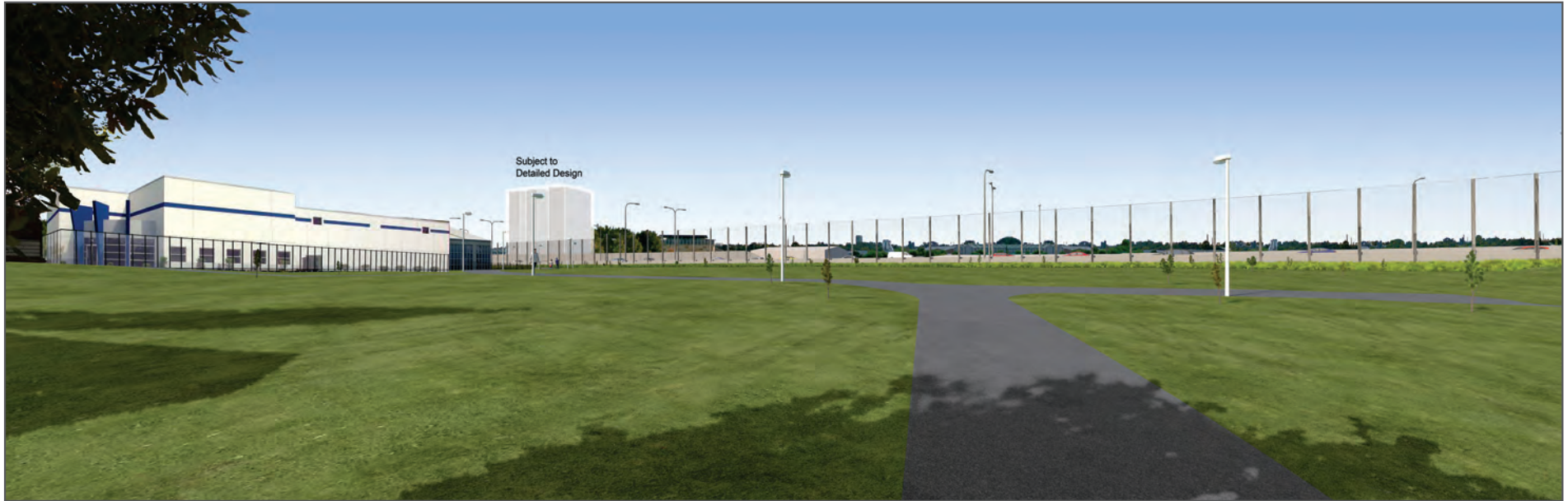
Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
D. Vanessa Street Industrial Compounds (refer	Industrial neighbours	The sensitivity of receivers in the industrial complex is Low due to: - The utilitarian nature of the industrial development (ie emphasis on function rather than scenic amenity) - Views are available to the site from the industrial area, but they are generally obtained from carparks between large scale industrial complexes - Low to moderate numbers of viewers at their place of work.	The magnitude of change due to the development would be High, due to: - The change in character of the site from an existing, elevated turf parkland with scattered trees, to the MOC1, including 30 metre ventilation facility - The change in scale of development from the existing vegetated parkland - The visibility of the MOC1 and ventilation facility to the neighbouring area due to the elevated topography of the site and scale of the buildings. Proposed landscaping would offer some screening from this view.	Moderate
E. Beverly Grove Park South (refer Figure 6-57 and Figure 6-58)	Pedestrians / cyclists	The sensitivity of pedestrians and cyclists using the path through Beverly Grove Park South is High due to: - The importance of the quality of the view to recreational users - The close proximity from which the viewer would see changes to the site - The moderate to high number of users - The slow speed at which the receiver moves through the site (although the view would only be part of a greater journey).	The magnitude of the change at this location would be High. The changes are very different in character and scale to the existing situation, with views changing from the elevated parkland to a narrow path between the MOC1 (including the ventilation facility) and the channelised Wolli Creek. The realignment of the pathway from the ridge of the parkland with views out over the surrounding landscape (with glimpse views between neighbouring buildings to landscape beyond) to the lowest point in the site adjacent to Wolli Creek, with detailed views across the concrete channel to the neighbouring industrial compounds and associated car parks.	High

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
F. Tallawalla Street	Residential neighbours	The sensitivity of residential receivers is Low due to: - The close proximity of the residents at the site of proposed change (the boundary of the M5 East Motorway corridor) - Receivers would be seeing the view from their primary place of residence - The view from residential properties would be important, however the property in question is situated adjacent to an transport corridor - The character of the change is in keeping the existing situation, however the scale of the change is a new element within the view - However, low numbers of receivers viewing the site at close proximity (one residence).	The magnitude of the change would be Moderate. The change comprises of a noise barrier of five metres (the top two to three metres of the noise barrier are transparent). The noise barrier lies to the north of the property, so some extra overshadowing in winter to the property is anticipated.	Moderate



Figure 6-53 Existing view from the end of Glamis Street south to the existing noise mound adjacent to the M5 East Motorway

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The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-54 Photomontage showing the change to view from the end of Glamis Street at project completion (opening)



The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-55 Photomontage showing the change to view from the end of Glamis Street, ten years after opening

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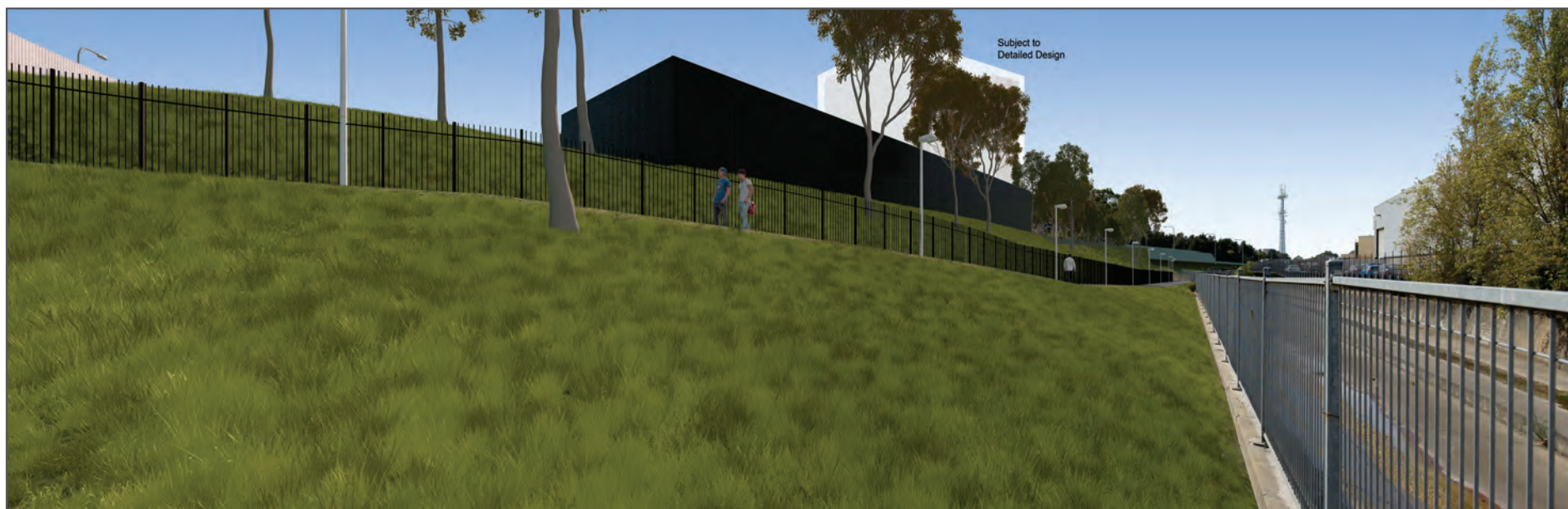
Figure 6-56 The existing view from the northern edge of Wolli Creek, looking north along Beverly Grove Park South boundary.

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The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-57 Photomontage showing the view from the northern edge of Wolli Creek, looking north towards the MOC1 at opening



The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-58 Photomontage showing the view from the northern edge of Wolli Creek, looking north towards the MOC1, ten years after opening

Night Lighting Impacts

Table 6-36 Night Lighting Visual Impact Assessment of changes at the western surface works site at operation

Receiver Location	Receiver	Visual Impact Assessment		Rating
		Sensitivity	Magnitude	
A. Glamis Street, southern end	Residential neighbours	Moderate Refer Table 6-35	The magnitude of change would be Moderate. Although lighting would be reinstated to the pedestrian / cycle path within the park, the path would be realigned to a position which brings the lighting closer to the rear and side boundaries of adjoining properties.	Moderate
	Pedestrians / cyclists	Moderate Refer Table 6-35	The magnitude of change would be Negligible, as the existing lighting to the path would be reinstated, therefore lighting levels would return to existing levels.	Negligible
	Passive recreational users	Moderate Refer Table 6-35	The magnitude of change would be Negligible, as lighting would be reinstated to the path within the park, therefore lighting levels would return to existing levels at operation.	Negligible
B. M5 Linear Park - Kindilan underpass	Pedestrians / cyclists	Moderate Refer Table 6-35	The magnitude of change would be Moderate. Although lighting would be reinstated to the pedestrian path on the northern side of the M5 East Motorway, the Kindilan underpass would be lengthened, requiring more lighting for safety. In addition, the access road on the southern side of the M5 East Motorway (to the MOC1) would be lit, thereby increasing the lighting to the area. These increases in lighting levels would be an uncharacteristic change within a previously low lit recreational area.	Moderate
C. M5 East Motorway	Road users	Low Refer Table 6-35	Although lighting to the roadway would ultimately increase due to road widening and the lighting to the tunnel portals, the magnitude of the change is Low, as the changes would be in keeping with the utilitarian nature of the road corridor, and safety requirements for lighting within this situation.	Low
D. Vanessa Street Industrial Compounds	Industrial neighbours	Low Refer Table 6-35	It is assumed that the site would be minimally lit for safety purposes, and the lighting to the pedestrian path to the south of the MOC1 would be reinstated to the existing levels. The increase in lighting to the site is assessed as Moderate, due to the change from existing (ie from a park) distance of viewing and the realignment of the lit public path to closer to the boundary of the site (closer to the receiver location).	Moderate - Low
E. Beverly Grove Park South	Pedestrians / cyclists	High Refer Table 6-35	It is assumed that the site would be minimally lit for safety purposes, and the lighting to the pedestrian path would be reinstated to the existing levels. Although the lighting levels to the pedestrian path are anticipated to remain the same, there would be an overall increase in lighting to the site, which is therefore assessed as Moderate.	High - Moderate
F. Tallawalla Street	Residential neighbours	Low Refer Table 6-35	It is assumed that no additional lighting would be seen by receivers at this location, as no extra lighting to the M5 Motorway corridor is proposed. The magnitude of the change is therefore Negligible.	Negligible

Overshadowing impacts

During the summer months, no overshadowing would occur to properties outside the MOC1 site due to the built structures. During winter, some midday to late afternoon shadowing would be experienced in the industrial complexes on Vanessa Street from the ventilation facility of the MOC1 (refer **Figure 6-59**). However these shadows would be limited to a narrow band due to the tall, narrow form of the ventilation facility. Further, these shadows fall on industrial properties with no public open space associated with them, or outdoor space on private land that occupants would use where this overshadowing would impact visual amenity.

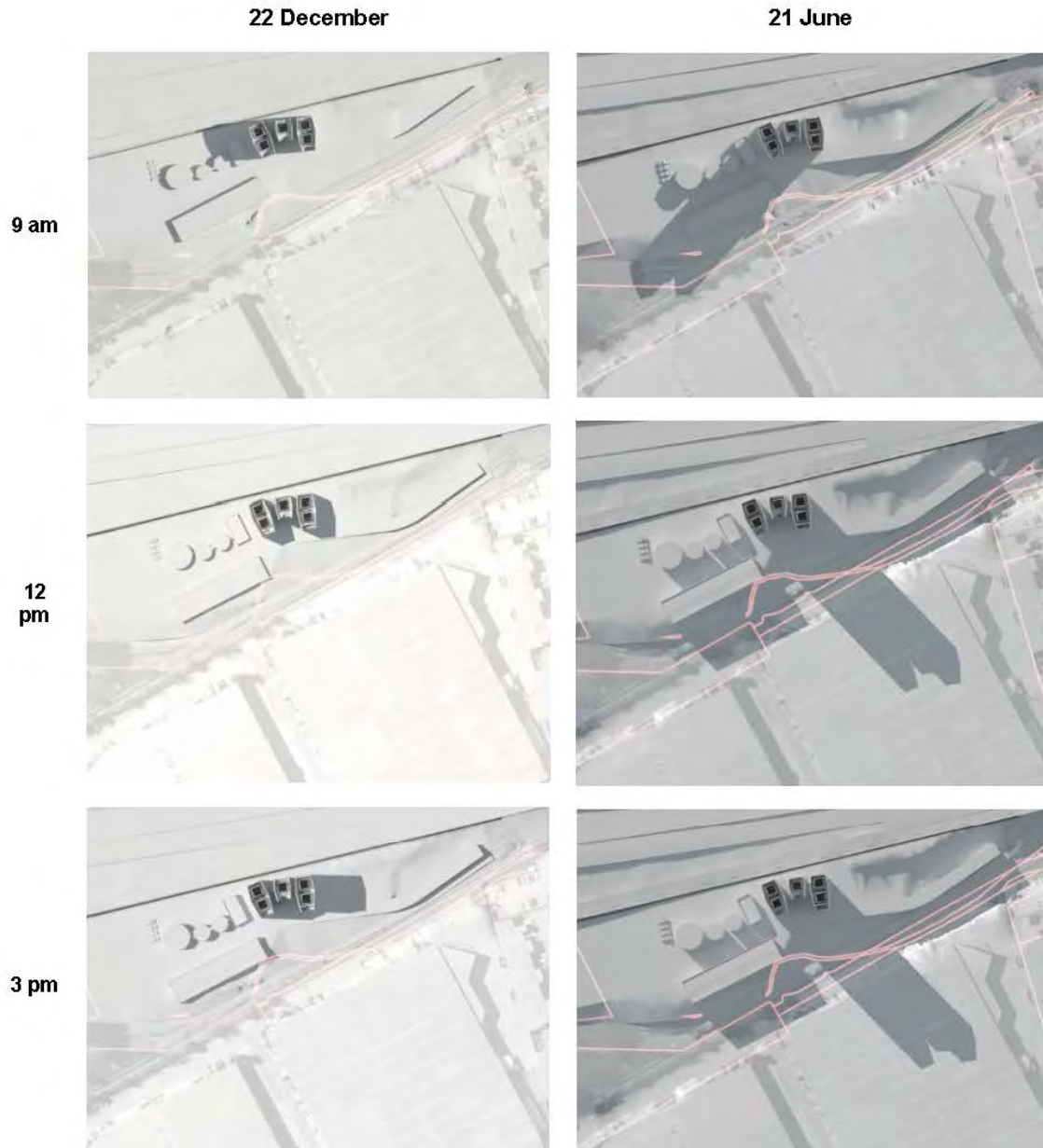


Figure 6-59 Shadows generated by the MOC1 on the surrounding landscape

Summary of Potential Impacts

Few receiver groups would see the changes to Beverly Grove Park South, as the site is visually contained to the north by the M5 East Motorway and is bounded to the south by industrial development. Users of the M5 Linear Park would be the most affected, as they pass in close proximity to the MOC1. The visual impact of the changes is rated as High for this receiver group at this location.

The workers in the industrial compound to the south of the MOC1 would see the changes to the site, but they are anticipated to have a lower sensitivity to changes within the landscape than recreational users of public open space. Night lighting on the site would also be very different to the existing condition, but the impact of these changes would be viewed by relatively few receivers. The MOC1 would have safety and security lighting, including around the car park. Lighting would include cut-off fittings and would be directed to reduce light trespass.

Changes to Beverly Grove Park North would affect residents in adjoining properties and recreational users of the park. The changes comprise the narrowing of the park and the removal of the vegetated noise mound between the park and the M5 East Motorway. This would make the road infrastructure more visible to these receivers until the vegetation had matured, although the overall character of the park would only be minimally affected.

All general visual impact and lighting visual impact ratings for this site are summarised in **Table A - 14**.

6.4.2 Bexley Road South motorway operations complex

6.4.2.1 Visual envelope mapping

Figure 6-60 illustrates the potential visibility of the project from the surrounding areas. The VEM is taken from the top of the MOC2 at a height of around four metres above existing ground level, and demonstrates the locations from which views of the site would potentially be obtained.

Views from the north are localised to the front of residential properties along the eastern side of Bexley Road (south of Poole Street) and a small section of Wolli Avenue. Views from the east are screened by the existing infrastructure and vegetation associated with the M5 East Motorway filtration plant and motorway operations support and pedestrian overpass.

It is unlikely that receivers from the south or south-west of Kingsgrove Avenue would have significant views of the motorway operations complex due to the density of the existing vegetation within the M5 Linear Park.



Figure 6-60 Visual envelope map of Bexley Road South motorway operations complex

6.4.2.2 Key Viewpoints

Refer Section 6.2.2 for a brief outline of permanent changes to the Bexley Road South motorway operations complex (MOC2) site.

Five Receiver Locations have been assessed for this site (refer **Figure 6-61**):

C) M5 East Motorway

- This Receiver Location assesses the impact of the MOC2 on users of the M5 East Motorway heading both east and west past the site. The M5 East Motorway dives into a tunnel under Bexley Road, therefore the approaching Motorway lanes lie below the surrounding ground level. However the on / off ramps intersecting with Bexley Road are at grade with the surrounding area
- Receivers comprise road users

G) Intersection of Bexley Road and Wolli Avenue

- This Receiver Location assesses the impact of the development on residents and passers-by on Bexley Road at the intersection of Bexley Road and Wolli Avenue
- Receivers comprise road users and residential neighbours

H) M5 Linear Park, Bexley, south of M5 East Motorway entry

- This Receiver Location assesses the impact of the development on users of the M5 Linear Park, south of the M5 East Motorway. This entry to the park comprises a pedestrian / cyclist path on the northern edge of the park, and a large expanse of turfed open space sloping down to Wolli Creek, which runs along the southern boundary of the park.
- At present, the park can accommodate both active and passive recreation activities, as it has the cycle pathway as well as open space for passive recreation pursuits. Passive recreation levels are assumed to be low due to the sloping site and no facilities (eg BBQs or public toilets) are provided. At project completion, much of the turfed area which may be used for passive recreation would be occupied by the development; therefore no receivers would be able to use the space for passive recreation. For these reasons, the only receivers assessed at this location are pedestrians and cyclists.

I) Bexley Road, south of the pedestrian underpass

- This Receiver Location assesses the view seen by passers-by on Bexley Road, directly adjacent to the MOC2
- Receivers comprise Road Users.

The assessment is provided in **Table 6-37** and **Table 6-38**.



Figure 6-61 Receiver locations for the Bexley Road South motorway operations complex

Impact Assessment

Table 6-37 Visual Impact Assessment of changes at the Bexley Road South motorway operations complex site at operation

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
C. M5 East Motorway	Road users	The sensitivity of road users is Low due to: - Road users travelling on the east and west bound lanes adjacent to the MOC2 would predominantly receive views along the roadway itself, and only to the surrounding landscape from the east bound lane approaching Bexley road but from a fair distance away, as the road pavement lies below the surrounding ground level - Road users entering / exiting the freeway would only see the site from Bexley Road, not from the on / off ramps of the M5 East Motorway due to noise walls and vegetative screening - The small portion of Bexley Road affected by the construction works as part of a greater journey along the M5 East Motorway. - The utilitarian nature of the M5 East Motorway road corridor as an infrastructure element.	The magnitude of the change would be Negligible, as the buildings would be around five metres tall and therefore unable to be seen behind the noise walls and screen planting adjacent to the M5 East Motorway.	Negligible
G. Intersection of Bexley Road and Wolli Avenue	Residential neighbours	The sensitivity of residential neighbours on Bexley Road is Low, due to the following: - These properties are residential; therefore views to the road would be seen from rooms facing south-west from their homes as well as from front yards. However, these properties front Bexley Road at the intersection with the M5 East Motorway; two transport corridors - The view to the MOC2 is highly oblique for all but the southern-most home - The low numbers of receivers who would see the changes to the view.	The magnitude of the change would be Moderate, due to the following: - The view from this location is dominated by Bexley Road and the intersection with the M5 East Motorway at this location. The MOC2 would be seen in the middle to background against a backdrop of dense existing vegetation - The character of the built element would be a change from existing, but landscaping and building materiality would soften the built form.	Moderate - Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Road users	The sensitivity of road users is Low due to: - The small portion of road affected by the MOC2 as part of the greater journey along Bexley Road - Bexley Road is a major road with the somewhat utilitarian character of an infrastructure element. However it is integrated into the surrounding landscape as it lies at grade, and is fronted by residential homes and parks, among other development types.	The magnitude of the change would be Moderate, as the character of the MOC2 would be very different from the existing recreational open space. Due to the combination of muted colours and landscape planting, the facility is not expected to be visually prominent from Bexley Road. The site is seen as the driver passes by, and is therefore only a small element within the greater road journey.	Moderate - Low
H. M5 Linear Park, Bexley, south of M5 entry (refer Figure 6-62 to Figure 6-64)	Pedestrians / cyclists	The sensitivity of pedestrians and cyclists using the M5 Linear Park pathway is High due to: - The importance of the quality of the view to recreational users - The moderate number of users who would use the pathway - The slow speed at which the receiver would move through the site, allowing time for the surrounding landscape to be viewed in great detail (especially true of pedestrians) - The receiver would be moving through / past the site, therefore the view seen would only be part of a larger journey - The close proximity from which the viewer would see changes to the site.	The magnitude of change to the view would be Moderate. The existing parkland adjoining the pedestrian / cycle path (which provides views from the path to the Wolli Creek riparian corridor to the south) would be fenced off and replaced with views to two large built structures and hardstand areas. The site would be transformed from a 'green gateway' to the M5 Linear Park to a small entry point between two large pieces of infrastructure (i.e. the M5 and the MOC2). Landscaping (including tree planting) would help to soften the impact of the change, and break up the scale of the proposed development.	High - Moderate

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
I. Bexley Road, south of the pedestrian underpass	Road Users	The sensitivity of road users is Low due to: - The small portion of road affected by the MOC2 as part of the greater journey along Bexley Road - Bexley Road is a major road with the somewhat utilitarian character of an infrastructure element. However it is integrated into the surrounding landscape as it lies at grade and is fronted by residential homes and parks, among other development types. It has some more picturesque stretches where the road is fringed by parks or by an intersecting riparian corridor (as per this location).	The magnitude of the change would be Moderate. The MOC2 would comprise two large built structures surrounded by landscaping and fencing, where the existing site is viewed from this location as a sloping piece of recreational open space visually linked to the Wolli Creek riparian corridor. Although the change in character of this site would be very different from the existing situation, the site is seen as the driver passes by, and is therefore only a small element within the greater road journey.	Moderate - Low



Figure 6-62 Existing view of the entry to the M5 Linear Park, south of the M5 East Motorway on Bexley Road



Figure 6-63 Photomontage from the entry to the M5 Linear Park, south of the M5 East Motorway, showing the view to the MOC2 at opening



Figure 6-64 Photomontage from the entry to the M5 Linear Park, south of the M5 East Motorway, showing the view to the MOC2 ten years after opening

Night Lighting Impacts

Table 6-38 Night Lighting Visual Impact Assessment of changes at the Bexley Road South Motorway Operations Complex site at operation

Receiver Location	Receiver	Visual Impact Assessment		Rating
		Sensitivity	Magnitude	
C. M5 East Motorway	Road users	Low	Lighting on the M5 East Motorway would remain unchanged at operation, as no changes within the road corridor are designed at this location. No additional lighting should be seen external to the M5 East Motorway due to screening. The magnitude of change to lighting is therefore Negligible.	Negligible
G. Intersection of Bexley Road and Wolli Avenue	Residential neighbours	Low Refer Table 6-37	It is assumed that the site would be minimally lit for safety purposes, and the lighting to the pedestrian path would be reinstated to the existing levels. The increase in lighting to the site is assessed as Low, due to the angle and distance of viewing and the high level of lighting to Bexley Road in the foreground of the view for receivers at these locations.	Low
	Road users	Low Refer Table 6-37		Low
H. M5 Linear Park, Bexley, south of M5 entry	Pedestrians / cyclists	High Refer Table 6-37	It is assumed that the site would be minimally lit for safety purposes, and the lighting to the pedestrian path would be reinstated to the existing levels. Although the lighting to the pedestrian path is anticipated to remain the same, the public park to the south of the park would have some lighting; therefore the increase in lighting to the site is therefore assessed as Moderate.	High - Moderate
I. Bexley Road, south of the pedestrian underpass	Road Users	Low Refer Table 6-37	As above, it is assumed that the buildings would be lit with low level safety lighting, which is a change from the existing situation where the site is an unlit public park. The magnitude of the change as seen from the road is Low due to viewing distance, the brightly lit road where the site would be viewed from, and the attention of the driver focused on the road.	Low

Overshadowing impacts

No residential, commercial or industrial neighbours would be affected by overshadowing by the MOC2. Some limited shadowing would fall onto the Wolli Creek riparian corridor during the winter months, but this land is not used for recreation purposes (refer **Figure 6-65**).

Summary of Potential Impacts

This site is reasonably isolated from surrounding development. It has no industrial, commercial or residential neighbours adjoining the boundaries. The most affected receivers are users of the M5 Linear Park, which would receive a high to moderate rate of visitation from people using the path for active recreation (pedestrians and cyclists), and a low rate of visitation for people choosing to use the site for passive recreation. At operation, the site would no longer be available for passive recreation, but there would be a high level of change to the view for receivers viewing the site from the path. These receivers would also be the most affected by changes to night lighting, although it is expected that at night the number of receivers using the path would drop to a low level.

The MOC2 would have safety and security lighting, including around the car park. Lighting would include cut-off fittings and would be directed to reduce light trespass.

Refer **Table A - 15** for a summary of visual impacts at this location at operation.

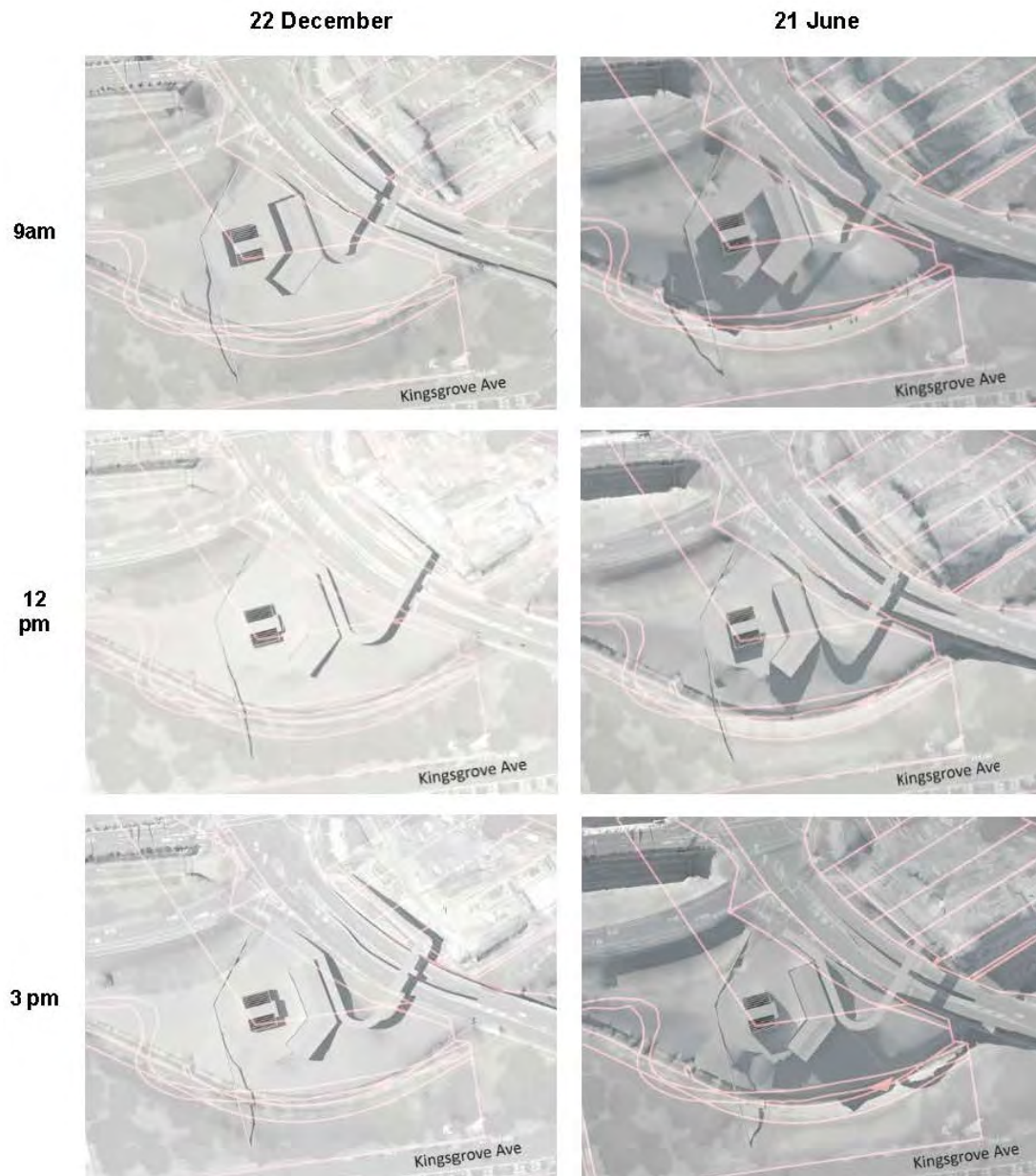


Figure 6-65 Shadows generated by the Bexley Road South motorway operations complex

6.4.3 Arncliffe motorway operations complex

6.4.3.1 Visual Envelope Mapping

Figure 6-66 illustrates the potential visibility of the project from the surrounding areas. The VEM is taken from the top of the ventilation facility (MOC3) at a height of around 35 metres above existing ground level, and demonstrates the key locations from which views of the site would be obtained.

The most affected receivers are likely to include motorists travelling along Marsh Street and nearby residences north-west of the site in Valda Avenue, Flora Street and Innesdale Road. In conjunction with the residential buildings and substantial mature street and garden cover, residential areas greater than 200 metres from the site are unlikely to have substantial visibility of the project elements except for the top of the ventilation facility.

Views to the motorway operations complex from the north would be available from residences in high-rise apartment buildings that line Gertrude Street, Innesdale Road and Marsh Street.

Views from the south demonstrate that the combination of existing screening vegetation and noise barriers along the M5 East Motorway effectively block significant views to the motorway operations complex.

Views of the MOC3 from the east within Kogarah Golf Course would be prominent, but only when users are playing on the fairways that are adjacent to the project. Areas greater than 300 metres from the site are unlikely to have substantial visibility of the project elements due to the existing mature vegetation within the golf course, except for the top of the ventilation facility.



Figure 6-66 Visual envelope map of the Arncliffe motorway operations complex

6.4.3.2 Key Viewpoints

Refer Section 6.2.3 for a brief outline of permanent changes to the Arncliffe motorway operations complex (MOC3) site.

Four Receiver Locations have been assessed for this site (refer Figure 6-65):

C) M5 East Motorway

- This Receiver Location assesses the impact of the MOC3 on users of the M5 East Motorway heading both north and south past the site. Although the M5 East Motorway is broadly at grade at this location, the corridor is partially visually buffered by noise walls and vegetation
- Receivers comprise road users

J) The intersection of Flora and Marsh Streets

- This Receiver Location assesses the visual impact on receivers at the intersection of Marsh Street (a major road corridor) and Flora Street (a smaller, residential development lined street), and is representative of similar views from nearby locations. Marsh Street runs along the northern boundary of the Kogarah Golf Course, while Flora Street runs perpendicular to the site, terminating at Marsh Street opposite the entry to the MOC3. The Cook Park Trail runs along Marsh Street at this location.
- Receivers comprise residential neighbours (both low density and high density developments, although the high density residential buildings lie one block to the north-east along Marsh Street), road users and pedestrians and cyclists.

K) Eve Street Cycleway

- This Receiver Location assesses the visual impact of the MOC3 on users of the Eve Street Cycleway, which makes up part of the Cook Park Trail. This portion of the cycle path runs between the intersection of the M5 East Motorway and Marsh Street in a south-western direction to where Eve Street meets the M5 East Motorway. There are underpasses at each end of this cycle path, one under Marsh Street and one under the M5 East Motorway at Eve Street. The path runs parallel to the Western Outfall Main Sewer, a heritage listed item.
- Receivers comprise pedestrians and cyclists.

L) Kogarah Golf Course

- This Receiver Location assesses the visual impact of the development on people using the golf course
- Users comprise active recreational users of a semi-public open space.

The assessment is provided in **Table 6-39** and **Table 6-40**.



Figure 6-67 Receiver locations for the Arncliffe motorway operations complex (MOC 3)

Impact Assessment**Table 6-39 Visual impact assessment of changes at the Arncliffe motorway operations complex**

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
C. M5 East Motorway	Road users	The sensitivity of road users is Low due to: - The limited views afforded to road users within the M5 East Motorway corridor, with views predominantly focussed along the roadway itself, and views towards the adjoining landscape predominantly screened by vegetation and noise walls - The small portion of road affected by the MOC3 as part of a greater journey along the M5 East Motorway - The speed at which road users would view the MOC3 would preclude detail viewing - The utilitarian nature of the M5 East Motorway road corridor as an infrastructure element.	The magnitude of the change would be Low, as the MOC3 ventilation facility are likely to be seen as brief glimpses only from the M5 East Motorway due to the following: - Screening due to vegetation and landform between the Eve Street Cycleway and the M5 East Motorway - Screening vegetation retained along the western boundary of the Kogarah Golf Course adjacent to the existing ponds to be retained - The distance of viewing between the road corridor and the compound, coupled with the 'basin' landform within which the golf course lies.	Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
J. The intersection of Flora and Marsh Street (refer Figure 6-68 to Figure 6-70)	Residential neighbours (low density housing)	The sensitivity of residential receivers is considered to be Moderate due to: - The close proximity of the residents to the compound, but separated from the site by a major roadway - Receivers would be seeing the view from their primary places of residence, a view in which the receivers would have a proprietary interest. However due to the busy nature of the road, many residences along Marsh Street have built high front fences and planted tall screening vegetation to block views to the street - A moderate number of receivers on both Valda Avenue and Flora Street would have views to the MOC3 looking down the street when entering from West Botany Road - A low number of receivers viewing the site at close proximity, eg from Marsh street and the southern end of Flora Street - The character of the MOC3 would be in sharp contrast to the character of the existing land use (a golf course), and the low scale nature of development the residential development opposite.	The magnitude of the change to the view is considered to be High. The character of the site would change from one of a green, vegetated recreational space to that of large industrial scale buildings and tall massed forms of ventilation facility with associated infrastructure. The MOC3 would comprise a relatively small development, (with the exception of the ventilation facility) which would comprise a considerable portion of the overall view seen from nearby residential neighbours. This view would be seen within the context of busy Marsh Street in the foreground. The removal of mature vegetation, fringing the road, would contribute to the visual prominence of the MOC3 site from these receivers early within the operation phases. However, these views to the MOC3 would be softened and screened as proposed landscaping along Marsh Street matured, with the exception of the ventilation facility which would rise prominently above the screening vegetation, albeit as closely concentrated elements. The visual prominence of the ventilation facility when looking down Valda Avenue would comprise a substantial, visually contrasting element within the otherwise relatively low scale development of the residential development, Marsh Street and the Kogarah Golf Course.	High - Moderate

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Residential neighbours (high density housing)	The sensitivity of residential receivers is High due to: - The moderate proximity of the residents the MOC3 site - Receivers would be seeing the view from their primary places of residence, a view in which they would have a proprietary interest. The golf course would make up the foreground of a district / regional elevated view obtained from apartments facing south-east and south-west. - Low to moderate numbers of receivers - The character of the MOC3 would be in sharp contrast to that of the surrounding land uses.	The magnitude of the change to the view would be Moderate. The character of the site would change from one of a green, vegetated recreational space to MOC3 and associated infrastructure. However, the MOC3 would comprise a relatively small development (with the exception of the ventilation facility) which would make up a relatively small portion of the overall view seen from these apartments, particularly in the upper building levels which are likely to obtain regional views. The removal of mature vegetation particularly that fringing the road, would contribute to the visibility of the MOC3 site from receivers in lower apartments and hotel rooms. However, these views would be softened and screened as the landscaping along Marsh Street matured.	High - Moderate

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Road users	The sensitivity of road users is considered to be Moderate due to: - The small portion of road affected by the MOC3 as part of a likely greater journey - Marsh Street is a major road with the somewhat utilitarian character of an infrastructure element. However it is integrated into the surrounding landscape as it lies at grade, and is fronted by residential homes and parks, among other development types. - Flora Street, although a residential street, only shares one intersection with the boundary of the MOC3, which limits the impact this development would have on views from this street.	The magnitude of the change to the view would be Moderate, due to the following: - Although the character of the MOC3 site would change from a green, vegetated recreational space to a motorway control complex, this complex is well contained within the north-western corner of the golf course. Built structures are situated within the middle of the MOC3 to minimise their visibility to receivers - The MOC3 would initially be highly visible to motorists on Marsh Street, especially the ventilation facility. Landscaping could assist in screening the development. - A substantial skyline view of the ventilation facility would be visible looking east along Marsh Street from near the intersection with West Botany Street. - Existing screening along Marsh Street would assist in screening the ventilation facility when travelling west until relatively close to the development. - As discussed above, receivers entering and travelling down Valda Avenue are likely to observe substantial views of the ventilation facility either towards the end of the street, or above residential development when travelling down the street. This view of the ventilation facility would add a new and visually contrasting industrial scaled element to the low density / low scale residential neighbourhood. However, the ventilation facility also comprises of a closely concentrated group of elements, with the remainder of the development likely to be substantially screened over time by boundary vegetation.	Moderate - Low

Receiver Location	Receiver	Visual Impact Assessment Sensitivity	Magnitude	Rating
	Pedestrians / cyclists	The sensitivity of pedestrians and cyclists using the Cook Park Trail would vary depending on what part of the trail they are on due to the range of environments that the trail passes through (e.g. from waterside park to pedestrian verge alongside busy roads and through industrial areas). Recreational users of public space typically have a high sensitivity, due to: - The importance of the quality of the view to recreational users - The slow speed at which the receiver would move through the site, allowing time for the surrounding landscape to be viewed in great detail. However, at this location, users of the Cook Park Trail are considered to have a Moderate sensitivity, due to: - The busy, utilitarian nature of Marsh Street, which lies between the receiver and the construction compound site - The receiver would be moving through / past the site and therefore the view seen may only be a small part of a substantially larger journey - This rating is notwithstanding: - The moderate to high number of users who would use the pathway - The scale and character of the development is in contrast to that of the existing situation - The close proximity from which the viewer would see changes to the site.	The magnitude of the change to the view would be Moderate, due to the following: - The character of the site would change from a green, vegetated recreational space to the MOC3, with large infrastructure scale buildings and hardstand areas - The site is highly visible to users of the path at this location, but is viewed with Marsh Street in the foreground - The MOC3 would initially be highly visible to users of the cycle path, particularly the ventilation facility. Landscaping to the Marsh Street edge could soften views to the MOC3 - This view would be seen briefly as part of a larger journey.	Moderate

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
K. Eve Street Cycleway	Pedestrians / cyclists	The sensitivity of pedestrians and cyclists using the Cook Park Trail at Eve Street is considered to be Moderate due to: - The anticipated moderate to low number of users who would use the cycleway - The receiver would be moving through / past the site and therefore the view would be seen only be a potentially small part of a larger journey - The moderate to close proximity from which the viewer would see changes to the site. - The importance of the quality of the view to recreational users - The slow speed at which the receiver would move through the site, allowing time for the surrounding landscape to be viewed in great detail - The quiet, off road section of path running between the Cooks River and Marsh Street along the Western Outfall Main Sewer, a heritage listed item	The magnitude of the change to the view would be Moderate, due to the following: - The character of the north-western corner of the site would change from a green, vegetated recreational space to the MOC3, with substantial built elements and hardstand areas - The removal of screening vegetation between the cycle path and the MOC3 site, but which replacement screening vegetation would be expected to screen much of the development - The vegetation associated with the existing wetlands in the western corner of the site adjacent to the cycle path would provide some screening to the development - The scale and character of the large ventilation facility in particular would be in sharp contrast to that of the existing situation	High - Moderate

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
L. Kogarah Golf Course (refer Figure 6-71 to Figure 6-73)	Active recreation - players on the golf course	The sensitivity of users of the Kogarah Golf Course would be Moderate due to the following: - The visual amenity of the landscape would be important to those partaking in the recreational activity, although golfers could also be expected to be concentrating on their game - The slow speed at which the receiver would move through the site, allowing time for the surrounding landscape to be viewed in great detail and for prolonged periods of time - A low to moderate number of users would play on the golf course during the week, but potentially a high number of users would play on the weekends - However the MOC3 would only take up a relatively small portion of the existing golf course. Views to the MOC3 would only be seen from the north-west corner of the course and screened from most other areas, including the club house.	The magnitude of the change to the view would be Moderate, due to the following: - The character of the affected part of the golf course would change from a green, vegetated recreational space to a developed site with two large, tall structures, lower but still substantial buildings and hardstand areas - The site would be visible to users of the golf course, but generally only when they were playing holes in the north-west corner of the site - The MOC3 would initially be highly visible to golf course users, but over time as the landscaping matured at the boundary between the complex and the course, these views would be screened and softened by vegetation.	Moderate



Figure 6-68 Existing view of the Kogarah Golf Course from the corner of Flora Street and Marsh Street

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The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-69 Photomontage from the corner of Flora Street and Marsh Street, showing the view to the MOC3 at opening



The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-70 Photomontage from the corner of Flora Street and Marsh Street, showing the view to the MOC3 ten years after opening

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Figure 6-71 Existing view of the Kogarah Golf Course looking east towards Marsh Street from the Eve Street Cycleway

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The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-72 Photomontage looking east towards Marsh Street from the Eve Street Cycleway, showing the view to the MOC3 at opening



The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-73 Photomontage looking east towards Marsh Street from the Eve Street Cycleway, showing the view to the MOC3 ten years after opening

Night Lighting Assessment

Table 6-40 Night Lighting Visual Impact Assessment at the MOC3

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
C. M5 East Motorway	Road users	Low	The magnitude of lighting increase is likely to be Negligible, as lighting levels on the M5 East Motorway would remain unchanged and the lower lit elements of MOC3 would substantially screened from view from the M5 East Motorway.	Negligible
J. The intersection of Flora and Marsh Street (refer)	Residential neighbours (low density housing)	Moderate Refer to Table 6-39	The magnitude of lighting increase is considered to be Low due to the following: - The visual setting of the MOC3 includes lighting associated with Marsh Street, Flora Street and surrounding residences. The MOC3 is situated on recreational land which is predominantly unlit - It is assumed that the MOC3 would only be minimally lit sufficient for safety and security purposes. This lighting is likely to be screened with maturing landscape vegetation on the boundary of Marsh Street (subject to detail landscape design) - Many of these residences would only obtain minor views to the MOC3 due to built and vegetative screening on their properties. Additionally, the development would be viewed across the busy and well lit setting of Marsh Street.	Moderate - Low
	Residential neighbours (high density housing)	High Refer to Table 6-39	The magnitude of lighting increase is considered likely to be Low due to the following: - The visual setting of the MOC3 includes lighting associated with Marsh Street, Flora Street and surrounding residences. The MOC3 is situated on recreational land which is predominantly unlit - It is assumed that the MOC3 would only be minimally lit sufficient to meet safety and security requirements, including operational requirements of Sydney Airport - This low level change to lighting levels would be clearly seen from neighbours in surrounding high rise buildings, who would look down into the site from above - However the view to the MOC3 would comprise a small portion of the overall view to the surrounding landscape, which would contain many well lit sources such as surrounding streets, the airport and other developments.	Moderate
	Road users	Low Refer to Table 6-39	The magnitude of change to the lighting levels as seen by road users is considered to be Low, due to the following: - The relatively bright lighting levels to Marsh Street would be likely to minimise the visual prominence of low level lighting within the MOC3 - A minimal increase in lighting may be observed by the passing motorist, who could be expected to have their concentration centred on driving.	Low

Receiver Location	Receiver	Visual Impact Assessment		Rating
		Sensitivity	Magnitude	
	Pedestrians / cyclists	Moderate Refer to Table 6-39	The magnitude of lighting increase is Low due to the following: - The visual setting of the MOC3 includes lighting associated with Marsh Street, Flora Street and surrounding residences. The MOC3 is situated on recreational land which is predominantly unlit - It is assumed that the MOC3 would only be minimally lit for safety - This minimal change to lighting levels would be viewed from the well-lit transport corridor of Marsh Street, and over time would be screened by vegetation as the landscaping associated with the MOC3 matured.	Moderate - Low
K. Eve Street Cycleway (refer)	Pedestrians / cyclists	H Refer to Table 6-39	At present there is no lighting provided on the Eve Street Cycleway. Therefore it is assumed that pedestrians and cyclists would not use this path at night time and no assessment can be made regarding the change in lighting as seen by these receivers.	N/A
L. Kogarah Golf Course	Active recreation - players on the golf course	High Refer to Table 6-39	As per the Eve Street Cycleway, the golf course would not be available for play at night, therefore no receivers would be present to view any changes to lighting levels.	N/A

Overshadowing impacts

No residential, commercial or industrial neighbours would be affected by overshadowing by the MOC3. A very small portion of the Eve Street Cycleway would be in shadow in winter in the morning, and only for a short period of time (refer **Figure 6-74**).

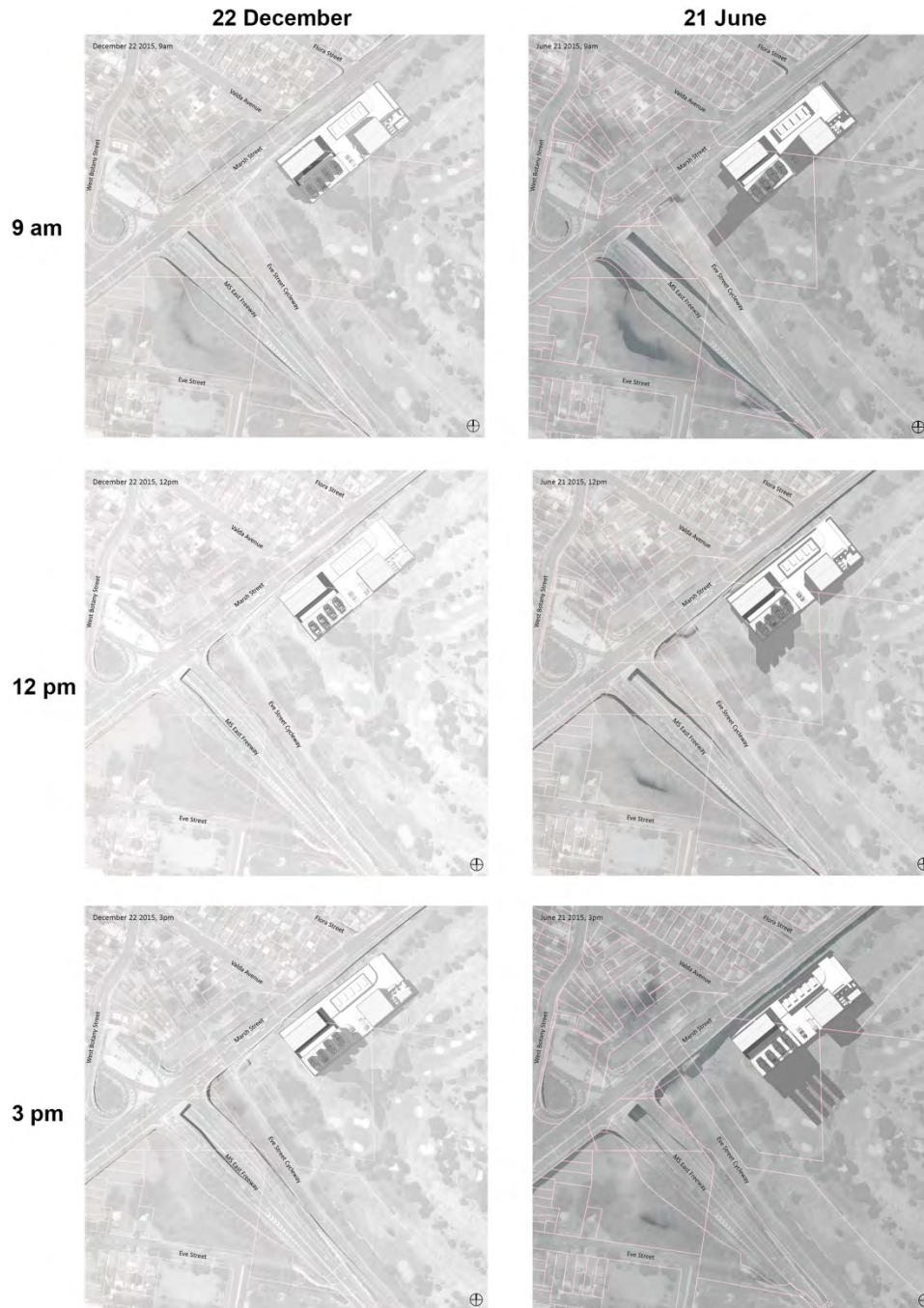


Figure 6-74 Shadows generated by the Arncliffe motorway operations complex

Summary of Potential Impacts

The MOC3 is a relatively contained built element within the north-western corner of the Kogarah Golf Course. Although the change in the character of the view to the site would be substantial and is broadly assessed as Moderate on average, these changes may be substantially mitigated from external receiver locations with adequate landscaping to the boundary of the site, once it had matured. The landscaping design would be refined during detailed design.

The MOC3 would have safety and security lighting, but this would be at a relatively low level. Lighting would include cut-off fittings and would be directed to reduce light trespass. It would also be designed to meet the requirements for Sydney Airport.

All visual impact and lighting visual impact ratings for this site are summarised in **Table A - 16**.

6.4.4 St Peters Interchange

6.4.4.1 Visual envelope mapping

Figure 6-75 illustrates the potential visibility of the project from the surrounding areas at St Peters. The VEM is taken from the top of the ventilation facility (MOC4) at a height of around 20.5 metres and top of the motorway operations complex (MOC5) at a height of around 8.5 metres above existing ground level, and demonstrates the locations from which views of the site would potentially be obtained.

Views to the St Peters interchange from the west would be seen across a busy intersection, with the most prominent elements of the Dynamo building and the street trees to be retained. However, a number of new elements would be seen within the view, including the ventilation facility, new motorway operations buildings and landscaping to the Canal Road edge.

Views from the north-west would be limited by the adjacent commercial buildings that front the Princes Highway. The most visible elements would be the canopy of trees within the St Peters interchange parkland as the vegetation matures.

Views from the north-east would be a significant change in terms of the character and scale of the development, particularly with regard to the widening of Campbell Road. Elements that would be seen from the road include the pedestrian bridge joining Sydney Park, the St Peters interchange and open parklands.

Views from the south at the corner of Canal Road and Burrows Road would be limited by the adjacent industrial development and Gardeners Road bridge crossing. Views from the road to the MOC5 would be of short duration and limited by landscaping and street tree plantings.

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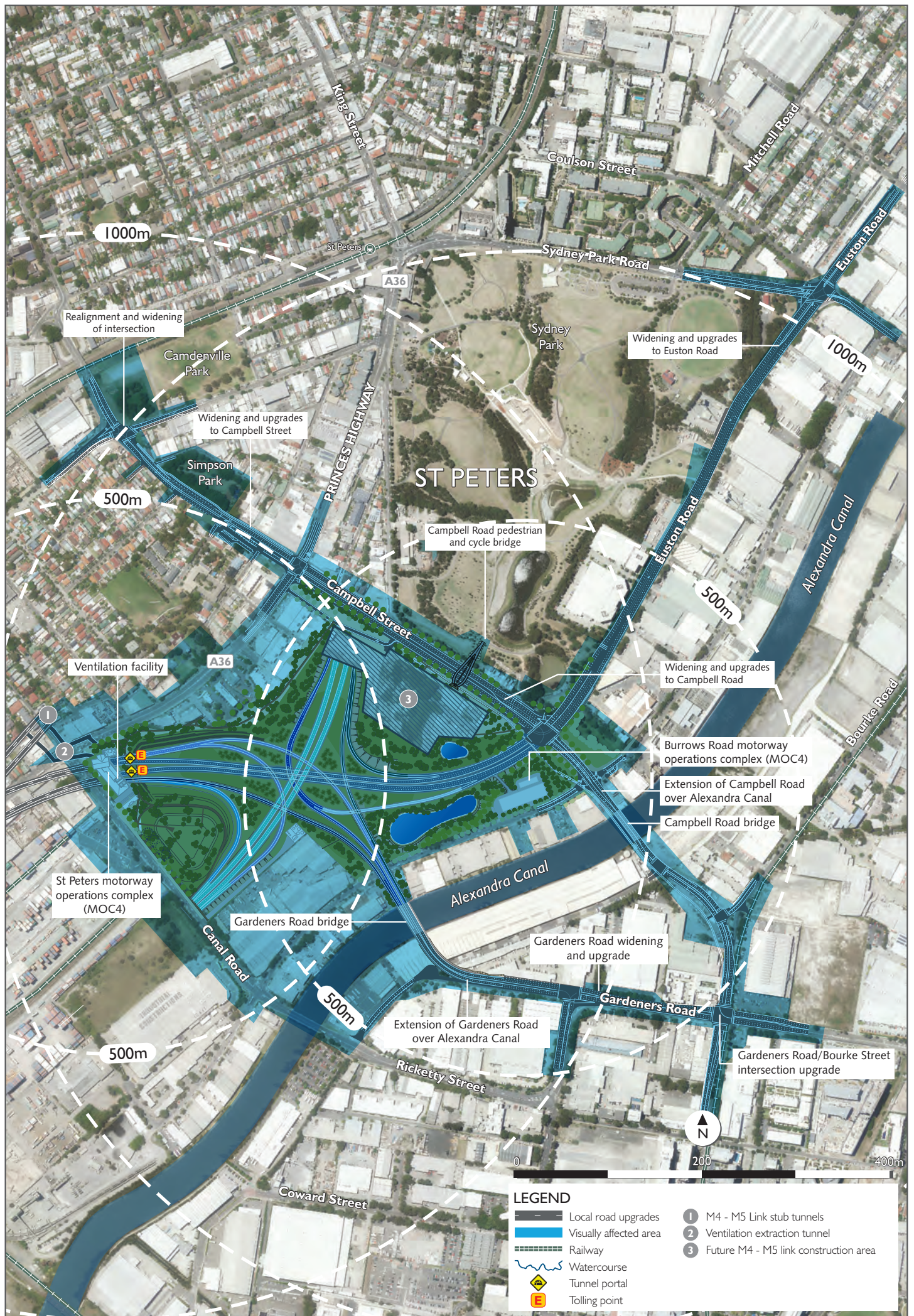


Figure 6-75 Visual envelope map of St Peters interchange

6.4.4.2 Key Viewpoints

Refer **Section 6.2.4** for a brief outline of permanent changes to the St Peters interchange site.

The St Peters interchange is a large site with a number of large built elements within it. Receivers who would experience the changes to the site are typically situated on the periphery, generally along the roads bounding the site (the Princes Highway, Canal Road, Burrows Road and Campbell Road) or from developments (including public open space) that front onto these roads, with the exception of changes that occur beyond this site area, namely the local road upgrades.

The site has been broken up into four sections for assessment (refer **Figure 6-76**):

- 1) The St Peters motorway operations complex on Canal Road (MOC4)
 - Assesses the visual impact due to changes in the vicinity of the MOC4
 - Receiver Locations M, N and O
- 2) The Burrows Road motorway operations complex (MOC5)
 - Assesses the visual impact due to changes in the vicinity of the (e.g. the bridge over the Alexandra Canal at Campbell Road)
 - Receiver Location P
- 3) Other Receiver Locations surrounding the St Peters interchange
 - Assesses the visual impact on Receiver Locations not near a MOC
 - Receiver Locations Q, R, S, T, and U
- 4) Local Road upgrades
 - These have been assessed with a slightly different methodology, using the character zones set up within the Urban Design Report (refer **Section 6.4.5**).

The assessment is provided in **Table 6-41** to **Table 6-51**.

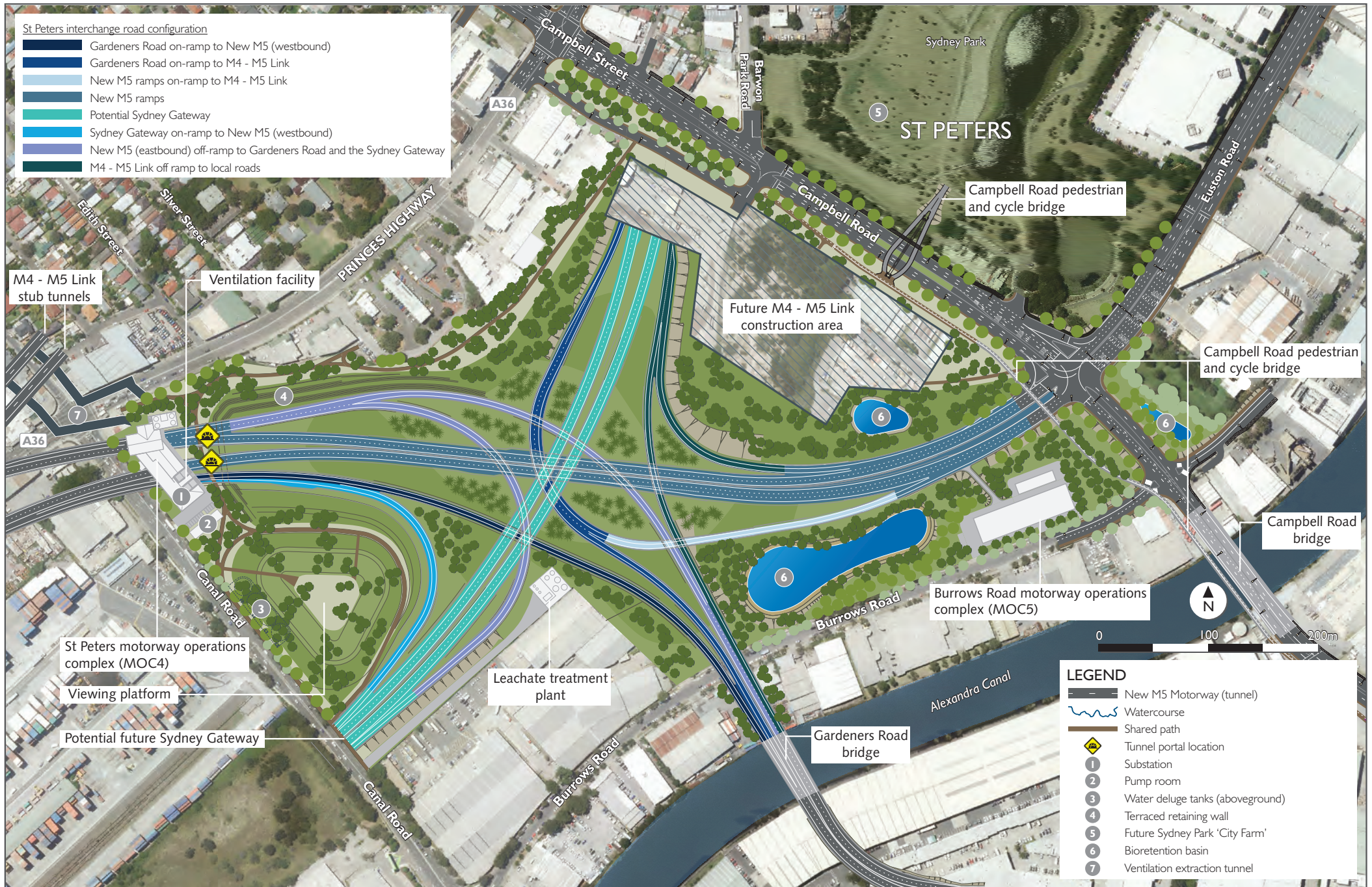


Figure 6-76 Overview of the St Peters interchange site

6.4.4.3 The St Peters motorway operations complex

Three Receiver Locations have been assessed for St Peters motorway operations complex MOC4 (refer **Figure 6-77**):

M) The intersection of Princes Highway and Canal Road

- This Receiver Location assesses the impact of the MOC4 on users receivers at the Southern Cross Hotel, a heritage item situated on the corner of Canal Road and the Princes Highway, as well as passers-by travelling through this intersection
- Receivers comprise hotel patrons, workers and customers of the surrounding commercial businesses (commercial neighbours), and road users

N) Commercial complexes backing onto the St Peters interchange I site

- This Receiver Location assesses the impact of the MOC4 on workers and visitors to the commercial buildings / complexes that front onto the Princes Highway, but share a back boundary with the St Peters interchange site
- Receivers comprise commercial neighbours

O) Industrial buildings on the Princes Highway

- This Receiver Location assesses the impact of the development on workers, visitors and passers-by to the industrial buildings on the Princes Highway
- Receivers comprise industrial neighbours and road users.

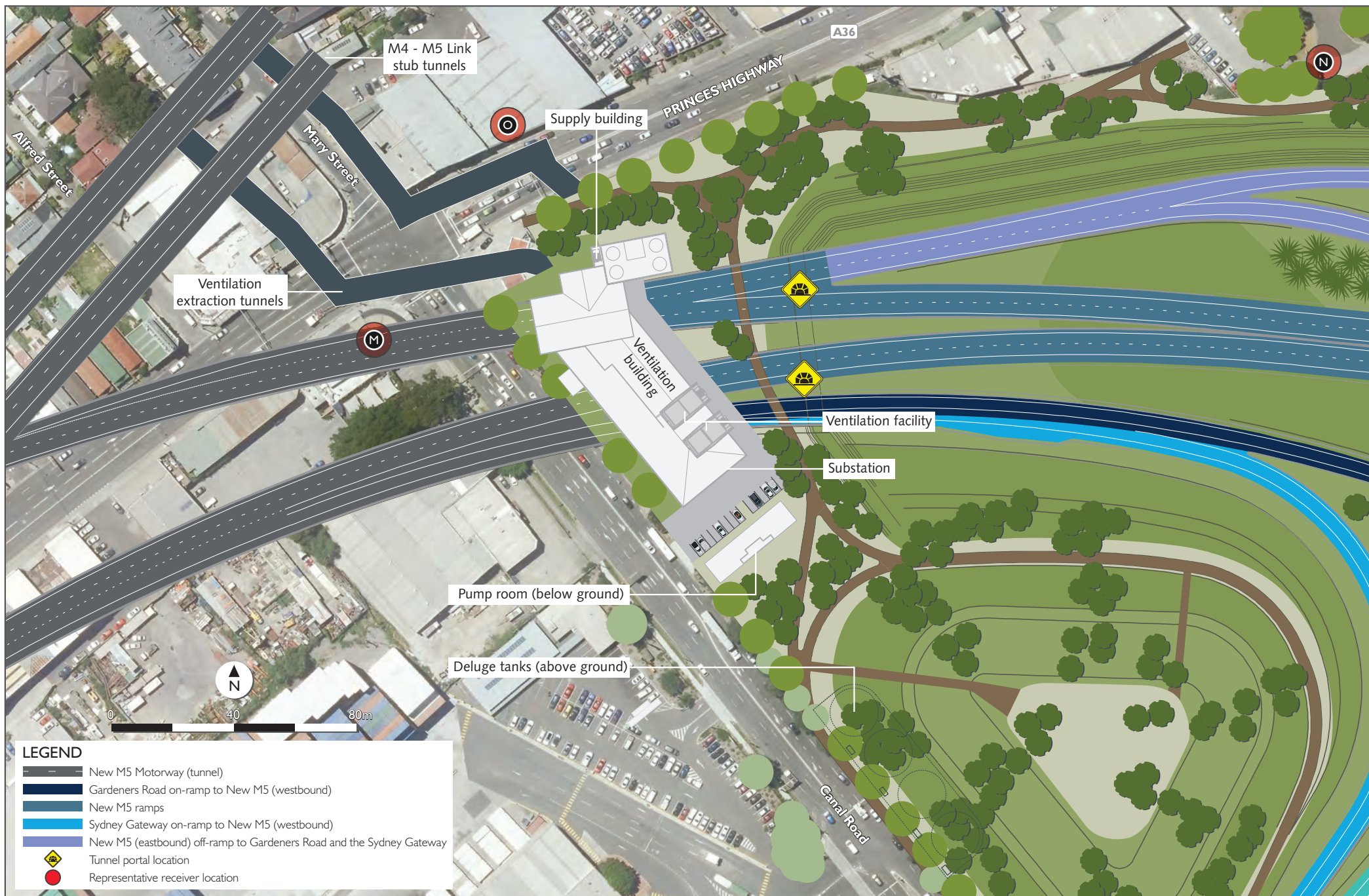


Figure 6-77 Receiver locations for the St Peters motorway operations complex (MOC 4)

Impact Assessment

Table 6-41 Visual Impact Assessment of changes due to the St Peters interchange in the vicinity of the MOC4

Receiver Location	Receiver	Visual Impact Assessment Sensitivity	Magnitude	Rating
M. The intersection of Princes Highway and Canal Road (refer Figure 6-78 , Figure 6-79 and Figure 6-80)	Commercial neighbours	Receivers at this location comprise workers and customers at the heritage listed hotel and surrounding commercial businesses. The sensitivity of the user group is assessed based on the most sensitive of these users, which would be hotel patrons at this location. The sensitivity of this user group is Low, due to the following: - Visiting the hotel would be a recreational pursuit, therefore patrons could be assumed to have a heightened appreciation for the visual amenity of their surrounds, although the focus would be internal to the building rather than to the landscape in the case of these receivers - The hotel does have an outside balcony ('Verandah Bar'), but views from this bar are screened by a tall, solid balcony rail and potted plants - Although there are limited windows and a small balcony fronting onto Canal Road (towards the site), the blinds appear to be drawn during the day - The hotel is situated on the intersection of two major roads - The anticipated change to the view would be in contrast to the existing character, but may be a softening of the view, with associated landscaping potentially providing a positive change to the existing situation - Street trees along Canal Road would be retained, which would assist in softening views to any changes.	The magnitude of change to the view from this location would be Moderate. The view from the hotel towards the St Peters interchange is seen across a busy intersection, with the most prominent elements (the Dynamo building and the street trees) to be retained. However, a number of new elements would be seen within the view, including two ventilation shafts, new motorway operations buildings and landscaping to the Canal Road edge. Due to the utilitarian, almost temporary character of the existing buildings and fencing fronting Canal Road, the change to the view along Canal Road from this location may not be negative, but would comprise well considered built forms with landscaping sensitive to the street front and existing mature street trees that lie along Canal Road would be retained. The Dynamo building fronts the Princes Highway and Canal Road intersection, with its 'back' to the site, partially limiting views to the development and maintaining the heritage element within the view.	Moderate - Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Road users	The sensitivity of road users is Low due to: - Low scenic value of the utilitarian road corridors of the Princes Highway and Canal Road at this location - The small portion of road affected by the project as part of the greater journey - The anticipated change to the view would be in contrast to the existing character, but may comprise a softening of the view, with associated landscaping providing a potentially positive change. Although these are major roads with a somewhat utilitarian character of an infrastructure element, they are integrated into the surrounding landscape. They lie at grade and are fronted by commercial and industrial businesses, among other development types, which contribute to the overall character of the area.	The magnitude of the change to the view from this location would be Moderate, due to the following: - Two key characteristic elements within the existing view would be retained: the Dynamo building and street trees along Canal Road. However a number of new elements would be present, including two ventilation shafts and other, lower built forms, and landscaping along Canal Road and the Princes Highway. Some of these elements would be in contrast to the existing character of the site, but in the case of the landscaping and new built form addressing Canal Road, would not be negative changes - The site is seen as the driver passes by, and is therefore only a small element within the greater road journey - The site is situated on a busy intersection, with many pieces of road infrastructure associated with the intersection (e.g. traffic lights, signage, etc.) punctuating views from the road.	Moderate - Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
N. Commercial complexes backing onto the St Peters interchange site	Commercial neighbours	The sensitivity of users at this location would be Low, due to the following: - The commercial buildings either front onto the Princes Highway or have internal courtyards / car parks, but appear to have limited views to the St Peters interchange (with views either blocked by buildings backing onto the site, or by solid colourbond fences along the boundary) - The utilitarian (industrial / commercial) character of the area (i.e. emphasis on function rather than scenic amenity) - The anticipated change to the view would be in contrast to the existing character, with associated landscaping potentially providing a softening to the existing industrial / construction aesthetic associated with the site - Moderate numbers of viewers (predominantly workers in the surrounding buildings, who could be assumed to have their attention focused on their work activities rather than on the landscape).	The magnitude of the change in views from this location would be Low, due to: - The limited existing views to the site from these commercial properties - The changes to the site would not result in a significant change in character of the view from this location, especially considering views from this location would not be focused on the site, but away from it. The most visible elements within the St Peters interchange would be the canopy of trees growing on the site as the vegetation matures. This would not be a negative change in the view.	Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
O. Industrial buildings on the Princes Highway	Industrial neighbours	The sensitivity of users at this location would be Low, due to the following: - Changes to the site due to the St Peters interchange would comprise a significant change to the character of the view, from one of utilitarian hoardings with scattered billboards to a more open, landscaped road edge with trees, turf and pedestrian paths - The site would be seen with the busy Princes Highway in the foreground - The utilitarian (industrial / commercial) character of the area (i.e. emphasis on function rather than scenic amenity) - Moderate numbers of viewers (predominantly workers in the surrounding buildings, who could be assumed to have their attention focused on their work activities rather than on the landscape) working from buildings with limited opportunities for viewing the landscape.	The magnitude of the change in views from this location would be Moderate, due to: - Limited opportunities for viewing the landscape from inside these industrial buildings - Two key characteristic elements within the existing view would be retained. However a number of new elements would be present which would be in contrast to the existing character of the site, some of which may not constitute negative changes to the view (i.e. the landscaping surrounding the built forms and fronting the Princes Highway) - The site is seen from across a busy road, with many pieces of road infrastructure associated with the intersection punctuating the view.	Moderate - Low
	Road users	The sensitivity of road users is Low due to: - Low scenic value of the utilitarian road corridor of the Princes Highway - The small portion of road affected by the construction works as part of the greater journey - The anticipated change to the view would be in contrast to the existing character, but may comprise a softening of the view, with associated landscaping providing a potentially positive change.	The magnitude of the change to the view from this location would be Moderate, due to the following: - Two key characteristic elements within the existing view would be retained. However a number of new elements would be present, some constituting a negative impact on the view (i.e. the ventilation facility) and others contributing in a positive way (i.e. the landscaping surrounding the built form on the site). - The site is seen as the driver passes by, and is therefore only a small element within the greater road journey - The site is situated on a busy intersection, with many pieces of road infrastructure associated with the intersection punctuating views from the road.	Moderate - Low



Figure 6-78 The view to the Dynamo building from the corner of Canal Road and the Princes Highway, looking south along Canal Road



The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-79 Photomontage showing the changes to the view at the corner of Canal Road and the Princes Highway (the MOC4) at opening



The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-80 Photomontage showing the changes to the view at the corner of Canal Road and the Princes Highway (the MOC4), ten years after opening

Night Lighting Assessment

Table 6-42 Night Lighting Visual Impact Assessment of changes due to the St Peters interchange in the vicinity of the MOC4

Receiver Location	Receiver	Visual Impact Assessment		Rating
		Sensitivity	Magnitude	
M. The intersection of Princes Highway and Canal Road	Commercial neighbours	Low Refer	The visual setting at this location includes lighting associated with Princes Highway and Canal Road, and illuminated windows and external lighting to the Southern Cross Hotel and commercial properties fronting the roads. The site itself is currently unlit at night. It is anticipated that there would be a general increase in night lighting to the vicinity of the intersection, as lighting would be needed for safety to the external built forms and pedestrian paths that surround the MOC4. However this increase in lighting would be seen with the well-lit road corridors and intersection in the foreground and buffered by landscaping between the buildings and Canal Road, which may diminish the impact of the increase. The magnitude of increase to lighting levels is Low.	Low
	Road users	Low	As above, the visual setting at this location includes lighting on the Princes Highway and Canal Road, lighting associated with the Southern Cross Hotel. The site itself is currently unlit at night. The outside of the built form (not including the ventilation facility) are anticipated to be lit, but visually buffered by the landscaping to Canal Road. The pedestrian paths within the landscape along the Princes Highway are anticipated to be lit. However these changes would be viewed from within the well-lit road corridor, the levels of which would be maintained as is. The magnitude of increase to lighting levels is Negligible.	Negligible

Receiver Location	Receiver	Visual Impact Assessment		Rating
		Sensitivity	Magnitude	
N. Commercial complexes backing onto the St Peters interchange PI site	Commercial neighbours	Low	The visual setting at this location includes lighting associated with Princes Highway and illuminated windows and external lighting associated with the commercial complexes and adjoining car parks. The site itself (seen over the back fences of some complexes, but blocked from view from others) is unlit at night. There would be an increase in lighting levels within the St Peters interchange site, due to the motorway operations centres and the roads themselves. However receivers would have limited opportunities to view these changes due to the angle of viewing (to the MOC4) and the screening by buildings and fencing. Further, there would be a reduction in the number of receivers that would view the site at night time. The magnitude of change is therefore Low.	Low
O. Industrial buildings on the Princes Highway	Industrial neighbours	Low	The visual setting at this location includes lighting on the Princes Highway, and lighting associated with industrial and commercial buildings fronting the Princes Highway. The site itself is currently unlit at night. There would be a general increase in lighting within the St Peters interchange, due to lighting to built form, roads and pedestrian pathways. However this change would be seen with the Princes Highway corridor in the foreground (which is a well-lit, major road corridor). Limited night time activity is anticipated from these industrial properties. The magnitude of change to lighting levels as seen from this location is Low.	Low
	Road users	Low	As per the assessment of the Princes Highway / Canal Road intersection, the visual setting at this location includes lighting on the Princes Highway, and lighting associated with industrial and commercial buildings fronting the Princes Highway. The site itself is currently unlit at night. There would be a general increase in lighting within the St Peters interchange, due to lighting to built form, roads and pedestrian pathways. However these changes would be viewed from within the well-lit road corridor, the levels of which would be maintained as is. The magnitude of increase to lighting levels is Negligible.	Negligible

Overshadowing Impacts

Overall, the buildings of the MOC4 do not significantly overshadow surrounding areas external to the St Peters interchange site. The only overshadowing occurs at 9am on the winter solstice, generated by the ventilation facility onto one industrial neighbour on Canal Road (refer **Figure 6-81**). This overshadowing is minor, in that it only occurs during the deep winter months and only in the morning.

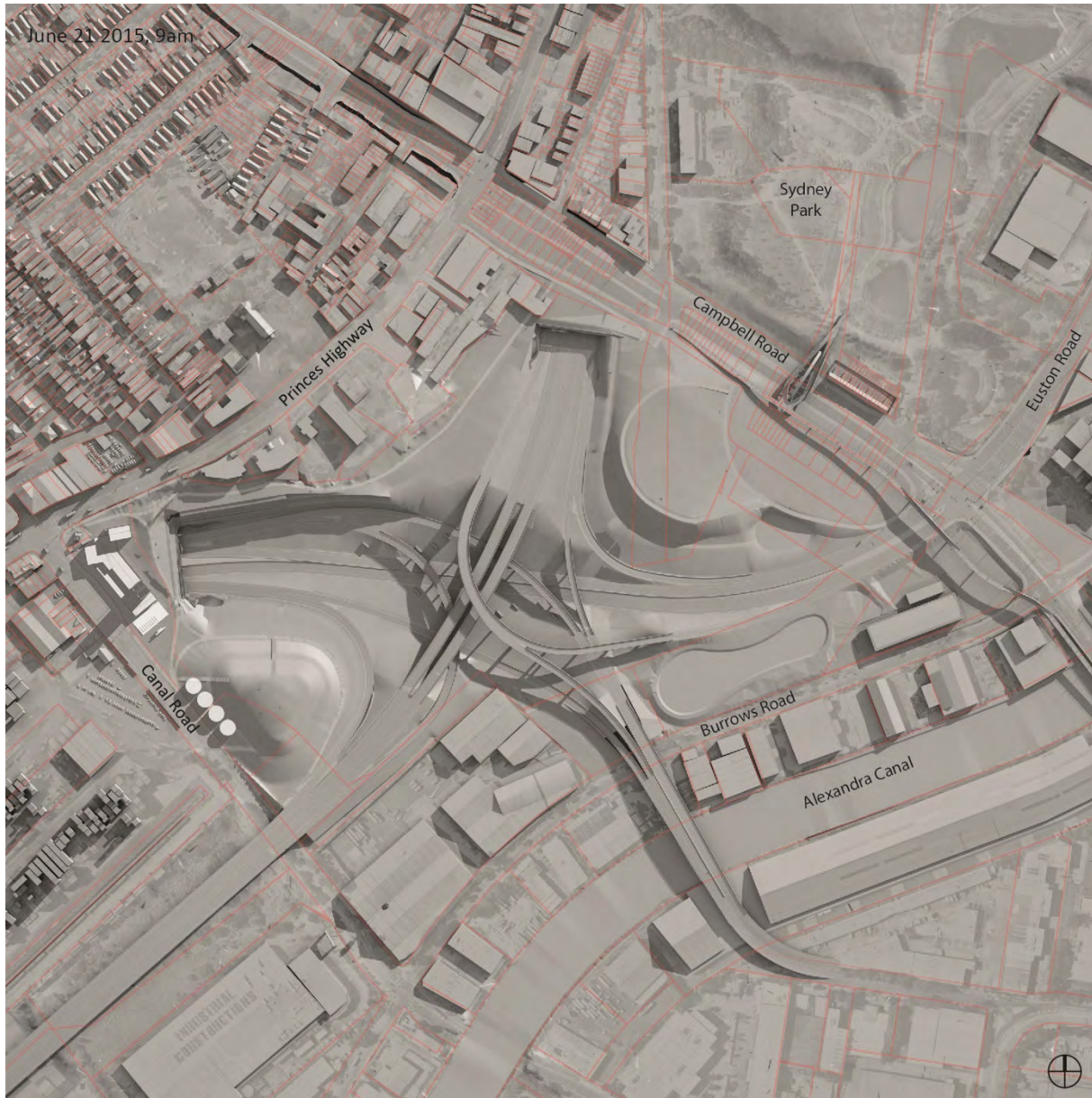


Figure 6-81 Shadows generated by the St Peters interchange infrastructure at 9am on the winter solstice. Note the shadows created from the MOC4 ventilation facility on industrial neighbours on Canal Road.

6.4.4.4 The Burrows Road motorway operations complex

One Receiver Location has been assessed for the Burrows Road motorway operations complex (MOC5) (refer **Figure 6-82**):

P) Burrows Road

- This Receiver Location assesses the visual impact on receivers at Burrows Road, a major road corridor which adjoins the St Peters interchange site and connects Campbell Road with Canal Road
- Receivers comprise industrial neighbours and road users

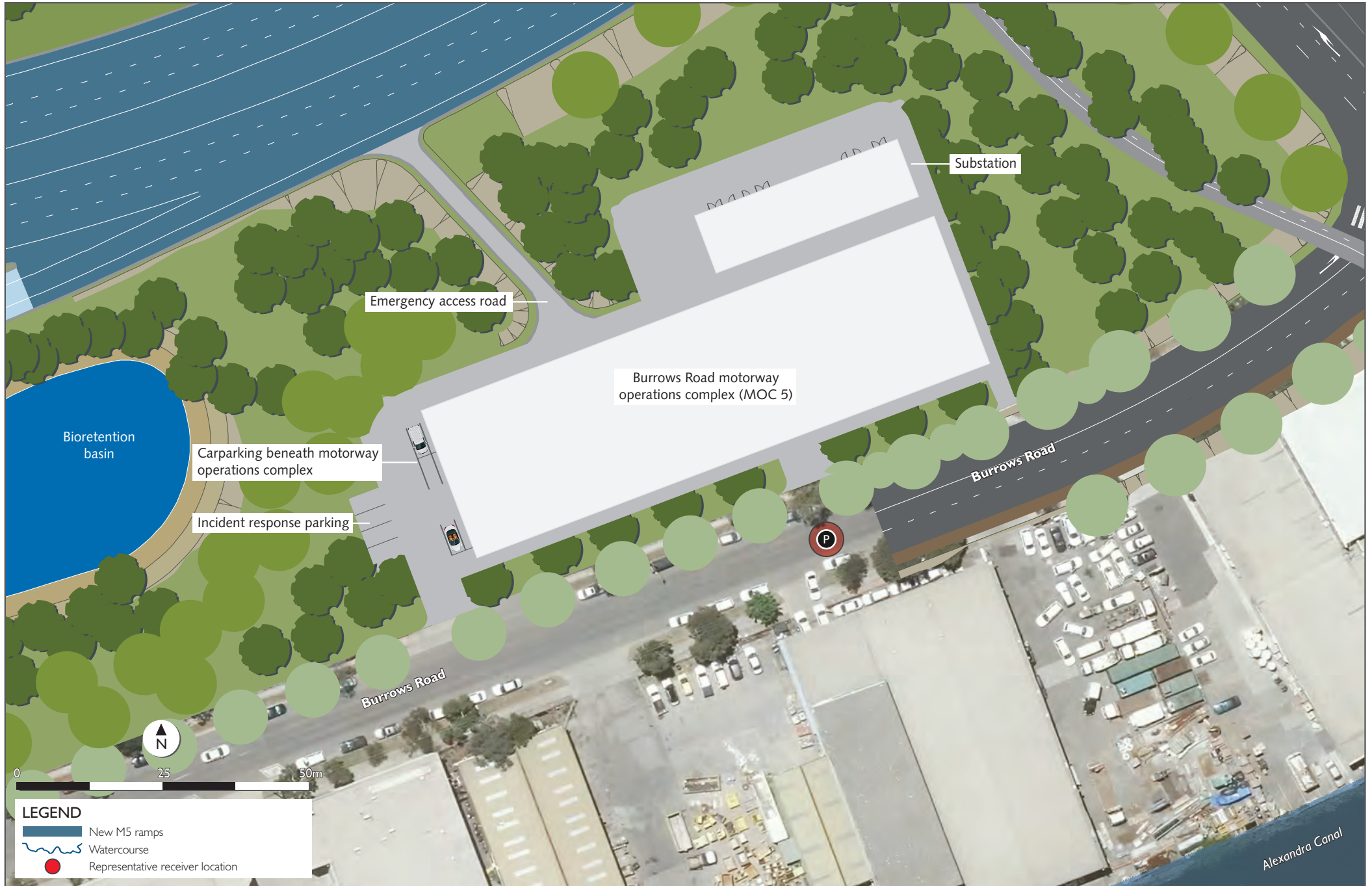


Figure 6-82 Receiver locations for the Burrows Road motorway operations complex (MOC 5)

Impact Assessment**Table 6-43 Visual Impact Assessment of changes due to the St Peters interchange in the vicinity of the MOC5**

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
P. Burrows Road	Industrial neighbours	The sensitivity of receivers at this location would be Low, due to the following: - The utilitarian (industrial) character of the area (i.e. emphasis on function rather than scenic amenity) - Moderate number of viewers (predominantly workers, who could be assumed to have their attention focused on their work activities rather than on the landscape) working from buildings with limited opportunities for viewing the landscape - The site would be seen with the busy Burrows Road in the foreground, which would include a steady stream of heavy vehicular traffic - The scale of the MOC5 built form would be in keeping with the existing built form of the area, but the character of the overall development may be a significant change to that of the existing situation due to the landscaping to the surrounds of the building. However, this may be a positive change to the view seen by these receivers.	The magnitude of change to the views to the site from this Receiver Location is Moderate, due to: - The limited opportunities for viewing the landscape from inside these industrial buildings. Receivers would only get views to the changes when they were entering or leaving these properties - The changes to the site would potentially result in a change to the utilitarian character of the view. However this change (particularly in regards to the parkland style landscaping to the south of the MOC5 surrounding the water quality basin) would constitute a positive change to the outlook seen by these receivers.	Moderate - Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Road users	The sensitivity of road users is Low due to: - The low scenic value of the utilitarian road corridor of Burrows Road at this location - The small portion of road affected by the construction works as part of the greater journey - The scale of the MOC5 built form would be in keeping with the existing built form of the area, but the character of the overall development may be a significant change to that of the existing situation due to the landscaping to the surrounds of the building. Although Burrows Road has the utilitarian character of an infrastructure element flanked by industrial development, it is integrated into the surrounding landscape as it lies at grade and fronted by industrial buildings.	The magnitude of the change in views to the site would be Moderate, due to: - The utilitarian character of the existing road, where function is valued over scenic amenity - The small portion of road affected by the construction works as part of the greater journey - The changes to the site would potentially result in a change to the utilitarian character of the view. However this change (particularly in regards to the parkland style landscaping to the south of the MOC5 surrounding the water quality basin) would constitute a positive change to the outlook seen by these receivers.	Moderate - Low

Night Lighting Assessment

Table 6-44 Night Lighting Visual Impact Assessment of changes due to the St Peters interchange in the vicinity of the MOC5

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
P. Burrows Road	Industrial neighbours	Low Refer	The magnitude of change to night lighting due to the MOC5 would be Low. The lighting associated with the streetscape would remain unchanged, while the lighting levels to the MOC5 built form would be similar to that of the existing industrial developments along Burrows Road. The parkland landscape south of the MOC5 building would be unlit, which may constitute a slight decrease in light levels seen from these observer locations. However few workers would be anticipated to be present in the industrial buildings to view this change.	Low
	Road users	Low	Lighting levels are to remain unchanged within the road corridor of Burrows Road. A slight decrease in lighting levels to the area south of the MOC5 would not be noticeable within the context of the driver travelling along and within the well-lit corridor of Burrows Road. The magnitude of change to the lighting levels is Negligible.	Negligible

Overshadowing Impacts

No overshadowing is created on properties outside the St Peters interchange site due to the MOC5.

6.4.4.5 Other Receiver Locations surrounding the St Peters interchange

Five Receiver Locations have been assessed for the remainder of the St Peters interchange (refer **Figure 6-76**):

Q) Burrows Road near the Gardeners Road Bridge

- This Receiver Location assesses the visual impact on receivers at Burrows Road, a major road corridor which adjoins the St Peters interchange and connects Campbell Road with Canal Road. The road is flanked by industrial development, the eastern side of which backs onto the Alexandra Canal
- Receivers comprise industrial neighbours and road users

R) Industrial complex on Canal Road

- This Receiver Location assesses the visual impact on receivers in the industrial complex at the corner of Burrows Road and Canal Road. This complex fronts Burrows Road, but has a large car park at the rear of the property, which backs onto the St Peters interchange
- Receivers comprise industrial neighbours

S) Campbell Road residences, between Woodley Street and Harber Street:

- This Receiver Location assesses the visual impact on receivers at the heritage listed terrace housing on Campbell Road
- Receivers comprise residential neighbours and road users

T) Sydney Park

- This Receiver Location assesses the visual impact on visitors to Sydney Park, a regionally important park
- Receivers comprise active and passive recreational users of the park

U) Barwon Park Road

- This Receiver Location assesses the visual impact on residents in medium density housing on the corner of Barwon Park Road and Campbell Road
- Receivers comprise residents without boundaries adjoining the St Peters interchange.

Impact Assessment

Table 6-45 Visual Impact Assessment of changes due to the St Peters interchange

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
Q. Burrows Road near the Gardeners Road Bridge	Industrial neighbours	The sensitivity of receivers at this location would be similar to that of Receiver Location P (Low), due to the following: - The utilitarian character of the area - Moderate number of viewers working from buildings with limited opportunities for viewing the landscape - The site would be seen with Burrows Road in the foreground, which would include a steady stream of heavy vehicular traffic - The scale and character of the development would be a change from the existing condition (including the parkland setting surrounding the water quality basins and the Gardeners Road Bridge over the Alexandra Canal).	The magnitude of change to the view as seen from this location is Moderate. While the character of the view would change due to the landscaping associated with the water quality basins and the new road bridge over the Alexandra Canal (including a localised change in road level surrounding the intersection between these two roads), only a low number of receivers would see the changes from their places of work. In addition, the character of the area is functional rather than scenic, due to the industrial development surrounding the site.	Moderate - Low
	Road users	As per Receiver Location P, the sensitivity of road users is Low due to: - The low scenic value of the utilitarian road corridor - The small portion of road affected by the construction works as part of the greater journey - The scale and character of the development would be a change from the existing condition (including the parkland setting surrounding the water quality basins and the Gardeners Road Bridge over the Alexandra Canal).	- The magnitude of the change in views to the site would be Moderate, due to: - The utilitarian character of the existing road, where function is valued over scenic amenity - The small portion of road affected by the construction works as part of the greater journey - The changes to the site would potentially result in a change to the utilitarian character of the view. However this change (particularly in regards to the parkland style landscaping to the water quality basin surrounds) would constitute a positive change to the outlook seen by these receivers.	Moderate - Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
R. Industrial complex on Canal Road	Industrial neighbours	The sensitivity of receivers at this location would be Low, due to the following: - The utilitarian character of the area - Moderate number of viewers working from buildings with limited opportunities for viewing the landscape - The industrial building fronts Burrows Road, although the site can be seen beyond the car park at the rear of the building - The scale and character of the development may not be a significant difference from that of the existing situation, considering the portion of the site behind the complex would not be completed within this phase of works.	The magnitude of change to the view from this Receiver Location is Low, considering: - The limited opportunity for viewing the site from the rear of this complex, given the screening to the site by the colourbond fence to the rear of the property - The utilitarian character of the existing view, which includes the car park of an industrial complex, with glimpses over the fence to the existing site which visually resembles a construction site and occasional trees - The low number of receivers, who could be assumed to have their attention focused on their working environment rather than the scenic amenity of their surrounding landscape.	Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
S. Campbell Road Refer Figure 6-83, Figure 6-84, and Figure 6-85	Residential neighbours	The sensitivity of residential receivers is High due to: - The close proximity of the Receiver Location to the SPI. - Receivers would see the site from outside the front of their primary places of residence, a view in which the receivers would have a proprietary interest - The scale and character of the development is very different from the existing situation - The homes are heritage listed and as such have an inherent sensitivity as important to the character of the area. There are a relatively low number of receivers that live within this bank of terrace houses on Campbell Road.	The magnitude of change to the view seen from this Receiver Location due to the development is High, due to the following: - The change in view would be a significant change in terms of the character and scale of the development. The changes include the widening of Campbell Road, a pedestrian bridge over Campbell Road adjoining Sydney Park, and the St Peters Interchange itself, which from this location would be seen as a landscaped green space - A portion of the site seen from these residences would still visually appear as a construction site at the completion of the project, as it would be delivered as part of future M4-M5 Link - The western most terraces would experience some afternoon overshadowing by the pedestrian bridge during the winter months at approximately 3:00pm until sunset. - However, due to the tall front fences on fronting the properties, views to all these change would be seen when the receivers entered or left their homes.	High

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Road users	The sensitivity of road users is Moderate due to: - The whole of Campbell Road is affected by the upgrade. However Campbell Road may make up only a small portion of the receivers overall journey - The road is generally utilitarian in character, with industrial development, but has picturesque elements within it, including heritage listed terrace housing and a frontage to Sydney Park - The change in views along the road would be a significant change to in character, particularly in relation to the road widening and setting on the southern side of the road, with the removal of the industrial buildings within the interchange site.	The magnitude of the change to the view would be High, due to the following: - The change in view would be a significant change in terms of the character and scale of the development, particularly in regards to the widening of Campbell Road - Other elements would be new within the views from the road, including the pedestrian bridge joining Sydney Park and the St Peters Interchange itself, which from this location would be seen as a landscaped green space whereas previously it was industrial and residential development - However, the parkland adjoining Campbell Road on the St Peters interchange site would be a positive change to the view (with regard to the removal of the industrial development) - A high number of receivers would see this view, particularly with the rise in traffic numbers due to the interchange itself, and changes to the end of Campbell Road and the bridge over the Alexandra Canal.	High - Moderate

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
T. Sydney Park	Active and passive recreational users of the park	Recreational users of Sydney Park would include visitors engaging in both active and passive recreation. Both groups would typically have a high sensitivity, due to: - The importance of the quality of the view to recreational users - The slow speed at which the receivers engaged in active recreation would move through the site - The moderate to high number of users - The scale and character of the development is in sharp contrast to that of the existing situation. However, the sensitivity of this receiver group is downgraded to Moderate, due to the following: - Only a small proportion of users of Sydney Park would see the changes, as much of Sydney Park has a visually inward focus, with landform and planting encouraging inward looking views towards focal points such as wetlands and a playground, or blocking views to the surrounding streets altogether - There are no picnic tables, BBQs or other facilities that have views to the site.	The magnitude of change due to the development is Moderate, due to: - The changes would only be seen from a very small portion of the park, along the southern edge adjacent to Campbell Road - New elements within the view from the park edge would include the pedestrian overpass over Campbell Road, the pathways linking the overpass to the existing pathways within the park, the widening of Campbell Road, and the change to the St Peters interchange site itself, which from this location would visually comprise an open park area with road infrastructure beyond - These changes would be screened somewhat by vegetation fringing the park, and the visibility would diminish over time as the new vegetation matured.	Moderate

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
U. Barwon Park Road (Refer Figure 6-86 to Figure 6-88)	Residential neighbours	The sensitivity of residential receivers is High due to: - The close proximity of the residents to the changes - Residents with apartments facing onto Barwon Park Road would get views from their primary places of residence, a view in which the receivers would have a proprietary interest. - The scale and character of the development is very different from the existing situation.	The magnitude of the change in view from this Receiver Location is High. The view to Sydney Park from these residences would not change, but the view to the St Peters interchange site would change significantly from a view to an industrial site to one of parkland with the road interchange beyond. This would be a positive change to the view from these residences. It is unlikely that residents in lower units would see the road interchange itself, but residents in the top floor units may get glimpse views to the road infrastructure before the vegetation within the associated parkland in the foreground matured enough to screen these views. The widening of Campbell Road would also be a significant change in the view from these residences.	High



Figure 6-83 Existing view from residences on Campbell Road opposite the St Peters interchange site, showing existing industrial buildings

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Figure 6-84 Photomontage showing the view from the residences on Campbell Road to the St Peters interchange and the Campbell Road pedestrian and cyclist bridge (to right of frame) at opening



Figure 6-85 Photomontage showing the view from the residences on Campbell Road to the St Peters interchange and the Campbell Road pedestrian and cyclist bridge (to right of frame) ten years after opening

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Figure 6-86 Existing view from the corner of Barwon Park Road and Campbell Road looking west towards the St Peters interchange site

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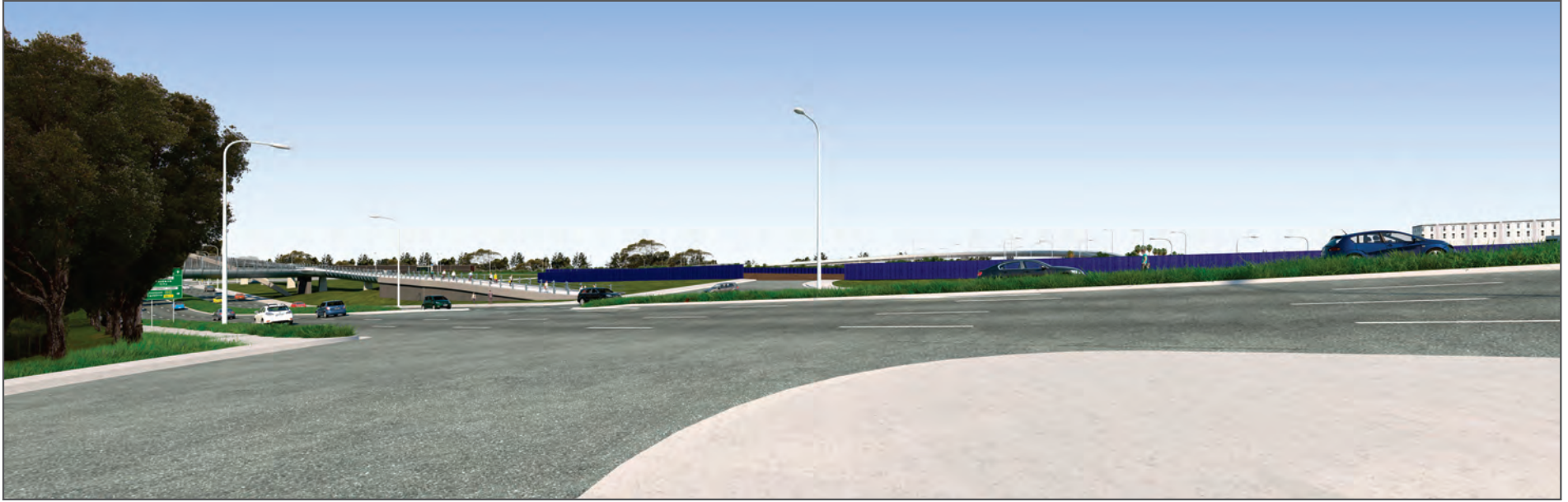


Figure 6-87 Photomontage showing the view from the corner of Barwon Park Road and Campbell Road looking west towards the St Peters interchange at opening (with M4-M5 Link construction area)



Figure 6-88 Photomontage showing the view from the corner of Barwon Park Road and Campbell Road looking west towards the St Peters interchange ten years after opening (with M4-M5 Link)

Night Lighting Assessment

Table 6-46 Night Lighting Visual Impact Assessment of changes due to the St Peters interchange in the vicinity of the MOC5

Receiver Location	Receiver	Visual Impact Assessment		Rating
		Sensitivity	Magnitude	
Q. Burrows Road near the Gardeners Road Bridge	Industrial neighbours	Low Refer Table 6-45	The magnitude of change to lighting within the vicinity of the Gardeners Road Bridge would be Moderate. The visual setting at this location includes lighting along Burrows Road, as well as lighting associated with the industrial buildings flanking the road. The St Peters interchange site is currently unlit at this location. There would be increased lighting levels associated predominantly within the new road corridor culminating in the Gardeners Road Bridge. This increase in lighting would only be seen by a limited number of receivers within the surrounding industrial buildings, as it is anticipated that a majority of the work would be done in business hours at these complexes, rather than at night time.	Moderate - Low
	Road users	Low Refer Table 6-45	Any increase in lighting levels associated with the new road and road bridge at the Gardeners Road Bridge would be seen within the already lit road corridor of Burrows Road. Lighting to the existing road would be maintained as is; therefore the magnitude of increase to lighting levels is Negligible.	Negligible
R. Industrial complex on Canal Road	Industrial neighbours	Low Refer Table 6-45	The magnitude of change to lighting levels from this Receiver Location would be Negligible. Views to the St Peters interchange could only be seen from the rear car park of this complex, which is surrounded by a colourbond fence, effectively screening much of the site from this location. Further, there would be limited (if any) receivers viewing from this location at night, as it is anticipated that work within the complex would be predominantly within regular work hours.	Negligible
S. Campbell Road	Residential neighbours	High Refer Table 6-45	The magnitude of change to lighting levels from this location would be High. Existing lighting seen from this location is associated with Campbell Road, and some lighting to the facades and windows of fringing industrial and residential development. The main change to lighting levels would be associated with the widening of Campbell Road and the pedestrian pathway and bridge. This would be a significant increase in the lighting seen from this location. However, lighting on the street and bridge may be filtered and reduced somewhat as street trees and vegetation matured.	High
	Road users	Moderate Refer Table 6-45	The magnitude of change to the lighting along Campbell Road would be Low. There would be an increase in lighting to the road associated with the widening, but these changes would be seen in context with the road corridor itself, where lighting levels are required for safety and would therefore be acceptable within the character of the new widened road corridor.	Moderate - Low

Receiver Location	Receiver	Visual Impact Assessment		Rating
		Sensitivity	Magnitude	
T. Sydney Park	Active and passive recreational users of the park	Moderate Refer Table 6-45	At present there is no lighting provided within Sydney Park in the vicinity of Campbell Road. Therefore it is assumed that visitors would not use this area at night time and therefore no assessment can be made regarding the change in lighting as seen by receivers.	N/A
U. Barwon Park Road	Residential neighbours	High Refer Table 6-45	The magnitude of change to lighting levels from this location would be Moderate. Existing lighting seen from this location is associated with Campbell Road, and some lighting to the facades and windows of fringing industrial and residential development. The main change to lighting levels would be associated with the widening of Campbell Road. This would be a significant increase in the lighting seen from this location. However, this change would be filtered and reduced somewhat as street trees and vegetation matured.	High - Moderate

Overshadowing Impacts

Some overshadowing would be experienced at Receiver Location S: Campbell Road residences (refer **Figure 6-89**). The shadow diagrams indicate that there would be some overshadowing during the winter months over the boundaries of three western most properties at around 3:00pm until sunset. The pedestrian bridge would not overshadow any adjacent properties during the summer months.

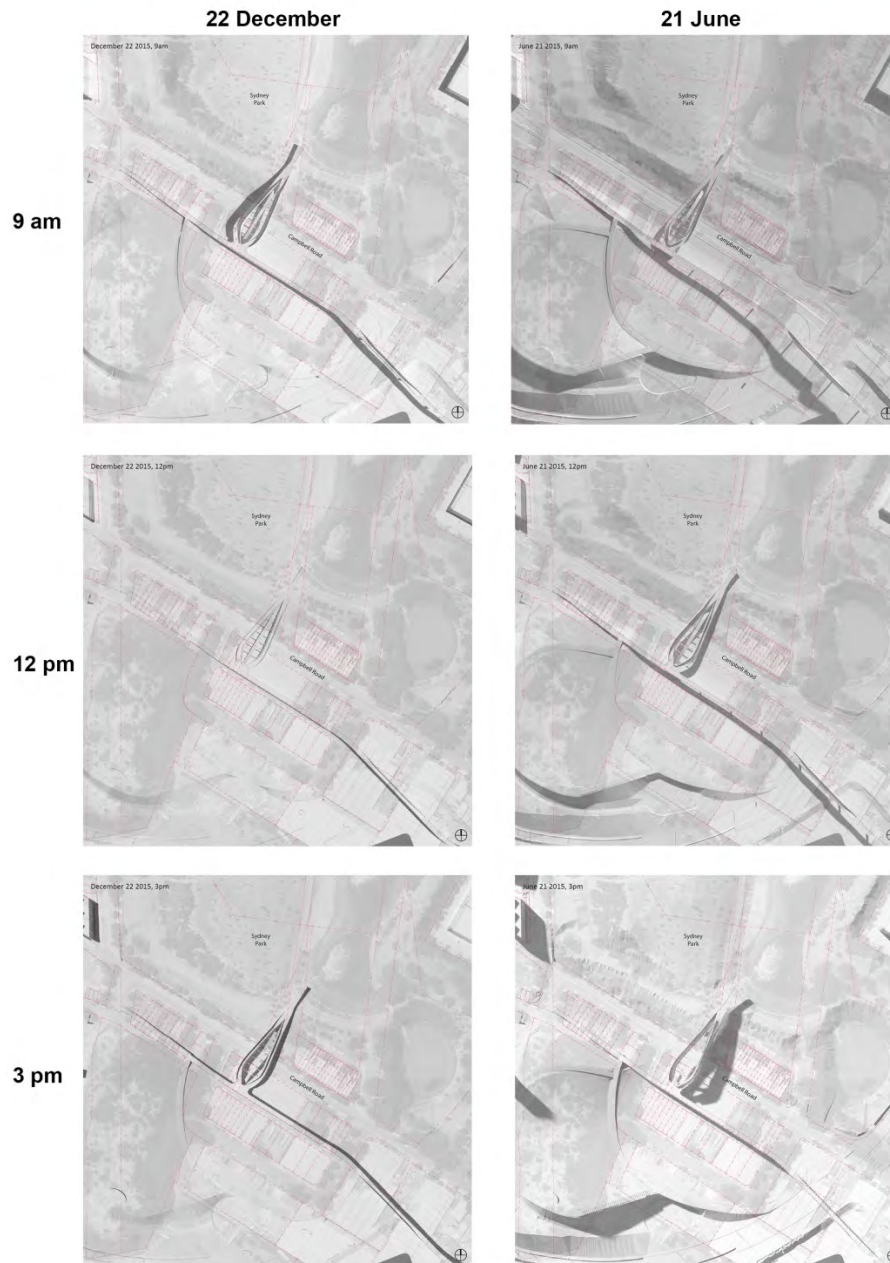


Figure 6-89 Shadows generated by the pedestrian bridge spanning Campbell Road. Note the shadows generated on the western most properties at 3 pm during the winter.

6.4.4.6 Summary of potential impacts for St Peters interchange

Overall, it is noted that the quality of the change to the St Peters interchange site is a positive visual impact. The integration of public open space within the interchange site provides beneficial views from surrounding receivers, and considered architectural finishes to buildings are also a positive outcome to the visual amenity of the site.

The visual impact within the vicinity of the MOC4 is limited by the utilitarian character of this intersection and surrounding area, coupled with the busy nature of these roads and the limited sensitivity of the receivers surrounding this location. As noted above, many of these changes are positive, especially due to the proposed parkland style landscaping to the surrounds of the complex, complete with pedestrian access to other parts of the site.

The visual impact within the vicinity of the MOC5 is also limited by the utilitarian character of the area, although on Burrows Road, the character is predominantly industrial, with a less busy road. The scale and materiality of the MOC5 would not be out of character within the area, although the parkland landscaping associated with the building would be a new, positive element within views to the site from the surrounding industrial developments and the road corridor. The new bridges over the Alexandra Canal constitute new elements within the area, but again, their visual impact is limited by the less sensitive receivers within the area due to its utilitarian character. Further, well considered architecture and landscape treatment would add to the visual amenity of this area.

Changes to Campbell Road along the St Peters interchange boundary (between Burrows Road and the Princes Highway) constitute significant differences, especially in regards to residential neighbours and users of public open space. These two receiver groups are highly sensitive and would get clear views to changes, which would include road widening, the development of the St Peters interchange site, pedestrian pathways and bridges, and landscaping. There would also be some overshadowing of approximately three residential neighbours on Campbell Road by the pedestrian bridge on winter afternoons.

The position of the Campbell Road pedestrian bridge to Sydney Park has been determined with consideration to City of Sydney's Sydney Farm project. Mitigation measures to reduce the impact of the development on residents living on Campbell Road include consideration of lighting design to minimise glare and light spill and careful placement of street trees to filter light spill and reduce the impact and scale of the pedestrian bridges as seen from these homes. Opportunities to minimise the overshadowing and visual impacts to the Campbell Road residences by the Campbell Road pedestrian bridge would be explored during detailed design. The width and bulk of these structures should match the anticipated usage by pedestrians.

Similarly, mitigation measures to reduce the impact of the development on residents living on Barwon Park Road should consider the use of street trees along both sides of Campbell Road that will provide screening of views of the project, including lighting from the carriageway.

Additional light would be introduced to the surrounding areas during operation associated with the St Peters Interchange. Lighting would include cut off fittings and would be directed to minimise light trespass. The extent of glare emanating from the new lighting towards the proposed new park is likely to be beneficial, providing safety and surveillance for park users.

Refer **Table A - 17** for summary of visual and lighting impacts at this location.

6.4.5 Local road upgrades

Road upgrades are part of the natural life cycle of any road; however some of the changes that form part of the St Peters interchange go beyond the normal changes expected to local roads. The local road upgrades could potentially change the landscape character of the streets and surrounding area, but are also important to catering for the predicted traffic volumes associated with the proposed intersection upgrades.

The urban design report has identified a number of character zones within the St Peters interchange area:

- A. Campbell Street residential / mixed use
- B. Princes Highway business corridor
- C. Campbell Road / park extension
- D. Euston Road park transition
- E. Bourke Road connection / industrial
- F. Burrows Road / Alexandra Canal / industrial
- G. Canal Road / park extension
- H. Brick pit / interchange
- I. Sydney Gateway

Four character zones have been described and assessed based on road upgrades which lie outside the main St Peters interchange site:

- A. Campbell Street residential / mixed use
- C. Campbell Road / park extension
- D. Euston Road park transition
- E. Bourke Road connection / industrial.

For each character zone, the desired character been outlined, followed by a description of changes proposed as part of the project. An assessment has been made for each street within that character zone as to if the changes lie within the existing and proposed character of the streets. If a significant change in character has been identified, the visual impact of the change has been assessed as per the methodology outlined in Section 2.3.

6.4.5.1 Assessment of potential character changes

A. Campbell Street Residential / Mixed Use

The proposed character for the Campbell Street upgrade would provide a continuous 'green corridor' and reflect the fine grain urban fabric of surrounding streets. Established vegetation in Camdenville Park, Simpson Park and Sydney Park would be retained to maintain the existing character of the area. Street tree plantings to include *Pyrus ussuriensis* along Bedwin Road and new avenue of *Angophora costata* would be used as street trees along Campbell Street.

Table 6-47 Potential change to street character within the Campbell Street character zone

Street	Existing character	Proposed changes	Potential change in character
Campbell Street between Unwins Bridge Road and Princes Highway	A two lane road (one in either direction), flanked by residential development (terrace housing) with tight building setbacks (refer Figure 6-90). Substantial mature street tree cover adjoining open spaces such as Camdenville Park and Simpson Park (refer Figure 6-91).	Street upgraded to a four lane road - two lanes in each direction with additional right turn lanes. Road widening to the south of the street only, retaining the development and parks along the northern street boundary. Residential housing on the southern side of the road to be removed, with residual land being made available for future development or landscaping on the southern side of the road at project completion. New street tree and general tree planting, in addition to turf and screen planting to pocket park areas. Off-street parking to be installed between St Peters Street and Church Street with a landscaped buffer planting between the parking area and Campbell Street.	Yes
Intersections with streets on the south-western side of Campbell Street: Brown Street, Florence Street, St Peters Street and Church Street	These minor residential streets are characterised by older style attached, semi attached and detached housing on small lots (most often terrace housing) with established private residential gardens and mature street trees.	Housing on the corners of these streets (at the intersection with Campbell Street) would be removed, but a majority of the length of these streets would not be upgraded.	No

Street	Existing character	Proposed changes	Potential change in character
Campbell Street between Princes Highway and Barwon Park Road	Narrow, two lane street flanked by residential housing on the south and industrial buildings to the north of the street, both with tight building setbacks and no street trees.	Street upgraded to a four lane road - two lanes in each direction with additional turning lanes. Road widening to the south of the street only, retaining the development and parks along the northern street boundary. Residential housing on the southern side of the road to be removed, with residual land being made available for future development or landscaping on the southern side of the road at project completion. New street tree and general tree planting, in addition to turf to pocket park areas.	Yes



Figure 6-90 View north along Campbell Street showing industrial / commercial buildings on the north-eastern side of the road (to be retained) and residential housing on the south-western side of the road (to be removed)



Figure 6-91 The view north-west along Campbell Street, showing mature fig trees adjoining Simpson Park and residential housing to be removed on the western side of the road (to left of frame)

C. Campbell Road

The proposed character for the Campbell Road upgrade would provide an extension of the landscape character of Sydney Park across Campbell Road to the south. The design would provide a continuous 'green corridor' along Campbell Road and include a pedestrian bridge, providing grade separated access to Sydney Park. Street tree plantings of *Angophora costata* would be coupled with screen plantings of indigenous small tree species and informal grove plantings of *Melaleuca quinquenervia*.

Table 6-48 Potential change to street character within the Campbell Road character zone

Street	Existing character	Proposed changes	Potential change in character
Campbell Road between Barwon Park Road and Burrows Road	Campbell Road is flanked on its north-east by Sydney Park and to the south-west by residential and industrial buildings with mature street trees (<i>Melaleuca quinquenervia</i>). The road character is greatly influenced by the mature street trees and vegetation associated with Sydney Park (refer Figure 6-92). The pockets of old style housing (including a row of heritage listed terrace housing) and industrial buildings with established street trees also add to the character of the street bordering residential / industrial neighbourhoods. The road itself is wide, although with only one lane in both direction, and a mix of heavy industrial traffic as well as cars from residential areas. Parking is provided on both sides of the road.	Campbell Road would be upgraded from one lane in each direction with parking on either side, to two lanes each direction plus turning lanes at intersections. The road would be widened to the south-east, with residential and industrial development removed to accommodate the St Peters interchange.	Yes



Figure 6-92 The view looking south along Campbell Road, to detached residential housing on the right and mature vegetation fringing Sydney Park on the right.

D. Euston Road Park Transition

The proposed character for the Euston Road upgrade maintains the existing landscape character of the road by retaining the existing vegetation along the corridor and reinforcing the street tree avenue of *Melaleuca quinquenervia*. The intersection at Euston Road, Campbell Road and Northern Ramps would include the use of tall parkland trees which would provide a sense of scale.

Table 6-49 Potential change to street character within the Euston Road character zone

Street	Existing character	Proposed changes	Potential change in character
Euston Road between Campbell Road and Sydney Park Road (Refer Figure 6-93)	Euston Road is a wide, two lane street, bounded predominantly by Sydney Park to the north-east with some small pockets of industrial buildings, and industrial complexes to the south-west. The road is characterised, in part, by the mature street trees that line Sydney Park (<i>Melaleuca quinquenervia</i>), although other tree species occasionally are present on the western side of the road (predominantly fig trees). The industrial complexes that line the south-western side of the street are a series of low industrial buildings with established landscapes and street trees that soften the facades of the buildings.	Euston Road would be upgraded to provide two lanes in each direction, a central right turn lane and parallel parking on the eastern and western side. The road would be widened along the north-eastern side, with removal of park edge (Sydney Park) and the demolition of one industrial building. A simple avenue of <i>Melaleuca quinquenervia</i> trees would be planted along the new verge, with the residual land formerly taken up by the industrial building to be demolished returned to parkland as part of Sydney Park. A signalised intersection would be installed at the Campbell Road / Euston Road intersection. The round-about at the corner of Euston Road and Sydney Park Road would also be replaced with a signalised intersection.	Yes
Euston Road between Sydney Park Road and Maddox Street	From Sydney Park Road, Euston Road is flanked by a mix of high density residential apartments and industrial buildings. The road is very busy, with two lanes merging into one from the round-about heading north-east, and two lanes heading west into the round-about. Young street trees (<i>Waterhousia floribunda</i>) line the eastern side of the road, and the southern side of the road is characterised by mature <i>Melaleuca quinquenervia</i> street trees.	The upgrade of Euston Road from Sydney Park Road includes two lanes in each direction, a central right turn lane and parallel parking on the eastern and western side. <i>Waterhousia floribunda</i> street trees are proposed to line the street at this location. A signalised intersection is also proposed at Euston Road / Sydney Park Road intersection.	No



Figure 6-93 Euston Road is characterised by mature street trees lining the road, predominantly *Melaleuca quinquenervia* (to left of frame) but with occasional figs and other species.

E. Bourke Road Connection / Industrial

The proposed character for the Bourke Road connection would provide an extension of the 'green corridor' that forms Campbell Road. A feature avenue of trees on approach to the Campbell Road bridge crossing would provide a sense of arrival. Bourke Road and Gardeners Road would provide widened grass verges and street tree planting and screen planting to the boundary of industrial buildings to provide visual amenity for pedestrians.

Table 6-50 Potential change to street character within the Bourke Road connection / industrial character zone

Street	Existing character	Proposed changes	Potential change in character
Bourke Street / Bourke Road	Bourke Street and Bourke Road are characterised by wide streets flanked by utilitarian industrial complexes and mature street trees. Parallel parking is provided on either side of these roads.	Bourke Street and Bourke Road would be upgraded from one to two lanes in each direction. Street tree plantings of <i>Corymbia eximia</i> are proposed to tie in with City of Sydney's street tree guidelines, while the connection between Campbell Road and Bourke Road would be planted with <i>Angophora costata</i> to tie in with the Campbell Road / Campbell Street tree plantings. Small pocket parks would be vegetated with turf and screen planting at the corner of Bourke Road and Bourke Street. Vegetated median strips would be included at the Gardeners Road / Bourke Road intersection. A widened verge would provide some softening to the built form along Bourke Street leading up to the bridge over the Alexandra Canal. The changes to Bourke Road and Bourke Street only occur on a small portion of the overall length of the roads. A new bridge at the end of Bourke Road would make this end of the road a through road rather than a dead end.	Yes
Gardeners Road	As per Bourke Street, Gardeners Road is characterised by large scale industrial complexes and mature street tree planting (a mix of indigenous and exotic species, including <i>Melaleuca quinquenervia</i> and Plane trees, refer Figure 6-94).	Gardeners Road would be widened to three lanes in either direction. <i>Corymbia maculata</i> would be planted as street trees, in accordance with the City of Sydney's street tree guidelines. The changes to Gardeners Road only occur on a small portion of the overall length of the road. A new bridge at the end of Gardeners Road would make this end of the road a through road rather than a dead end.	Yes
Kent Road	A short road within an industrial area, characterised by utilitarian industrial buildings and mature street trees.	The changes to Kent Road are localised at the intersection between Gardeners Road and Kent Road, and therefore is only a small portion of the overall length of the road.	No



Figure 6-94 View along Gardeners Road, showing mature street tree planting and low industrial complexes addressing the street.

6.4.5.2 Assessment of visual impacts to roads with significant changes

It is noted that although many of the above impact assessments have Moderate to High ratings, many of these changes occur within road reserves zoned as SP2 Infrastructure Corridors. While there is a change to the character of the existing land use, it is considered visually acceptable within the context of these land zonings.

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Table 6-51 Visual Impact Assessment of changes to local roads

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
Campbell Street between Unwins Bridge Road and Princes Highway	Residential neighbours with adjoining boundaries	This Receiver Location assesses the visual impact on residential neighbours on streets running perpendicular to Campbell Street, with side fences adjoining the new road reserve edge. The sensitivity of residential receivers is High due to: - The close proximity of the road reserve edge to these residential properties - Receivers would be seeing the view from their primary places of residence, a view in which the receivers would have a proprietary interest - The scale and character of the development is in contrast to that of the existing situation - However, there would be low numbers of receivers viewing the changes at close proximity.	The magnitude of change to the view at this location is Moderate. Although the change seen would be from closely spaced residential neighbours to a view to a widened Campbell Street, the street would be buffered by a strip of parkland which would have trees and screening vegetation. This parkland strip would buffer the view as seen from these residences.	High - Moderate
	Industrial neighbours	The sensitivity of receivers in the industrial buildings is Moderate due to: - The utilitarian nature of industrial development (i.e. emphasis on function rather than scenic amenity) - The contained nature of views as seen from buildings, with limited views to the streetscape seen from windows in buildings - Low numbers of viewers.	The magnitude of change to the view from these buildings would be Low, due to the following: - The road would be widened from two to four lanes, but the setback from the street would remain the same for these buildings - The view across the street would be buffered somewhat by the green space provided on the opposite side of the road - The low viewer numbers coupled with the limited opportunities for viewing the changes from these buildings.	Moderate - Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Recreational users	This Receiver Location assesses the visual impact on users of the local pocket parks that line the street, more specifically Simpson Park at this location. The sensitivity of passive recreational users is Moderate due to: - The importance of the quality of the view to recreational users - The user may sit within the park, viewing the landscape in great detail for moderately prolonged lengths of time - The moderate number of users who would use the park due to facilities provided (public toilets, a playground and cricket pitch would draw users to the park) and the density of the surrounding residential area.	The magnitude of change from this Receiver Location would be High, due to the following: - The quiet character of the park is due in part to the narrow street which limits traffic movement. This would change due to the width of the street and the volume of traffic that would pass the park - Views from the park to the characteristic terrace housing surrounding it would change, with one row of residential buildings removed. However this would be replaced with a strip of landscaping and potential future development for larger residual lots which would soften the backdrop to the new, busier road.	High
	Road users	The sensitivity of road users is Moderate due to: - The limited views afforded to road users along Campbell Street due to closely spaced built form with limited setback from the street - The utilitarian nature of parts of the road, passing through areas of industrial development, however parts of the road pass through residential or park setting, which have a more picturesque quality - The narrow road and slow speed of travel due to traffic and intersections would give the road user quite detailed views to the landscape - Travel along this street would make up part of a greater journey for the road user.	The magnitude of change from this Receiver Location would be Moderate. Although the road would change from a quiet, two lane road to a busier four lane road, the park setting, industrial buildings fronting the road and residential development seen in the side streets would not change. Some residential housing would be replaced with a strip of pocket parkland, which would soften the views to other residential properties along the road.	Moderate

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Commercial neighbours (refer Figure 6-95 , Figure 6-96 and Figure 6-97)	This Receiver Location assesses the visual impact on employees and customers of the heritage listed Town and Country Hotel at the intersection of Campbell Street and May Street / Unwins Bridge Road. The sensitivity of these receivers The sensitivity of this user group is Low, due to the following: - Visiting the hotel would be a recreational pursuit, therefore patrons could be assumed to have a heightened appreciation for the visual amenity of their surrounds, although the focus would be internal to the building rather than to the landscape in the case of these receivers - The hotel does not appear to have any outdoor seating addressing the intersection or associated streets - Although there are limited windows and a small balcony fronting onto the roads, the blinds appear to be drawn during the day - The hotel is situated at a busy intersection. - The anticipated change to the view would not be in significant contrast to the existing character (with road widening and removal of some vegetation within the May Street Reserve). Proposed landscaping to the intersection and a widened, vegetated verge adjoining the hotel on Campbell Street would potentially comprise a positive impact on views from the front of the hotel.	The magnitude of change to the view from this location would be Low. The upgraded intersection and widened Campbell Street comprise the changes to the view, but these changes would be softened by proposed landscape features such as street trees and vegetated verges. There are also limited views to the intersection and roads from the hotel, therefore the impact on patrons and employees would be minimal.	Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
Campbell Street between Princes Highway and Barwon Park Road	Industrial neighbours	The sensitivity of these receivers would be low. Although they would be viewing the changes from a very close distance (with limited space between the street and the front of the building), there are few windows from these industrial and commercial buildings from which to view the changes. These buildings have a utilitarian character to them, with value placed on usage rather than scenic amenity.	The magnitude of change seen from this Receiver Location is Moderate. The road would widen and traffic volumes would increase, and residential housing fronting the opposite side of the road would be removed. However limited opportunities from which to view these changes are available from these buildings.	Moderate - Low
	Road users	The sensitivity of road users along this stretch of the road is Low, due to the following: - The limited views afforded to road users along Campbell Street due to closely spaced built form with limited setback from the street - The utilitarian nature of this section of the road, coupled with the poorly maintained state of some of the surrounding buildings - The narrow road and slow speed of travel due to traffic and intersections would give the passer-by quite detailed views to the landscape (which, as above, is utilitarian in character) - Travel along this street would make up part of a greater journey for the road user.	The magnitude of change at this location would be Moderate: - The road would be widened, with higher volumes of traffic passing along it - The road would be flanked to the south by a vegetated 'island' between Campbell Street and Albert Street; a significant change in character from the existing residential housing that fringes the road.	Moderate - Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
Campbell Road between Barwon Park Road and Burrows Road Refer Figure 6-98, Figure 6-99, and Figure 6-100	Residential neighbours with adjoining boundaries	This Receiver Location assesses the change to the views seen by residents of the strip of heritage listed terrace houses on Campbell Road. The sensitivity of these receivers is High, due to the following: - The close proximity of the residential properties to the road - Receivers would be seeing the view from their primary places of residence, a view in which they would have a proprietary interest - The scale and character of the development is in contrast to that of the existing situation - However, there would be low numbers of receivers viewing the changes at close proximity - Potential for overlooking of private rear garden spaces from pedestrian overbridge.	The magnitude of change from this Receiver Location is High. Campbell Road would be changed from a wide but only two lane road with parallel parking, to a busy four lane road with a bus lane. The industrial and residential housing fronting the opposite side of the road from these residences would be removed and replaced with the St Peters interchange. However much of this interchange would be seen as green, vegetated space from these residences. The pedestrian bridge over the road would be seen as a new built element within the view.	High
	Recreational users	This Receiver Location assesses the change as seen by users of Sydney Park. The sensitivity of these receivers is Moderate, due to the following: - The importance of the quality of the view to recreational users - The user may sit within the park, viewing the landscape in great detail for moderately prolonged lengths of time - The high numbers of receivers who would use this regionally important park - However views from the park to Campbell Road are predominantly blocked by landform and mature vegetation.	The magnitude of change as seen from this Receiver Location is Moderate. Although the change in character of Campbell Road is significantly different from the existing situation (the widening of the road to a four lane road plus bus lane, and the removal of fringing industrial and residential development and replacement with a transport interchange), much of these changes would be screened from view of park users by vegetation and landform. The areas of the park where users would see the changes are smaller park spaces situated behind the main body of the park, which is arranged to be an inward-looking park with views centred on interest points such as the wetlands or playgrounds.	Moderate

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Road users	The sensitivity of road users is Moderate due to: - The utilitarian nature of parts of the road, passing through areas of industrial development, however parts of the road pass through residential development or a park setting, which have a more picturesque quality - Although quite wide and fringed with some industrial development, this road has a 'backstreet' quality due to the fact it is only a two lane road with mature street trees and small residential housing - Travel along this street would make up part of a greater journey for the road user.	The magnitude of change to the street from this Receiver Location would be Moderate. The change in character along this street would be significant. However, landscaping provided as part of the St Peters interchange site would strengthen the parkland setting of the roadway. The pedestrian bridge over the road would be seen as a new built element within the view, however would give users access to proposed parkland designed within the St Peters interchange.	Moderate
Euston Road between Campbell Road and Sydney Park Road Refer Figure 6-101 , Figure 6-102 and Figure 6-103	Recreational users	This Receiver Location assesses the changes seen to views by visitors to Sydney Park. The sensitivity of these receivers is High, due to the following: - The importance of the quality of the view to recreational users - The user may sit within the park, viewing the landscape in great detail for moderately prolonged lengths of time - The high numbers of receivers who would use this regionally important park - Views from the park to Euston Road are predominantly screened from the body of the park. However a number of park entrances lie along the stretch of road. In addition, changes to the park edge (which would be significant in character) would occur along the full length of the park.	The magnitude of change to this location is High, due to the following: - The change to the length of the park edge is a significant portion of the perimeter of the park - The widening of Euston Road, which would use land which is visually part of the parkland, although technically is zoned as part of the road reserve.	High

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Industrial neighbours	The sensitivity of these receivers is Moderate, due to the following: - The receivers would comprise workers to these industrial sites, who could be expected to have less of an interest in the surrounding landscape and be more focussed on their work within the industrial sites - They would be viewing the changes from close proximity - The changes are uncharacteristic of the existing road, mainly due to the reduction in 'park edge' due to the widening and the demolition of one industrial complex - The view would be seen most of the year of a nice street edge.	The magnitude of change to the view from this location would be Moderate: - The widening of Euston Road, which would eat into land which is visually part of the parkland, although zoned as part of the road reserve - The limited opportunities for some workers within these industrial buildings to view the changes while inside their places of work.	Moderate
	Road users	The sensitivity of road users is Moderate due to: - The utilitarian nature of parts of the road, passing through areas of industrial development, however Sydney Park road edge with established street trees and screening vegetation gives it a more picturesque quality - Travel along this street would make up part of a greater journey for the road user.	The magnitude of change would be Moderate. The road would be significantly widened, eating into the perceived parkland edge of Sydney park. However the demolition of an industrial building and its replacement with more parkland would marginally increase the 'seen area' of parkland along the road.	Moderate
Bourke Street / Bourke Road	Industrial neighbours	The sensitivity of receivers within the industrial complexes on Bourke Road / Bourke Street would be Low. These complexes comprise large blocks, with individual factory units fronting carparks and courtyards away from the roadways themselves. Limited views are seen to the roads, which are lined by mature street trees and narrow verges. Workers could be expected to have less of an interest in the surrounding landscape and be more focussed on their work within the industrial sites.	The magnitude of change to views from these complexes is Low. Although these streets would be widened, and provide through traffic (ie an increased volume of traffic due to the bridge over the Alexandra Canal), views to these changes from the buildings would be limited.	Low

Receiver Location	Receiver	Visual Impact Assessment		
		Sensitivity	Magnitude	Rating
	Road users	The sensitivity of road users along these streets is Low. Although lined with mature street trees, which soften the facades of the industrial complexes, the street has a utilitarian character due to its land use. Views along these streets are limited to within the road corridor due to landform and built form.	The magnitude of change from this Receiver Location is Moderate. Changes to the road (including widening of the road and new pocket parks and street trees) are broadly in keeping with the existing character. However, linking of this road to roads on the western sides of Alexandra Canal would make this road a through road, increasing traffic volumes. These changes only occur to a small portion of the overall existing road.	Moderate - Low
Gardeners Road	Industrial neighbours	As for the Bourke Street / Bourke Road industrial neighbours, the sensitivity of these receivers would be Low.	The magnitude of change to views from these complexes is Low. Although these streets would be widened, and provide through traffic (i.e. an increased volume of traffic due to the bridge over the Alexandra Canal), views to these changes from the buildings would be limited.	Low
	Road users	As for the Bourke Street / Bourke Road road users, the sensitivity of these receivers would be Low.	As per the Bourke Street / Bourke Road changes, the magnitude of change from this Receiver Location is Moderate. Changes to the road (including widening of the road and new pocket parks and street trees) may be keeping with the existing character. However, linking of this road to roads on the western sides of Alexandra Canal would make this road a through road, increasing traffic volumes. These changes only occur to a small portion of the overall existing road.	Moderate - Low



Figure 6-95 Existing view from the front of the Town and Country Hotel looking from the intersection back up Campbell Street towards the Princes Highway

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Figure 6-96 Photomontage showing the upgraded intersection as seen from the corner of the Town and Country Hotel at opening



Figure 6-97 Photomontage showing the upgraded intersection as seen from the corner of the Town and Country Hotel, ten years after opening

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Figure 6-98 Existing view from Burrows Road to the industrial buildings on the intersection of Burrows Road and Campbell Road (seen to right of frame)

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Figure 6-99 Photomontage showing the widened and realigned Campbell Road from the corner of Burrows Road, with Sydney Park to right of frame and pedestrian bridge to left of frame, at opening



Figure 6-100 Photomontage showing the widened and realigned Campbell Road from the corner of Burrows Road, with Sydney Park to right of frame and pedestrian bridge to left of frame, ten years from opening

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Figure 6-101 Existing view looking north along Euston Road showing edge of Sydney Park

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The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-102 Photomontage showing widened Euston Road, with Sydney Park to right of frame at opening



The architectural treatment of the ventilation facilities would be confirmed during detailed design as discussed in Chapter 2

Figure 6-103 Photomontage showing widened Euston Road, with Sydney Park to right of frame, ten years after opening

Night Lighting Visual Impacts

Although lighting levels may change slightly along local roads due to road upgrades, road lighting is standardised for safety and comfort of all road users and adjacent land use. Therefore any change to lighting levels is considered likely to be broadly consistent with existing levels of lighting.

6.4.6 Tolling gantries within the M5 East Motorway corridor

A series of tolling gantries are proposed within the new M5 East Motorway corridor. The indicative locations for toll infrastructure include:

- King Georges Road interchange (entry and exit)
- M5 East Motorway, near the King Georges Road interchange (east and westbound)
- Kingsgrove Road interchange (entry and exit)
- Bexley Road interchange (entry and exit)

The gantries are located in areas where they are unlikely to be visually prominent from adjacent sensitive receptors (residents and recreational users) given:

- The extent of proposed revegetation and screening to the corridor edges
- The relative height of noise walls and the lower motorway carriageway.
- Road users would view the toll gantries as single structures, which are visually typical within the context of the motorway corridor.

7.0 Mitigation and management measures

7.1 Construction

The following mitigation measures are recommended to minimise visual impacts as a result of construction:

- Existing vegetation around the perimeter of the construction compounds to be retained where feasible and reasonable, particularly:
 - Vegetation surrounding the Bexley Road East construction compound, particularly along the boundary between residential properties and the compound along the northern and eastern boundaries
 - Mature trees along the north-west (Marsh Street) and south-west boundaries of the Arncliffe construction compound site
 - Mature trees and vegetation along the boundary of Sydney Park along Campbell Road and Barwon Park Road.
- Landscape planting using fast growing species to be provided where feasible and reasonable to soften views of construction sites, particularly for compounds located within public recreational spaces.
- Revegetation and landscaping would be undertaken progressively.
- Temporary noise walls would be erected early within the site establishment phase where required to minimise noise impacts and provide visual screening.
- Design of temporary noise walls to include painted surface and project information/logo to deter graffiti and reduce the scale of noise walls, particularly adjacent to residential areas or public open space.
- Site hoardings and fencing to be regularly maintained, including the prompt removal of graffiti.
- Design of acoustic sheds erected within the site establishment phase to minimise noise impacts and provide visual screening to be visually recessive, such as the use of mid toned colours and materials to minimise the intrusiveness and potential glare of the sheds
- Cut-off or and directed lighting would be used within and outside of construction compounds with lighting location and direction considered to ensure glare and light spill are minimised
- The project would be constructed in accordance with the requirements of the Civil Aviation Safety Authority and Sydney Airport, with respect to lighting used during construction.
- The lighting design for shared paths located within the M5 Linear Park impacted by the project or located adjacent to compounds would be designed to minimise light spill to adjoining residential properties while maintaining a safe night time environment for path users (eg lighting position below the height of the fence line).
- A signage strategy would be developed during detailed design for temporary wayfinding and safety. Potentially affected receivers would be consulted on the final signage in relation to the location and associated impacts.
- Elements within construction sites would be located to minimise visual impacts as far as feasible and reasonable, for example, locating equipment back from site boundaries.
- Investigate opportunities to maximise the separation distances as far as reasonable and feasible:
 - Between the Kingsgrove North construction compound to the adjoining residential areas to reduce shading and visual impacts.
 - Between the Bexley Road North and Bexley Road East construction compounds and adjoining residential areas to reduce shading and visual impacts.
- Investigate opportunities to provide an alternative southern cycle route for the length of the existing shared path impacted by the western surface works.

7.2 Operation

The following mitigation measures are recommended to minimise visual impacts at operation include:

- The architectural treatment of the ventilation facilities would be finalised prior to the commencement of construction and following consultation with surrounding communities. The final architectural treatment for the facilities would be informed by the functional requirements and the design principles detailed in the New M5 Urban Design Report. This would be documented in the final Urban Design and Landscape Plan for the project.
- Limitation of vegetated batters to 1:3 and 1:4 where possible in order to maximise the impact of vegetation on these batters and minimise maintenance.
- Chain link fencing to sites should only be used where these would not be viewed by sensitive receivers, such as residents and users of recreational space. At these locations, high quality fencing suitable for parks and public spaces should be considered.
- Where large areas of hardstand are or structures are designed, such as car parks, consideration of shade trees within these spaces, where feasible, would assist in softening views to these areas, as well as providing shade and visual amenity within the sites.
- Pedestrian and share paths to be aligned away from residential property boundaries where public open space adjoins residential boundaries.
- Maximise planting area, where feasible, between public open space and infrastructure and include taller, screening vegetation, for example at Bexley Road North motorway operations complex between the built form and the M5 Linear Park share path.
- Lighting design within motorway operations complexes, roadways, and on elevated pedestrian bridges (for example at St Peters interchange) to minimise impact of lighting to surrounding areas (particularly residential areas), for example the use of cut-off and directed lighting to minimise light spill and glare.
- Consider the use of street trees along both sides of the street (for example Campbell Road) that would provide screening of views of the project, including lighting from the carriageways.
- Aviation hazard lighting, building lighting and surface road lighting would be designed and operated in accordance with the requirements of the Civil Aviation Safety Authority and Sydney Airport. At St Peters interchange, consideration of temporary vegetative screening adjacent to M4-M5 construction areas is recommended.
- Opportunities to minimise the overshadowing and visual impacts to the Campbell Road residences by the Campbell Road pedestrian bridge would be explored during detailed design.

Appendix A

Visual impact summaries

Appendix 1: Visual Impact Summary Tables**Construction*****Kingsgrove North construction compound***

Table A - 1 Summary of visual impacts from Kingsgrove North construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Boundary adjoining compound	2. Glamis Street, southern end	Low (6 properties with boundaries adjoining the compound on Glamis Street, plus four properties on Armitree Street and three on Rosebank Avenue, total 12 properties)	North of compound	High	High
Boundary not adjoining compound	3. 101 Armitree Street	Moderate (approx. 21 properties on Armitree Street, 22 on Glamis Street, and nine on Rosebank Avenue, total 52 properties)	North of compound	Moderate	Moderate - Low
Industrial neighbours					
Industrial neighbours	1. Garema Circuit, C1 entry	Low (two properties with boundaries adjoining compound and one opposite compound entry, total three properties)	North and east of compound	Low	Moderate - Low
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road	-	-	-	-	-
Drivers on a motorway	6. M5 East Motorway	High	South of compound	Low	Negligible

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
Recreational users					
Passive recreation, public open space	-	Moderate number of existing users anticipated - but visual impact is not assessed as the parkland is to be completely removed during construction. Therefore receivers would be affected in that they would not have access to the park, but during construction no receiver would be present at the site to be affected by visual impact due to the project.		-	-
Active recreation, public open space (pedestrian / cyclist)	2. Glamis Street, southern end	At present, a moderate number of pedestrians and cyclists use the pathway, however this number could potentially double during construction (therefore a high number of users) as the pathway on the southern M5 East Motorway Linear Parkland is closed and users diverted under the Kindilan underpass and onto the northern pathway during construction	North of compound	High	Moderate
	4. M5 Linear Park - Kindilan underpass			High	Moderate
Active recreation, semi private open space (e.g golf course)	5. Canterbury Golf Course	A low to moderate number of people would use Canterbury Golf Course on the weekend, but potentially this could increase to a high number of receivers on the weekends.	North of the changes / north-east of the compound	Moderate - Low	Negligible

Kingsgrove South construction compound

Table A - 2 Summary of visual impacts from Kingsgrove South construction compound C2 and Commercial Road compound C3

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	-	-	-	-	-
Residential neighbours not on adjoining properties	-	-	-	-	-
Industrial neighbours					
Industrial neighbours	7. Commercial Road, C3 (tunnel) entry	Low (three properties, medium sized industrial buildings approximately 1,450m ²)	South-east of compound	Low	Moderate - Low
	8. Vanessa Street industrial compounds	Low (Six properties ranging in size between 14,500m ² and 2,250m ² building footprint)	South of compound	Moderate	Moderate - Low
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road	-	-	-	-	-
Drivers on a motorway	6. M5 East Motorway	High	North of compound	Low	Negligible

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
Recreational space users					
Passive recreation, public open space	-	Moderate number of existing users anticipated - but visual impact could not be assessed as the parkland is to be completely removed during construction. Therefore receivers would be affected in that they would not have access to the park, but during construction no receiver would be present at the site to be affected by visual impact due to the project.		-	-
Active recreation, public open space (pedestrian / cyclist)	-	At present, a moderate number of pedestrians and cyclists use the pathway, however this pathway is to be closed and users diverted under the Kindilan underpass and onto the northern pathway during construction, therefore no receiver would be present at the site to be affected by visual impact due to the project.		-	-
Active recreation, semi private open space	-	-	-	-	-

Bexley Road North construction compound

Table A - 3 Summary of visual impacts from Bexley Road North construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	12. Flatrock Road / Jones Avenue	Low – Eight residential properties have boundaries adjoining the compound site.	West of compound	High	High - Moderate
Residential neighbours	9. Bexley Road, north of	These Receiver Locations assess the visual impact of the	North of compound	High -	Moderate

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
not on adjoining properties	Poole Street	compound on homes on Bexley Road. A low number of receivers see views from this location: 13 properties lie directly opposite the Bexley Road North construction compound on the eastern side of Bexley Road, and six homes would get views to the site but are positioned either north of the northern corner of the site, or south of the southern corner of the site opposite the M5 East Motorway.		Moderate	
	11. Intersection of Bexley Road and Wolli Avenue		East of compound	Moderate	Moderate
Industrial neighbours					
Industrial neighbours	-	-	-	-	-
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road	11. Intersection of Bexley Road and Wolli Avenue	High - major four lane road near the intersection with the M5 East Motorway	East of compound	Moderate - Low	Negligible
	9. Bexley Road, north of Poole Street	High - major four lane road	North of compound	Moderate - Low	Negligible
Drivers on a motorway	6. M5 East Motorway	High	South of compound	Low	Negligible
Recreational users					
Passive recreation, public open space	-	-	-	-	-

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
Active recreation, public open space (pedestrian / cyclist)	10. M5 Linear Park, Bexley, north of M5 entry	Moderate number of users would enter the M5 Linear Park from this location. As an entry point to the park, this position is a landmark event within the greater journey through the M5 Linear Park.	South of compound	High	Moderate
Active recreation, semi private open space (e.g golf course)	-	-	-	-	-

Bexley Road South construction compound

Table A - 4 Summary of visual impacts from Bexley Road South construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	-	-	-	-	-
Residential neighbours not on adjoining properties	11. Intersection of Bexley Road and Wolli Avenue	Low number of receivers. No residential homes lie opposite this site on the eastern side of Bexley Road. Five properties are likely to get views to the site from further north on Bexley Road.	North-east of compound	Moderate	Moderate - Low
Industrial neighbours					
Industrial neighbours	-	-	-	-	-

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road	11. Intersection of Bexley Road and Wolli Avenue	High – major four lane road near the intersection with the M5 East Motorway	North-east of compound	Moderate - Low	Negligible
	15. Bexley Road, south of the pedestrian underpass	High - major four lane road	East of compound	Moderate - Low	Negligible
Drivers on a motorway	6. M5 East Motorway	High	North of compound	Low	Negligible
Recreational users					
Passive recreation, public open space	-	-		-	-
Active recreation, public open space (pedestrian / cyclist)	13. M5 Linear Park, Bexley, south of M5 entry	Moderate number of users would enter the M5 Linear Park from this location. As an entry point to the park, this position is a landmark event within the greater journey through the M5 Linear Park.	North of compound	High	Moderate
Active recreation, semi private land	-	-	-	-	-

Bexley Road East construction compound

Table A - 5 Summary of visual impacts from Bexley Road East construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	14. Reserve adjacent to 9 Johnston Street, Bexley	A low number of receivers with adjoining boundaries to the compound - 5 homes on Johnston Street to the north-east of the compound, and five properties to the north of the compound, fronting Wolli Avenue.	North, north-east of compound	High - Moderate	High - Moderate
Residential neighbours not on adjoining properties	11. Intersection of Bexley Road and Wolli Avenue (refer	Low - only one home (the corner of Wolli Avenue and Bexley Road) would get views to the compound	North of compound	Moderate - Low	Moderate - Low
Industrial neighbours					
Industrial neighbours	-	-	-	-	-
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road	11. Intersection of Bexley Road and Wolli Avenue (refer	High numbers of drivers on a major four lane road	North / west of compound	Low	Negligible
Drivers on a motorway	-	-	-	-	-

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to compound	Visual Impact Rating	
				General	Night Lighting
Recreational space users					
Passive recreation, public open space	-	-	-	-	-
Active recreation, public open space (pedestrian / cyclist)	13. M5 Linear Park, Bexley, south of M5 entry	Moderate number of people entering the M5 Linear Park from this location	North-west of compound	Moderate	Moderate
Active recreation, semi private land	-	-	-	-	-

Arncliffe construction compound

Table A - 6 Summary of visual impacts at the Arncliffe construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	15. The intersection of Flora and Marsh Street (Low density residential)	A low number of single residential homes either front onto or have a side boundary facing Marsh Street (eight)	North of the compound	High - Moderate	Moderate
	15. The intersection of Flora and Marsh Street (High density residential)	A moderate number of apartments would look out over the construction compound site from this location	North of the compound	High	High
Residential neighbours not on adjoining properties	-	-	-	-	-
Industrial neighbours					
Industrial neighbours	-	-	-	-	-
Commercial neighbours					
Commercial neighbours	15. The intersection of Flora and Marsh Street (Airport Hotel)	A low number of receivers would see the view from this location (one hotel).	North of the compound	High	High
Road users					
Drivers on a local road	15. The intersection of Flora and Marsh Street	High	North of the compound	Moderate	Low

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Drivers on a motorway	6. M5 East Motorway	High	South-west of the compound	Negligible	Negligible
Recreational space users					
Passive recreation, public open space	-	-	-	-	-
Active recreation, public open space (pedestrian / cyclist)	15. The intersection of Flora and Marsh Street	A moderate to high number of users would use this pathway as part of the popular Cook Park Trail cycle path	North of the compound	High - Moderate	Moderate
	16. Eve Street Cycleway		South-west of the compound	High-Moderate	N/A
Active recreation, semi private land	17. Kogarah Golf Course	A low to moderate number of users would play on the golf course during the week, but potentially a high number of users would play on the weekends.	East of the compound	High	N/A

Canal Road construction compound

Table A - 7 Summary of visual impacts due to the Canal Road construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	-	-	-	-	-

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours not on adjoining properties	-	-	-	-	-
Industrial neighbours					
Industrial neighbours	20. Industrial buildings on the Princes Highway	A low number of buildings, predominantly industrial but with some commercial properties, front onto the Princes Highway between Canal Road and Campbell Road.	North of the compound	Low	Low
Commercial neighbours					
Commercial neighbours	18. The intersection of Princes Highway and Canal Road	This Receiver Location assesses workers and customers at the Southern Cross Hotel and other commercial businesses. A low to moderate number of receivers are anticipated between these businesses.	North-west of the compound	Low	Low
	19. Commercial complexes backing onto the St Peters interchange site	Six commercial complexes back onto the St Peters interchange site, some contain one business (e.g. a fast food restaurant) and others are a collection of small factory units within the complexes.	North of the compound	Low	Low
	21. The St Peters Anglican Church	A moderate number of visitors are anticipated to visit the church for weekly services, weddings, and other events.	North of the compound	Negligible	N/A

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Road users					
Drivers on a local road	18. The intersection of Princes Highway and Canal Road	High	North-west of the compound	Low	Negligible
	19. Commercial complexes backing onto the St Peters interchange site	High	North of the compound	Low	Negligible
Drivers on a motorway	-	-	-	-	-
Recreational space users					
Passive recreation, public open space	-	-	-	-	-
Active recreation, public open space (pedestrian / cyclist)	-	-	-	-	-
Active recreation, semi private land	-	-	-	-	-

Campbell Road construction compound

Table A - 8 Summary of visual impacts due to the Campbell Road construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	-	-	-	-	-
Residential neighbours not on adjoining properties	22. Campbell Road	18 terraces house located on the northern side Campbell Road	North of compound	High	High - Moderate
Industrial neighbours					
Industrial neighbours					
Commercial neighbours					
Commercial neighbours					
Road users					
Drivers on a local road	22. Campbell Road	High	North of compound	High - Moderate	Negligible
Drivers on a motorway	-	-	-	-	-
Recreational space users					
Passive recreation, public open space	22. Campbell Road	A high number of recreational visitors would visit this regionally important park. However only a small proportion of	North of the compound	Moderate	N/A

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Active recreation, public open space (pedestrian / cyclist)		visitors would get views to the compound site as it is screened from view by landform and planting, and no facilities are positioned near the area. The park is predominantly unlit at night, therefore the impact of night lighting to the compound could not be assessed due to an assumed lack of receivers.			
Active recreation, semi private land	-	-	-	-	-

Landfill Closure construction compound

Table A - 9 Summary of visual impacts due to the Landfill Closure construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties or beyond	-	-	-	-	-
Industrial neighbours					
20. Industrial complex accessed from the Princes Highway	20. Industrial complex accessed from the Princes Highway	A low number of buildings, predominantly industrial but with some commercial properties, front onto the Princes Highway between Canal Road and Campbell Road.	West of the compound	Low	Low

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road or motorway					
Recreational space users					
Active and passive recreation on public and semi-private open space	-	-	-	-	-

Burrows Road construction compound

Table A - 10 Summary of visual impacts due to the Burrows Road construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties or beyond	-	-	-	-	-

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Industrial neighbours					
20. Industrial complex accessed from the Princes Highway	23. Burrows Road	Five industrial buildings surround the Compound	North, west and south-west of Compound	Low	Low
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road or motorway	23. Burrows Road	High, including heavy vehicular traffic from surrounding industrial developments	North-west of Compound	Low	Negligible
Recreational space users					
Active and passive recreation on public and semi-private open space	-	-	-	-	-

Campbell Road bridge construction compound

Table A - 11 Summary of visual impacts due to the Campbell Road bridge construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties or beyond	-	-	-	-	-
Industrial neighbours					
Industrial neighbours	23. Burrows Road	Five industrial buildings surround the Campbell Road bridge construction compound	North, west and south-west of Compound	Low	Low
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road	23. Burrows Road	High, including heavy vehicular traffic from surrounding industrial developments	North-west of Compound	Low	Negligible
Drivers on a motorway	-	-	-	-	-
Recreational space users					
Active and passive recreation on public and semi-private open space	-	-	-	-	-

Gardeners Road bridge construction compound

Table A - 12 Summary of visual impacts due to the Gardeners Road bridge construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties or beyond	-	-	-	-	-
Industrial neighbours					
Industrial neighbours	24. Burrows Road	Around three industrial buildings surround the construction compound	North, west and south-west of Compound	Low	Low
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road or motorway	24. Burrows Road	High, including heavy vehicular traffic from surrounding industrial developments	North-west of Compound	Low	Negligible
Recreational space users					
Active and passive recreation on public and semi private open space	-	-	-	-	-

Sydney Park construction compound

Table A - 13 Summary of visual impacts at the Sydney Park construction compound

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	22. Campbell Road	18 terraces house located on the northern side Campbell Road	North of compound	High - Moderate	Moderate
Residential neighbours not on adjoining properties	26. Barwon Park Road	Low to moderate number of residents in the apartment block that front onto Barwon Park Road at the corner of Campbell Road	East of the compound	High	High
Industrial neighbours					
Industrial neighbours	-	-	-	-	-
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road	22. Campbell Road	High	South of compound	High - Moderate	N/A
Drivers on a motorway	-	-	-	-	-
Recreational space users					
Passive recreation, public open space	25. Sydney Park	A high number of recreational visitors would visit this regionally important park. Facilities include BBQs,	South of the compound	High - Moderate	N/A

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Active recreation, public open space (pedestrian / cyclist)		playgrounds, picnic tables and seating, as well as other drawcards to the park such as wetlands and walking trails. The park is predominantly unlit at night, therefore the impact of night lighting to the compound could not be assessed due to an assumed lack of receivers.			
Active recreation, semi private land	-	-	-	-	-

Operation

Western surface works

Table A - 14 Summary of visual impacts at the western surface works site at operation

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	A. Glamis Street, southern end	Low (Six properties with boundaries adjoining Beverly Grove Park North on Glamis Street, plus four properties on Armitree Street and three on Rosebank Avenue, total 12 properties)	North of Beverly Grove Park North	Moderate	Moderate
	F. Tallawalla Street	Low (between two and four properties)	South of the M5 East Motorway	Moderate	Negligible
Residential neighbours not on adjoining properties	-	-	-	-	-

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating		
				General	Night Lighting	
Industrial neighbours						
Industrial neighbours	D. Vanessa Street Industrial Compounds	Low (six properties ranging in size between 14,500m ² and 2,250m ² building footprint)	South of MOC1	Moderate	Moderate - Low	
Commercial neighbours						
Commercial neighbours	-	-	-	-	-	
Road users						
Drivers on a local road	-	-	-	-	-	
Drivers on a motorway	C. M5 East Motorway	High	North of motorway operations complex	Low	Low	
Recreational users						
Passive recreation, public open space	A. Glamis Street, southern end	Low (six properties with boundaries adjoining Beverly Grove Park North on Glamis Street, plus four properties on Armitree Street and three on Rosebank Avenue, total 12 properties)	North of Beverly Grove Park North	Moderate - Low	Negligible	
Active recreation, public open space (pedestrian / cyclist)	A. Glamis Street, southern end			Moderate	Negligible	
	B. M5 Linear Park - Kindilan underpass		This path has a moderate number of users.	-	Moderate	Moderate
	E. Beverly Grove Park South		This path has a moderate number of users.	South of motorway operations complex	High	High - Moderate
Active recreation, semi private land	-	-	-	-	-	

Bexley Road South motorway operations complex

Table A - 15 Summary of visual impacts at the Bexley Road South Motorway Operations Complex site at operation

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to site	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	-	-	-	-	-
Residential neighbours not on adjoining properties	G. Intersection of Bexley Road and Wolli Avenue	Low number of receivers. No residential homes lie opposite this site on the eastern side of Bexley Road. Five properties are likely to get views to the site from further north on Bexley Road.	North of the site	Moderate - Low	Low
Industrial neighbours					
Industrial neighbours	-	-	-	-	-
Commercial neighbours					
Commercial neighbours	-	-	-	-	-
Road users					
Drivers on a local road	G. Intersection of Bexley Road and Wolli Avenue	High number of users - Bexley Road is a major four lane road, and the intersection with the M5 East Motorway is a major intersection	North to north-east of the site	Moderate - Low	Low
	I. Bexley Road, south of the pedestrian underpass		East of the site	Moderate - Low	Low
Drivers on a motorway	C. M5 East Motorway	High	North of the site	Negligible	Negligible

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to site	Visual Impact Rating	
				General	Night Lighting
Recreational users					
Passive recreation, public open space	-	-	-	-	-
Active recreation, public open space (pedestrian / cyclist)	H. M5 Linear Park, Bexley, south of M5 entry	Moderate number of people entering the M5 Linear Park from this location	North of the site	High - Moderate	High - Moderate
Active recreation, semi-private land	-	-	-	-	-

Arncliffe motorway operations complex

Table A - 16 Summary of visual impacts at the MOC3 at operation

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	J. The intersection of Flora and Marsh Street (Low density residential)	A low number of single residential homes either front onto or have a side boundary facing Marsh Street (8)	North of the MOC3	High-Moderate	Moderate - Low
	J. The intersection of Flora and Marsh Street (High density residential)	A moderate number of apartments would look out over the construction compound site from this location	North of the MOC3	High - Moderate	Moderate

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours not on adjoining properties	-	-	-	-	-
Industrial neighbours					
Industrial neighbours	-	-	-	-	-
Commercial neighbours					
Commercial neighbours	J. The intersection of Flora and Marsh Street (Airport Hotel)	A low number of receivers would see the view from this location (one hotel)	North of the MOC3	High - Moderate	Moderate
Road users					
Drivers on a local road	J. The intersection of Flora and Marsh Street	High	North of the MOC3	Moderate - Low	Low
Drivers on a motorway	C. M5 East Motorway	High	South-west of the MOC3	Low	Negligible
Recreational space users					
Passive recreation, public open space	-	-	-	-	-
Active recreation, public open space (pedestrian / cyclist)	J. The intersection of Flora and Marsh Street	A moderate to high number of users would use this pathway as part of the popular Cook Park Trail cycle path	North of the MOC3	Moderate	Moderate - Low
	K. Eve Street Cycleway		South-west of the MOC3	High - Moderate	N/A

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Active recreation, semi-private land	L. Kogarah Golf Course	A low to moderate number of users would play on the golf course during the week, but potentially a high number of users would play on the weekends	East of the MOC3	Moderate	N/A

St Peters Interchange

Table A - 17 Summary of visual impacts at the St Peters Interchange at operation

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
Residential neighbours					
Residential neighbours on adjoining properties	S. Campbell Road	Around 15 terraces house located on the northern side Campbell Road	North-east of the SPI	High	High
	U. Barwon Park Road	Low to moderate number of residents in the apartment block that front onto Barwon Park Road at the corner of Campbell Road	North-east of the SPI	High	High - Moderate
Residential neighbours not on adjoining properties	-	-	-	-	-
Industrial neighbours					
Industrial neighbours	O. Industrial buildings on the Princes Highway	A low number of buildings, predominantly industrial but with some commercial properties, front onto the Princes Highway between Canal Road and Campbell Road	North-west of the SPI	Moderate - Low	Low

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
	P. Burrows Road	A low number of industrial buildings	South of the SPI	Moderate - Low	Low
	Q. Burrows Road near the Gardeners Road Bridge	A low number of industrial buildings	South of the SPI	Moderate - Low	Moderate - Low
	R. Industrial complex on Canal Road	A low number of industrial units within the one complex on the corner of Burrows Road and Canal Road	West of the SPI	Low	Negligible
Commercial neighbours					
Commercial neighbours	M. The intersection of Princes Highway and Canal Road	This Receiver Location assesses workers and customers at the Southern Cross Hotel and surrounding commercial businesses. A low to moderate number of receivers are anticipated between these two businesses.		Moderate - Low	Low
	N. Commercial complexes backing onto the St Peters interchange site	Six commercial complexes back onto the St Peters interchange site, some contain one business (e.g. a fast food restaurant) and others are a collection of small factory units within the complexes.		Low	Low
	O. Industrial buildings on the Princes Highway	A low number of buildings, predominantly industrial but with some commercial properties, front onto the Princes Highway between Canal Road and Campbell Road.		Moderate - Low	Low
Road users					
Drivers on a local road	M. The intersection of Princes Highway and Canal Road	High		Moderate - Low	Negligible

Receiver type	Representative Receiver Location	Number affected	Location of receiver in relation to changes	Visual Impact Rating	
				General	Night Lighting
	O. Industrial buildings on the Princes Highway	High		Moderate - Low	Low
	P. Burrows Road	Moderate		Moderate - Low	Negligible
	Q. Burrows Road near the Gardeners Road Bridge	Moderate		Moderate - Low	Negligible
	S. Campbell Road	Moderate, although the number of motorists on Campbell Road would be anticipated to increase due to the linkage over the Alexandra Canal, the St Peters interchange and the road widening		High - Moderate	Moderate - Low
Drivers on a motorway	-	-	-	-	-
Recreational space users					
Passive recreation, public open space	T. Sydney Park	A high number of recreational visitors would visit this regionally important park. The park is predominantly unlit at night; therefore the impact of night lighting to the compound could not be assessed due to an assumed lack of receivers.	South of the compound	Moderate	N/A
Active recreation, public open space (pedestrian / cyclist)					
Active recreation, semi private land	-	-	-	-	-

