

Figure 7-37 Indicative layout of the bioretention facility at Manning Street at Rozelle

Visual impact assessment

Table 7-55 Receptor location IC2 visual impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|------------|---|---|---------------------|
| Residents | <p>Sensitivity to change: Moderate</p> <p>Residents impacted by the project would primarily be limited to those directly opposite the project. Overall, the view comprises a relatively soft 'green' outlook that could be expected to be valued by these residents.</p> <p>The number of receptors is considered likely to be low to moderate. The quality of the existing view is considered to be moderate to high. An oblique view would be available to the project from the front of the duplex residences on the eastern corner of Clubb Street.</p> | <p>Magnitude of change: Low</p> <p>The project would comprise a change in scale, with the planted basin area being in the order of 150 square metres. However, it would sit low within the landscape.</p> <p>The project would be broadly visually congruent with nearby areas such as the landscape setting of the bayside children's playground, and subject to well-considered urban design inputs and landscaping.</p> <p>The project would be seen from substantial outdoor living areas in addition to likely indoor living areas within the elevated residences, and orientated to the project. Within this context the project could be expected to be viewed over considerable periods of time.</p> | Moderate-Low |
| Recreation | <p>Sensitivity to change: Moderate</p> <p>Recreational users of the car parking area adjoining the project would be expected to include:</p> <ul style="list-style-type: none"> • Parents and children attending sporting activities, or visiting the children's playground • People driving to use the Bay Run • Potentially owners of the moored boats in the adjacent embayment. <p>The number of these receptors would be considered likely to be moderate to high, although their usage of the parking would be periodic, eg weekends, and potentially during the week before and after work. Other recreational users of the area include users of the Bay Run, who comprise very high numbers, but who would be unlikely to have a prominent view of the project at this location.</p> | <p>Magnitude of change: Low</p> <p>The project would be highly visible for these receptors using the adjoining parking facilities, and have low visibility when viewed from the Bay Run. The size of the bioretention facility is moderate within the context of the central informal parking area. However subject to urban design, the character of the development is considered have capability for a good visual 'fit' within the surrounding environment. The project would not significantly obstruct views of any features for this receptor.</p> | Moderate-Low |

| Receptor | Sensitivity | Magnitude | Rating |
|-------------|--|--|----------------------------|
| Pedestrians | <p>Sensitivity to change: Moderate</p> <p>Pedestrians who would pass along Manning Street would generally comprise local residents walking to the water's edge from nearby streets. The number of these receptors would be considered likely to be moderate, with frequent usage including weekends, weekday afternoons and evenings. However, the view of the project would comprise one small part of a potentially much longer walk.</p> | <p>Magnitude of change: Low</p> <p>The project would be visible for this receptor. The size of the bioretention facility is moderate within the context of the central informal parking area. However subject to urban design, the character of the development is considered have capability for a good visual 'fit' within the surrounding environment. The project would not significantly obstruct views of any features for this receptor.</p> | <p>Moderate–Low</p> |

Receptor location IC3 – View looking east along Victoria Road near Terry Street

Existing situation

This receptor location is situated about 30 to 40 metres west of Terry Street. The existing view is shown in **Figure 7-38**. The view comprises a busy arterial road adjoined by 'Balmain Shores' apartments, free standing residential development across the road, and a mix of commercial and institutional development beyond Terry Street. The view terminates at the Darling Street ridgeline, which is seen as part of a skyline view.

Project effects

The change in view from this receptor location is shown in **Figure 7-39** and **Figure 7-40**. The key project effects that would be visible from this receptor location are:

- Iron Cove Link portals
- Ventilation outlet within the centre median strip, east of Terry Street, and ventilation building immediately adjacent to the southern carriageway between Springside Street and Callan Street, and substation building to the western corner of Callan Street
- Retention of existing kerb line on the northern carriageway, including the existing footpath and planted vegetation
- New landscape treatments including substantial tree cover to centre medians east of the portals and along the southern edge of the project.

The ventilation outlet would comprise a dominant, feature of the view from this location, set within the broad expanse of the carriageway, projecting above the skyline, from close proximity, and in contrast to the adjacent lower dense residential and commercial development. The ventilation outlet building in the background would also exhibit many of the same characteristics, but to a substantially lesser degree. It is noted that the visibility of the ventilation and substation facilities would be expected to gradually recede with the maturing of project tree planting.

The character of the corridor would change from that of a relatively narrow, busy arterial road set tightly between commercial development and a range of contemporary and period housing, to that of a wide motorway interchange with portal dive structures/arterial road, subject to changes in level within the vicinity of the portals with associated retaining walls.

Lighting

Some additional light would be introduced to this area during operation associated with the increased extent of road infrastructure including nearby dive structures. Project lighting would include cut-off fittings and would be directed to reduce light spill. The extent of glare emanating from the new lighting towards the Balmain Shores residential development is anticipated to be moderately reduced by the existing dense planting along the frontage of this development. Over time, the existing freestanding residences located in the streets running off/close to Victoria Road would be subject to a minor reduction in increased glare due to proposed tree planting along the footpath/public domain edge.



Figure 7-38 Current view from Victoria Road near Terry Street looking east



Figure 7-39 Artist's impression at 12–18 months of operation from Victoria Road near Terry Street looking east



Figure 7-40 Artist's impression at 10 years of operation from Victoria Road near Terry Street looking east

Visual impact assessment

Table 7-56 Receptor location IC3 visual impact assessment – pedestrians

| Receptor | Sensitivity | Magnitude | Rating |
|--|--|--|---------------------|
| Pedestrians | Sensitivity to change: Low This receptor location incorporates no street tree planting or other soft landscape interventions, is highly exposed to the busy roadway, and constitutes an element of low visual quality within this context. The number of receptors would be likely to be low given that pedestrians would be expected to choose other quieter, more attractive routes where available. | Magnitude of change: Moderate The change in view would: <ul style="list-style-type: none"> • Comprise an increase in the size and scale of Victoria Road, including the addition of: further traffic lanes; large auxiliary infrastructure elements comprising the ventilation outlet, ventilation building and substation • Remove the existing commercial and residential buildings along the southern edge of Victoria Road, replacing these with a well-considered streetscape edge, and perception of a more open corridor • Be in moderate visual contrast to the existing situation given the context of the existing major arterial road setting • Be subject to well-considered landscape architectural and urban design inputs, in contrast to the current built form along much of the southern edge of the existing road corridor. | Moderate–Low |
| Motorists/ public transport/ cyclists | Sensitivity to change: Low Motorists and cyclists travelling east towards the project would predominantly be doing so as part of the weekly commute to or from work, with these receptors focussing on the road, or for cyclists the pedestrian/bicycle shareway. Passengers in public transport and cars would be expected to have a low level of sensitivity to the project given the opportunity to view it, taking in increased levels of detail over time. For both of these sub-groups, the project would comprise a small part of a longer journey. | Magnitude of change: Moderate The scale and character of the project would be different to that existing within the context of: <ul style="list-style-type: none"> • The moderately increased width of the carriageway • The large interventions of the ventilation outlet and the substation, each of which would comprise visually contrasting elements within the context of the surrounding built form • The positive perception of increased openness and visual relief within the corridor created as a result of the proposed landscaping along the southern edge of the road • The consistent, well-considered design approach would be applied to all project elements. All of these elements would be seen over short to moderate periods of time. | Moderate–Low |

Table 7-57 Receptor location IC3 lighting impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|--|---|---|---------------|
| Pedestrians | <p>Sensitivity to change: Low</p> <p>The sensitivity of pedestrians to additional lighting is considered to be low given that:</p> <ul style="list-style-type: none"> • It is anticipated to be at similar levels to that currently in place at this location • Likely low to potentially moderate number of pedestrians walking along Victoria Road at night, other than early evening with commuters alighting from buses after work. | <p>Magnitude of change: Low</p> <p>The magnitude of change is considered to be low given the portals would have been passed at this point, and as a result the intensity of lighting levels would be expected to be similar to those currently in place.</p> | Low |
| Motorists/ public transport/ cyclists | <p>Sensitivity to change: Low</p> <p>The sensitivity of motorists/public transport users and cyclists to additional lighting within the carriageway is considered to be Low, given:</p> <ul style="list-style-type: none"> • The lighting levels would be similar to other motorway interchange settings • The lighting would highlight the interchange as a different space within the road corridor, with refined architectural and urban design detailing associated with elements such as retaining walls, portals and streetscape improvements. | <p>Magnitude of change: Low</p> <p>The magnitude of change is considered to be low given the portals would have been passed at this point, and as a result the intensity of lighting levels would be expected to be similar to those currently in place.</p> | Low |

Receptor location IC4 – View looking south along Terry Street towards project

Existing situation

This receptor location is situated about 50 metres north of Victoria Road. For the purposes of this assessment, this view also addresses the representative view from the upper storeys of apartment blocks in Nagurra Place, which is situated within 100 metres of this location.

The view from this receptor location is shown on **Figure 7-41** and comprises an attractive residential streetscape of primarily contemporary three and four storey medium density apartments and limited period housing, with an exceptional large fig tree 'bookending' the corner of Terry Street with Victoria Road. A limited area of Victoria Road is seen in the middle ground, including traffic lights, street lights, signage and overhead wiring. This is set against a well vegetated backdrop of exotic and native trees within Toelle Street, and a darker green mounding backdrop of large native trees including figs within King George Park and the Callan Park site in the background.

Residences with views towards Victoria Road comprise:

- Balmain Shores apartment building on the corner of Terry Street
- Medium rise apartments along the northern and southern side of Nagurra Place
- Low rise apartments on Terry Street.

Project effects

The change in view from this receptor location is shown in **Figure 7-42** and **Figure 7-43**. The key project effects that would be visible from this receptor location are the landscaped area along the southern boundary of the project, the ventilation outlet, street tree planting.

Lighting

Additional lighting would be introduced to this area during operation associated with the central landscaped median, sufficient to meet safety and security requirements. The lighting would include cut-off fittings and would be directed to reduce light spill.



Figure 7-41 Current view looking south along Terry Street to Victoria Road



Figure 7-42 Artist's impression at 12–18 months of operation looking south from Terry Street to Victoria Road

Note: The 'white boxes' have been provided to illustrate in a three-dimensional form the extent of the residual lots. The height of the boxes approximates a two storey building height in keeping with Inner West Council building heights for this zone.



Figure 7-43 Artist's impression at 10 years of operation looking south from Terry Street to Victoria Road

Visual impact assessment

Table 7-58 Receptor location IC4 visual impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|---|---|---|---------------------|
| Residents – Balmain Shores corner of Terry Street | <p>Sensitivity to change: Low</p> <p>Some of the Balmain Shores apartments on the corner of Terry Street have a view up Victoria Road to the ridgeline of Darling Street. This comprises a permanent, low quality view.</p> <p>The number of receptors is considered to be relatively low.</p> | <p>Magnitude of change: Moderate</p> <p>The project would comprise a contrasting and permanent change in the view. The area and scale of the project would be relatively large. However, the duration of viewing would be expected to be low.</p> <p>The ventilation outlet would be seen at a distance of between 40 and 60 metres and would obstruct a small part of an existing variable view east across the Rozelle hillside. The character of the ventilation outlet at this point in the design phase solely reflects its functional requirements, but would be subject to well-considered urban design inputs as part of the detailed design stage. For the purposes of this assessment, these urban design inputs are considered likely to provide a moderate improvement in the visual character of this element.</p> <p>Tree planting within the centre median islands and southern streetscape would provide an increase in tree cover and associated landscape works.</p> | Moderate–Low |
| Residents – Nagurra Place: north side | <p>Sensitivity to change: Low</p> <p>These apartments are orientated such that the higher dwellings have an extensive harbour view to the north, and a substantial district view to the south-west. This latter view looks across a foreground of industrial development and the project, then across Rozelle substantially period housing to the hilltop, heritage listed Sydney School of Arts building group located about 700 metres distant, set within a substantial cultural landscape including large fig trees. This significant heritage landscape would be visually prominent from the higher apartments, and comprises a high quality, permanent view for a moderate number of visually sensitive receptors. However, the view of the project from these apartments would appear broadly to be limited to the upper two to three floors of the eastern half of the building. The</p> | <p>Magnitude of change: Low</p> <p>The viewing distance to the project would be in the order of 150 to 200 metres. The ventilation outlet would either be just visible or not visible from this receptor due to obstruction by the adjacent apartments on the south side of the street.</p> <p>The scale of the project would be low given the relatively limited extent visible from this location, and the character of ‘hard’ infrastructure which already exists. The ventilation and substation would provide a low level of contrast with the existing view, given the nearby views to a large industrial ‘roofscape’ and the derelict Balmain Leagues Club. The duration of viewing of the project would be expected to be low given the more accessible primary view of the harbour.</p> | Low |

| Receptor | Sensitivity | Magnitude | Rating |
|---------------------------------------|---|--|----------------------|
| | quality of the existing view of the project area is low. | | |
| Residents – Nagurra Place: south side | <p>Sensitivity to change: Moderate</p> <p>These apartments are located along an east–west running ridge line. The building is orientated such that the higher dwellings have a substantial district view to the south-west, which looks across a foreground of industrial development and the project, then across predominantly period housing within Rozelle to the hilltop, heritage listed Sydney School of Arts building group located about 700 metres distant. This significant heritage landscape would be visually prominent and comprises a high quality, permanent view for a moderate number of sensitive visual receptors. However, the view of the project from these apartments appears likely to be predominantly limited to the main south facing apartments.</p> | <p>Magnitude of change: High</p> <p>The viewing distance to the project would be in the order of 100 to 130 metres. While the duration of viewing of the project would be expected to be low, the scale of the project would be moderate to high given the substantial area that is visible from this location, and the character of 'hard' infrastructure. The ventilation outlet would comprise a highly contrasting structure within the context of the existing environment, which would be visible to many of the apartments.</p> | High–Moderate |
| Residents – Terry Street: west side | <p>Sensitivity to change: High</p> <p>The three storey apartments on the western side of the street have oblique views from balconies on the street frontage to a few of the hilltop Sydney College of Arts buildings. The group of apartments at the southern end of the street also have varying district views looking southeast across the top of single storey period housing and a commercial building to the Rozelle ridge line.</p> <p>These apartments look out onto a well-considered, almost entirely residential streetscape of visual quality. The existing view along the street (see Figure 7-41), is on balance considered likely to be moderately important given its residential component and landscaping, notwithstanding the busy Victoria Road seen in the middle ground. The view to the ventilation outlet from the balconies and front gardens of these apartments would be permanent.</p> | <p>Magnitude of change: High</p> <p>The scale and character of the ventilation outlet is a highly contrasting element compared to the existing view. However, the removal of residential and commercial development fronting onto the southern side of Victoria Road, and replacement landscape works, is considered to comprise an improvement in the visual character of this central part of the view. Nonetheless the ventilation outlet is seen from a distance of between 40 metres to 120 metres and is visually prominent. The view would be seen over moderate periods of time when residents are utilising their balconies.</p> <p>The ventilation outlet would be seen in sharp profile against the skyline from this receptor and may obstruct existing district views of Rozelle, in addition to existing limited views of the Sydney College of Arts heritage building group. The visibility of the outlet increases from elevated locations.</p> | High |

| Receptor | Sensitivity | Magnitude | Rating |
|-------------------------------------|--|--|----------------------------|
| Residents – Terry Street: east side | <p>Sensitivity to change: Moderate</p> <p>These four storey apartments on the eastern side of Terry Street have district views from the back of the building looking southeast, broadly along Victoria Road to the Rozelle ridgeline, as well as limited views on the southern end of the building looking southwest across Victoria Road to King George Park, Callan Park and Iron Cove beyond.</p> <p><i>View to the southeast</i></p> <p>The view to the southeast would obliquely incorporate the eastern end of the project from Callan Street. The quality of the existing view is considered to be low to moderate. The temporal duration of the view to the project would be permanent and a moderate number of sensitive visual receptors can be expected.</p> <p><i>View to the south-west</i></p> <p>The quality of the existing view is considered to be moderate to high within the context of the view across the Rozelle residential precinct, to parklands and Iron Cove, notwithstanding potentially limited foreground views of Victoria Road. However, this view to the southwest would only be seen from an estimated two apartments.</p> | <p>Magnitude of change: Low</p> <p><i>View to the south-east</i></p> <p>The ventilation outlet building would comprise a moderately contrasting structure, seen at an oblique viewing angle, within the context of an immediate foreground 'roofscape' of light industrial development, and larger nearby buildings including the Balmain Leagues Club and two to three storey buildings with large advertising billboards atop them, the latter of which would be of a similar height to the proposed ventilation outlet building. The degree of obstruction of existing elements is low. The duration of viewing is considered to be relatively low given the southeast aspect which would receive very little direct sunlight, compared with the northeast aspect of the Terry Street frontage which has balconies.</p> <p><i>View to the south-west</i></p> <p>This view would be to face of the outlet.</p> <p>The ventilation outlet would:</p> <ul style="list-style-type: none"> • Be seen in sharp profile against the skyline • Be likely to moderately obstruct existing district views of Rozelle • Not be expected to be viewed over long periods of time as the windows are unlikely to be from living areas • Be seen from a distance of about 70 metres • Be in moderate to high contrast to the existing view • Be subject to well-considered architectural and urban design inputs. | <p>Moderate–Low</p> |

| Receptor | Sensitivity | Magnitude | Rating |
|------------------------|--|--|------------|
| Pedestrians | Sensitivity to change: Low The existing view along the street (see Figure 7-41), is on balance considered likely to be a moderately important part of the view given its residential component and landscape backdrop, notwithstanding the busy Victoria Road seen in the middle ground. | Magnitude of change: Low The scale and character of the ventilation outlet within this view would comprise a contrasting element. However, the removal of residential and commercial development fronting onto Victoria Road, and replacement with setbacks and landscape works, is considered to comprise an improvement in the visual character of this central part of the view. The ventilation outlet would be seen in sharp profile against the skyline, however this would be over short periods of time. | Low |
| Motorists/ cyclists | Sensitivity to change: Low Motorists and cyclists travelling south towards the project along Terry Street would be focussing on the road. The project would comprise a small part of a longer journey and therefore comprise a short duration of the view. | Magnitude of change: Low The scale and character of the project would be different to that existing, particularly the ventilation outlet. However, the project elements would be subject to well-considered architectural and urban design inputs, and although these would be highly visible, this would be over a short period of time. | Low |

Table 7-59 Receptor location IC4 lighting impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|-----------|---|---|------------|
| Residents | Sensitivity to change: Low The sensitivity of residents to additional lighting is considered likely to be Low given: <ul style="list-style-type: none"> Some increase in lighting would be reasonably expected as part of the increased size of carriageway The quality of the existing view of Victoria Road is low. | Magnitude of change: Low The magnitude of change is considered to be Low given: <ul style="list-style-type: none"> The intensity of lighting levels seen from this location is expected to be similar to those currently in place The degree of contrast with existing lighting levels would be low The residential development would generally be moderately distant from the project lighting. | Low |

| Receptor | Sensitivity | Magnitude | Rating |
|------------------------|---|--|--------|
| Pedestrians | <p>Sensitivity to change: Low</p> <p>The sensitivity of pedestrians to additional lighting is considered to be Low given that:</p> <ul style="list-style-type: none"> It is likely a low number of pedestrians would be walking along Terry Street to Victoria Road at night Increased lighting associated with a major arterial road and motorway interchange would be reasonably expected The quality of the existing view of Victoria Road is low. | <p>Magnitude of change: Low</p> <p>The magnitude of change is considered to be Low given:</p> <ul style="list-style-type: none"> The intensity of lighting levels seen from this location is expected to be similar to those currently in place The degree of contrast with existing lighting levels would be low The duration of viewing would be relatively low, and seen as part of a longer journey. | Low |
| Motorists/ cyclists | <p>Sensitivity to change: Low</p> <p>The sensitivity of motorists and cyclists to additional lighting from the project is considered to be Low, given:</p> <ul style="list-style-type: none"> Some increase in lighting would be reasonably expected as part of the increased size of carriageway The quality of the existing view of Victoria Road is low. | <p>Magnitude of change: Low</p> <p>The magnitude of change is considered to be Low given:</p> <ul style="list-style-type: none"> The intensity of lighting levels seen from this location is expected to be similar to those currently in place The degree of contrast with existing lighting levels would be low The duration of viewing would be relatively low, and seen as part of a longer journey. | Low |

Receptor location IC5 – View looking north along Springside Street towards Victoria Road

Existing situation

This receptor location is located on Springside Street looking east towards the project. This location is representative of residents, including two rows of single and double storey detached housing. The street is narrow and steep and has no street trees. Within this context, views up and down the length of the street are extensive albeit limited by the width of the street and the building form along the streetscape. The existing view from this receptor is shown on **Figure 7-44**.

Project effects

The change in view from this receptor location is shown in **Figure 7-45** and **Figure 7-46**. The key project effects that would be visible from this receptor location are:

- The ventilation building which would be moderately visible from areas on the eastern side of the street
- Proposed shrub and tree planting between the south-west wall of the ventilation building and adjoining housing.

Lighting

Lighting effects associated with the project would be marginal when seen from this location, limited to new street lighting along the ventilation facility frontage.



Figure 7-44 Current view from Springside Street looking northeast towards Victoria Road



Figure 7-45 Artist's impression at 12–18 months of operation Springside Street looking northeast towards Victoria Road



Figure 7-46 Artist's impression at 10 years of operation from Springside Street looking northeast towards Victoria Road

Visual impact assessment

Table 7-60 Receptor location IC5 visual impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|-------------|---|---|----------|
| Residents | <p>Sensitivity to change: Moderate</p> <p>The streetscape view is considered to be important in that, even though it is not included within a heritage conservation zone, it includes diversity of small, period workers cottages and typically visually sensitive recent residential infill, stepping down the steep and narrow street. However, the existing view of the project looking up Springside Street is one of low visual quality, comprising about a three-metre high formed concrete wall with a poorly maintained low timber fence/wall atop.</p> <p>The buildings fronting onto Victoria Road have historically comprised a mix of commercial, industrial and residential development, much of which is now degraded given the busy road corridor. In some ways, these buildings can be seen as comprising a protective 'wall' for the quieter residential streets downslope of them. Within this context, the sensitivity of the residential receptors in Springside Street and Callan Street to the type of new development would be moderate.</p> <p>A moderate number of visual receptors are expected.</p> | <p>Magnitude of change: Moderate</p> <p>The magnitude of change resulting from the proposed ventilation outlet building would be affected by:</p> <ul style="list-style-type: none"> • It being moderately visually prominent from much of the eastern side of Springside Street, including being seen against the skyline, an effect that would increase when moving north up the hill from this location • The scale, form and visual mass of the building being moderately incongruent with the existing streetscape, particularly at the northern end of the street when viewing from a closer proximity • No visually significant elements being obstructed from this receptor location • The degree of contrast with the existing view being moderate, including within the context of the backdrop of larger buildings on the northern side of Victoria Road • The duration of viewing likely generally to be low, with most people generally exposed to the view when entering and leaving their residences, with the exception being views from back garden areas within proximity of the project, where the ventilation building would have the potential to be visually prominent • The viewing distance to the project would range from immediately adjoining to around 200 metres . | Moderate |
| Pedestrians | <p>Sensitivity to change: Moderate</p> <p>Pedestrians walking up Springside Street would be subject to the same visibility of the project as described above for residents entering or leaving their homes.</p> | <p>Magnitude of change: Moderate</p> <p>The magnitude of change is considered to be Moderate for the same reasons as described for residents above.</p> | Moderate |

Table 7-61 Receptor location IC5 lighting impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|-----------------|--|--|---------------|
| Residents | <p>Sensitivity to change: Low</p> <p>The sensitivity of residents to additional lighting is considered likely to be Low given:</p> <ul style="list-style-type: none"> • Some increase in lighting would be reasonably expected as part of the increased size of carriageway • The quality of the existing view of Victoria Road is low. | <p>Magnitude of change: Low</p> <p>The magnitude of change is considered to be Low given:</p> <ul style="list-style-type: none"> • The intensity of lighting levels seen from this location is expected to be similar to those currently in place • The degree of contrast with existing lighting levels would be low • The residential development would generally be moderately distant from the project lighting. | Low |
| Pedestrians | <p>Sensitivity to change: Low</p> <p>The sensitivity of pedestrians to additional lighting is considered to be Low given that:</p> <ul style="list-style-type: none"> • It is anticipated to be at similar levels to that currently in place at this location • Likely low to potentially moderate number of pedestrians walking along Springfield Street at night. | <p>Magnitude of change: Low</p> <p>The magnitude of change is considered to be Low given:</p> <ul style="list-style-type: none"> • The intensity of lighting levels seen from this location is expected to be similar to those currently in place • The degree of contrast with existing lighting levels would be low • The duration of viewing would be relatively low, and seen as part of a longer journey. | Low |

Receptor location IC6 – View looking west along Victoria Road at corner of Crystal Street towards project

Existing situation

The view is representative of those seen by pedestrians and cyclists looking west along Victoria Street. The existing view is shown on **Figure 7-47** and is generally of low amenity, comprising:

- Busy arterial road (Victoria Road), which is regularly congested with traffic
- An absence of street trees and consequent glare and heat impacts experienced during hot weather
- Roadside buildings, many of them subject to a busy road entropy effect
- Extensive road elements including pedestrian barrier fencing, power poles/wiring, lighting, road signage, traffic lights; and advertising signage.

The low amenity of this view is partially relieved by the large trees at the corner of Terry Street, and within the residential area to the south of Victoria Road seen projecting above signage to centre left of frame. Additionally, the well vegetated suburb of Drummoyne provides an impressive backdrop, although seen through power/light poles, overhead wiring and signage.

Project effects

The change in view from this receptor location is shown in **Figure 7-48** and **Figure 7-49**. The key project effects that would be visible from this receptor location are:

- The ventilation building on the southern edge of the view, which creates a new wall along this edge
- The ventilation outlet in the centre of the road, which is a new element of uncharacteristic form and scale, particularly given its location within the road reserve. Landscaping works including some tree planting is also visible.

Both elements would be seen against the skyline but would be subject to well-considered architectural, urban design inputs. The project would however help to visually organise and tie the road corridor together; providing separate pedestrian and cycle lanes within the verge tree planting in conjunction with associated low shrub understorey.

Lighting

Additional lighting would be introduced to this area during operation associated with the splitting of the Victoria Road carriageway west of Callan Street, sufficient to meet safety and security requirements. The lighting would include cut-off fittings and would be directed to reduce light spill.



Figure 7-47 Current view looking west along Victoria Road from corner of Crystal Street



Figure 7-48 Artist's impression at 12–18 months of operation looking west along Victoria Road from corner of Crystal Street



Figure 7-49 Artist's impression at 10 years of operation looking west along Victoria Road from corner of Crystal Street

Visual impact assessment

Table 7-62 Receptor location IC6 visual impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|-------------|--|---|---------------------|
| Pedestrians | Sensitivity to change: Low The receptor location is situated on busy Victoria Road within a very low amenity environment. Receptors would be considered likely to primarily comprise local residents walking to and from bus stops east of Terry Street, with a lesser number walking from residential areas such as Balmain Shores and housing east of Toelle Street, taking the most direct route to Darling Street. | Magnitude of change: Moderate Both the ventilation outlet and the ventilation building would be highly visible from this location, seen against the skyline. The ventilation outlet would obstruct a relatively small portion of view to the Drummoyne backdrop. However, this view would be softened by the centre median planting associated with the portals and ventilation outlet as this matured. The view would be seen over a moderate period of time, and from a viewing distance of about 70 metres for the ventilation building and 140 metres for the ventilation outlet from the receptor location. Pedestrians may walk past these features at which the distance to the view would be immediate. | Moderate–Low |
| Cyclists | Sensitivity to change: Low Cyclists travelling west towards Iron Cove Bridge would predominantly be doing so as part of the weekly commute to or from work, with these receptors focusing on the share pathway/other cyclists and pedestrians, and the project comprising a small part of a longer journey. The sensitivity of this receptor group to the proposed change is considered on balance to be Low. | Magnitude of change: Moderate The magnitude of change is considered to be Moderate, within the context of the project being highly visible but within an existing busy road corridor. Further, the project elements would be subject to well-considered architectural, urban design inputs, and although these would be seen in a substantial level of detail, this would be over a short period of time. | Moderate–Low |

Table 7-63 Receptor location IC6 lighting impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|-------------|---|---|---------------------|
| Pedestrians | Sensitivity to change: Low The sensitivity of pedestrians to additional lighting is considered to be Low given that: <ul style="list-style-type: none"> It is anticipated to be at similar levels to that currently in place at this location A likely low number of pedestrians would be walking | Magnitude of change: Moderate The magnitude of change is considered to be Moderate given: <ul style="list-style-type: none"> The anticipated increases in lighting west of the portals would be visible, notwithstanding that the intensity of lighting levels at this location would be expected to be closer to those currently in place The duration of viewing would be moderate, but seen as part of a | Moderate–Low |

| Receptor | Sensitivity | Magnitude | Rating |
|--|--|---|------------|
| | <p>along Victoria Road at night</p> <ul style="list-style-type: none"> Increased lighting associated with a major arterial road and motorway interchange would be reasonably expected The quality of the existing view of Victoria Road is low. | <p>longer journey.</p> | |
| Motorists/ public transport/ cyclists | <p>Sensitivity to change: Low</p> <p>The sensitivity of cyclists to additional lighting within the carriageway is considered to be Low given that:</p> <ul style="list-style-type: none"> It is anticipated to be at similar levels to that currently in place at this location They would be focussing on the share pathway/other cyclists and pedestrians, with the project comprising a small part of a longer journey The number of cyclists at night using the share pathway would be expected to be low Increased lighting associated with a major arterial road and motorway interchange would be reasonably expected The quality of the existing view of Victoria Road is low. | <p>Magnitude of change: Low</p> <p>The magnitude of change is considered to be Low given:</p> <ul style="list-style-type: none"> The anticipated increases in lighting west of the portals would be visible, notwithstanding that the intensity of lighting levels at this location would be expected to be closer to those currently in place The duration of viewing would be low. | Low |

St Peters interchange

Impacts associated with the construction and operation of the St Peters interchange have already been assessed in the WestConnex New M5 Urban Design, Landscape Character and Visual Impact Assessment (AECOM, 2015) for the New M5 project. In addition, the operational landscape design approach at the St Peters interchange has been detailed in the New M5 Urban Design and Landscape Plan (Hassell, 2016). However, the M4-M5 Link project proposes new permanent operational infrastructure to be located within this area, therefore requiring additional assessment.

Operational infrastructure proposed by the M4-M5 project is described in **Chapter 5** (Project description) of the EIS and **Appendix L** (Urban Design Report) of the EIS. **Figure 7-50** shows the operational layout of the site and the representative visual receptor locations assessed. The urban design outcome at the St Peters interchange would be delivered to be consistent with the New M5 Urban Design and Landscape Plan.

Given that this project will commence upon completion of the New M5 project, the St Peters Interchange component of the M4-M5 project is assessed assuming the New M5 works are in place. Therefore, where the existing conditions are discussed for each visual receptor location, these describe the finished New M5 landscape setting. Where within the 'existing situation' section of each assessment a photograph panorama of the view is provided, this is referred to as a 'recent view' to distinguish it from the 'existing situation'.

Further, as described within **Chapter 6** (Construction work) of the EIS, the New M5 construction compound on Campbell Road would be retained within the area proposed for the New M5 St Peters interchange Recreation Area, to be used as a construction compound for the M4-M5 Link project. For the purposes of this assessment it is assumed that all infrastructure associated with the New M5 construction compound such as site sheds and hoarding would have been removed and the site returned to a condition similar to that previously in place, all set behind a temporary security fence. The New M5 contractor would return to site and undertake the remaining St Peters interchange landscaping works once the M4-M5 contractor had vacated the construction compound site.

General arrangement/landscape setting

The project would be set within the widened Campbell Street and Campbell Road, with broad verges and street tree planting to both sides of the street. The majority of the verge on the northern side of the street would be subject to low plantings, comprising primarily of ornamental native grasses and low shrubs. The southern verges would be planted predominantly to turf including a stormwater swale system.

The western edge of the project site would be separated by an area six to 10 metres wide from the ventilation outlet building. As no treatment has been provided for this area at the time of writing, it is assessed as being hardstand. This area is adjoined by the existing New M5 share pathway, and then tree planting (estimated mature height of 10–12 metres⁵) adjoining the industrial development to the west. The eastern edge of the facility would be adjoined by the landscaped St Peters interchange, recently constructed by the New M5 contractor with early stage planting, with trees assumed to be in the order 1.5-2.5 metres high as shown in **Figure 7-55**.

Active transport routes (which include sensitive visual receptors) are shown on **Figure 7-52** and **Figure 7-56** located:

- Along the northern road verge and edge of Campbell Street and Campbell Road
- Along the southern road verge of Albert Street and through the St Peters interchange recreation area

⁵ A height of 10–12 metres is assumed for all trees within proximity of the project other than the Sydney Red Gum and Broad-leaved Paperbark avenue planting to Campbell Street/Campbell Road, and the newly constructed St Peters Interchange Recreation Area, due to limited information being available at the time of writing as to specific tree species.

- Either side of the project, along the western rim of the interchange, and through a well wooded/active recreational setting to the east and south.

The ventilation outlet building would sit 16 metres above ground level (atop the portal – assumed to be ground level), with four outlets extending a further six metres above this to a total height of 22 metres. The remaining three buildings on the site (substation, motor control room, and amenities building) would be in the order of four to eight metres high. The overall facility frontage to Campbell Street would be about 125 metres long, 30 metres wide along the western edge, and 45 metres wide along the eastern edge adjoining the proposed recreation area, and can be seen in **Figure 7-58**.

The ventilation facility and associated buildings would sit above the wooded interchange landscape to the south. Vehicles travelling north towards the M4-M5 Link portals would view the project within the context of an existing tall retaining wall to the west and well vegetated, relatively steep batter to the right, travelling towards two large portals with the ventilation outlet facility atop.

The project has a broadly similar footprint to the New M5 ventilation facility to the south. However, the height of the project ventilation buildings and ventilation outlets (16 metres and 22 metres respectively above ground level) would be higher than the New M5 ventilation facility (about eight to nine metres and 16.5 metres respectively above ground level).

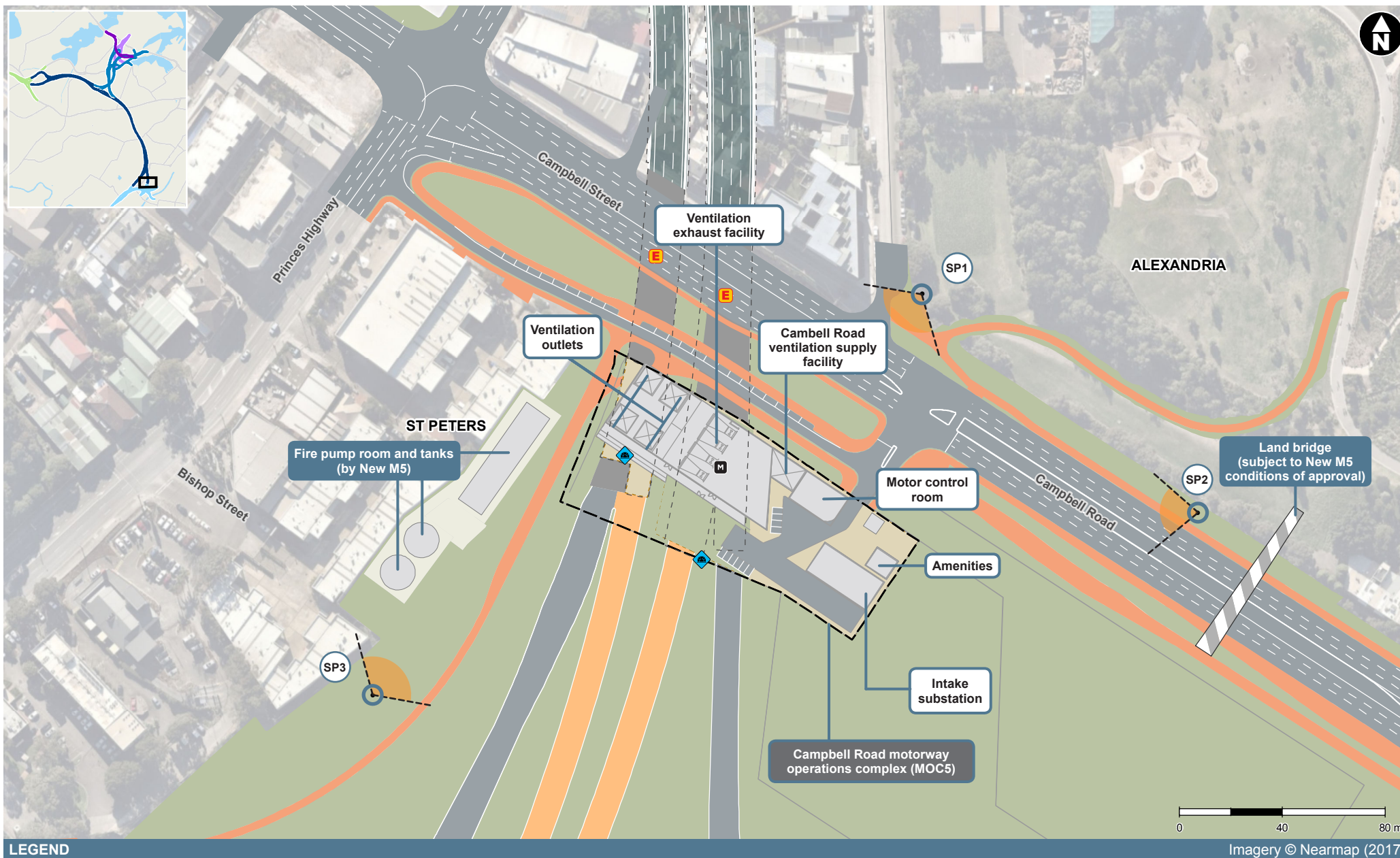


Figure 7-50 St Peters interchange operational receptor locations

Receptor Location SP1 – view looking south from corner of Barwon Park Road and Campbell Road

Existing situation

This receptor location is situated at the corner of Barwon Park Road and Campbell Road, and is representative for: residents in the adjacent apartment block and adjoining detached housing facing Campbell Road; pedestrians walking south along Barwon Park Road; and motorists/cyclists travelling south along Barwon Park Road. A recent view looking towards the project site from this receptor location (i.e. prior to completion of the New M5 project) is shown in **Figure 7-51**.

The existing situation view would comprise the widened Campbell Street and Campbell Road, with avenue planting to both sides, and substantial additional planting widths between Albert Street and Campbell Street and between the recreation area and the access road south of Campbell Road as described above. The newly established planting to Campbell Road still be relatively small with about five years of growth, in the order of five to six metres high for the Broad-leaved Paperbarks, and seven to eight metres high for the Sydney Red Gums. The M4-M5 Link construction site would be visible beyond this planting, comprising a construction site concrete deck above the M4-M5 Link portals/ tunnel stubs, and an adjoining elevated, flat grassed area for the project construction compound, all set behind a temporary security fence.

Active transport routes would run: along the northern road verge and edge of Campbell Street and Campbell Road; along the southern road verge of Albert Street and through the recreation area; and either side of the project site.

Project effects

The change in view from this receptor location is shown in **Figure 7-52** and **Figure 7-53**. The key project effects that would be visible from this receptor location are:

- Early to intermediate stage planting stretching along Campbell Street and Campbell Road. The ventilation outlet building would project above this planting when viewed from street level, with the four ventilation outlets further extending above this. It is likely that the project buildings would be the only proximate buildings clearly visible above this planting along the southern edge of Campbell Street/Campbell Road from this location
- A direct, but restricted view through the access gates to the substation would be available from this receptor location.

The ventilation building would comprise an uncharacteristically large structure, with the scale and mass of the facility in visual contrast to the adjacent, low industrial development to the west, and residential development on the northern side of Campbell Street. However, the facility would be viewed within the context of a long, well vegetated streetscape (albeit relatively immature), with the visually contrasting built form rising above it. Representative scale of the ventilation facility and other large infrastructure in the area, such as the Former Brickworks at Sydney Park, is shown in **Figure 7-54**.

With regard to adjacent residences, the key views from living spaces within the apartment building look south-east across Barwon Park Road to Sydney Park. The residences at the southern end of this building have balconies with large fixed metal louvres to minimise views of the project. The southern face of the apartment building opposite the project has no windows from indoor living spaces that face towards the project from the lower storeys, however upper storeys may have narrow window views to the project.

Two storey terraces and a semi-detached dwelling west of the apartment block on Campbell Street also face the project, and would have partially obscured views of the ventilation facility and some associated buildings. However, once the street trees reach maturity, the upper section of the ventilation buildings would be partially screened by the tree canopies. The lower half of the ventilation buildings and most of the motor control room would be seen between the vegetation.

Lighting

Additional light would be introduced to this area during operation, commensurate with safety and security requirements. The lighting would not be expected to be visually prominent from this location due to the necessary light levels for the upgraded Campbell Street/Campbell Road within the immediate foreground of the view. Visibility of lit areas would be expected to further diminish with the maturing of the street tree planting along the southern edge of Campbell Street/Campbell Road.



Figure 7-51 Receptor location SP1—Recent view looking south from corner of Barwon Park Road and Campbell Road



Figure 7-52 Receptor location SP1 – Artists impression at 12–18 months of operation of view looking south from corner of Barwon Park Road and Campbell Road



Figure 7-53 Receptor location SP1 – Artists impression at 10 years of view looking south from corner of Barwon Park Road and Campbell Road

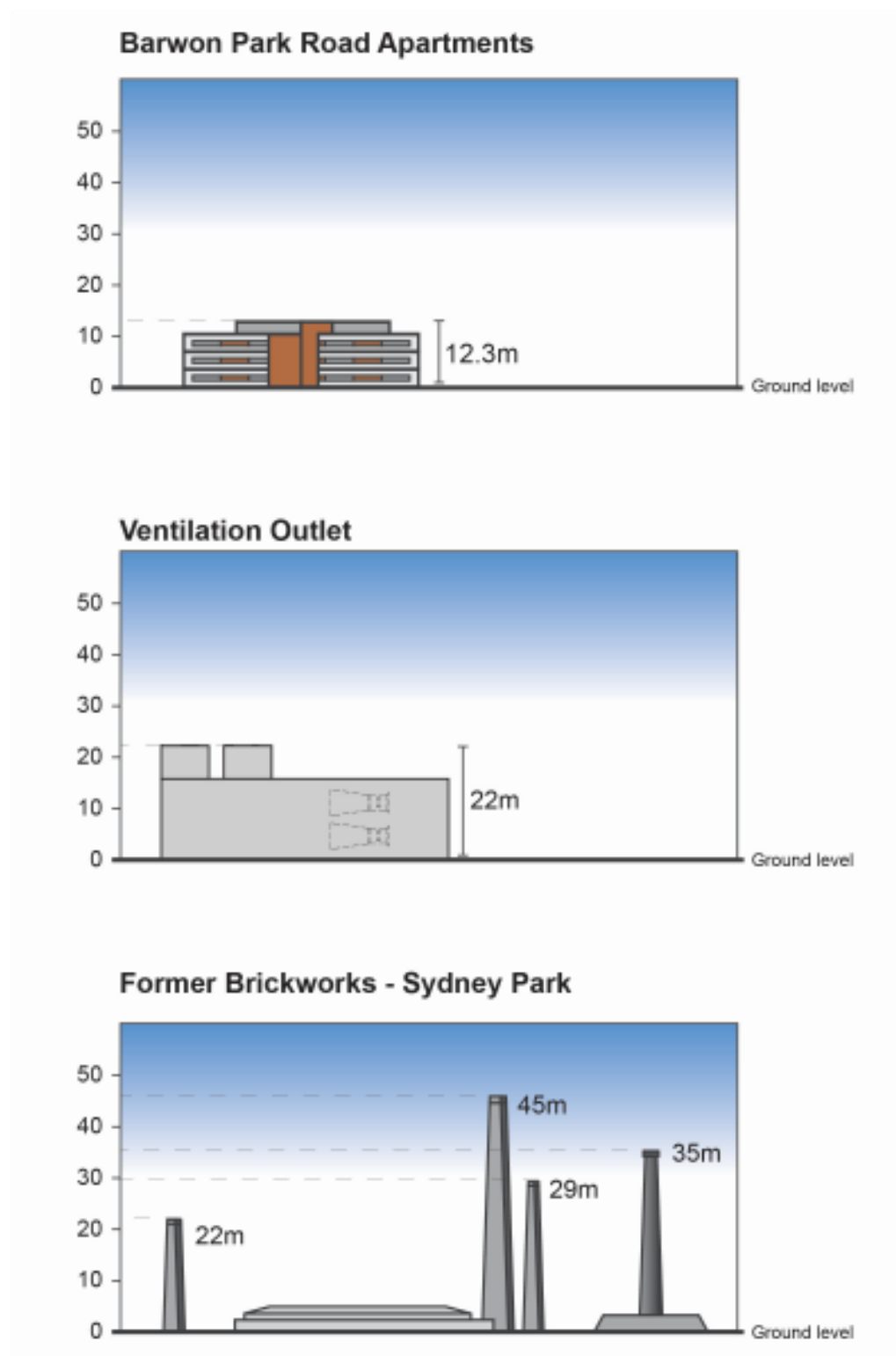


Figure 7-54 Scale comparison of key elements in the vicinity of the project

Visual impact assessment

Table 7-64 Receptor location SP1 visual impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|-----------|---|--|-----------------|
| Residents | <p>Sensitivity to change: Moderate</p> <p>Residents within the apartments facing onto Barwon Park Road are located on the edge of a residential area, adjacent to a major busy road (Campbell Street/Campbell Road) with parkland views to both sides of the road, ie Sydney Park and the St Peters interchange recreation area. A moderate number of receptors would have this view, and would consider the parkland component of their views to be of high importance. Notwithstanding, the quality of the view is considered to be moderate within the context of the busy Campbell Street/Campbell Road and adjoining Barwon Park Road.</p> <p>Residents within the housing facing onto Campbell Street would be expected to consider the streetscape setting to be of moderate importance. Notwithstanding the new streetscape setting including improved verge width, the quality of the view is considered to be moderate to low within the context of the busy arterial Campbell Street.</p> <p>On balance, the sensitivity of residents to the project is considered to be moderate within the context of their highly urbanised inner city location, including proximity to a major arterial road and the mixed land use and built form character of the wider precinct.</p> | <p>Magnitude of change: Moderate</p> <p>The magnitude of change for residents within the apartment block is considered to be moderate given their views are orientated primarily to the east and south-east across Sydney Park and the St Peters recreation area and land bridge. A small portion of the eastern end of the project would be visible from their balconies at a distance of about 100 metres. The duration of viewing would periodically be extended as residents looked out from their balconies.</p> <p>The magnitude of change for residents facing Campbell Street is considered to be moderate given their dwellings face towards the project, but taking into consideration the intervening recent substantial streetscape works to both sides of Campbell Street and Albert Street, which would be expected to provide some moderation of the visual prominence of the structures. Where the project is seen, it would be seen as a structure of large scale and mass above the tree line, in high contrast to surrounding development. However, the duration of viewing would generally be limited to when entering and leaving the premises, although longer viewing periods could occur from upstairs rooms.</p> | Moderate |

| Receptor | Sensitivity | Magnitude | Rating |
|------------------------|---|--|---------------------|
| Pedestrians | <p>Sensitivity to change: Moderate</p> <p>This receptor can be expected to primarily be walking along busy Campbell Street/Campbell Road for functional needs, eg taking the most direct route to a rail station, workplace or retail destination rather than for recreation such as walking within Sydney Park or the St Peters interchange open space. The number of receptors is assumed to be moderate. The quality of the view is considered to be moderate within the context of the maturing and well-considered streetscape with adjoining Sydney Park landscape, the adjacent St Peters interchange recreation area, notwithstanding the busy Campbell Street/Campbell Road carriageway seen within the immediate foreground.</p> | <p>Magnitude of change: Moderate</p> <p>The magnitude of change for pedestrians is considered to be moderate taking into consideration the recently intervening substantial streetscape works, which would provide some reduction in the visual prominence of the structures, notwithstanding the restricted, open view to the lower elements of the project through the entry gates. The ventilation buildings would be seen projecting about four metres above the existing streetscape tree line, and be seen at a distance of between about 65 and 100 metres, as a structure of scale and mass in high contrast to proximate low to medium rise residential development.</p> | Moderate |
| Motorists/ cyclists | <p>Sensitivity to change: Low</p> <p>Motorists travelling along the busy Campbell Street/Campbell Road, and cyclists travelling for non-recreational, destination focussed purposes would primarily be focused on the traffic. These receptors would have limited opportunity to take in views of the project, which would be partially obscured by the streetscape planting. The view of the project is considered to be of low importance. The number of vehicles is assumed to be high, and the number of cyclists is assumed to be moderate given the new shared path system. Within this context, these receptors are considered to have low sensitivity to the project.</p> | <p>Magnitude of change: Moderate</p> <p>The magnitude of change for motorists and cyclists is considered to be moderate taking into consideration the extent of the change, including the contrasting scale and form of the project within the otherwise low-rise development and adjoining open space settings. The project would be seen at a distance of about 70 metres from this location. The duration of viewing would be low.</p> | Moderate-Low |

Table 7-65 Receptor location SP1 lighting impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|------------------------|---|---|-------------------|
| Residents | <p>Sensitivity to change: Low</p> <p>The sensitivity of residents to project lighting is considered to be low within the context of the intervening busy and well illuminated Campbell Street.</p> | <p>Magnitude of change: Low</p> <p>The magnitude of change is considered to be low within the context of illumination levels from Campbell Street reducing the visibility of project lighting, and the majority of lighting being located to the lower levels subject to light spill cut-off measures and screening from streetscape planting.</p> | Low |
| Pedestrians | <p>Sensitivity to change: Low</p> <p>The sensitivity of residents to project lighting is considered to be low within the context of the intervening busy and well illuminated Campbell Street.</p> | <p>Magnitude of change: Low</p> <p>The magnitude of change is considered to be low within the context of illumination levels from Campbell Street reducing the visibility of project lighting, and the majority of lighting being located to the lower levels subject to light spill cut-off measures and screening from streetscape planting.</p> | Low |
| Motorists/ cyclists | <p>Sensitivity to change: Negligible</p> <p>The sensitivity of motorists and cyclists to project lighting is considered to be negligible within the context of the busy and well illuminated Campbell Street and Campbell Road, where the focus of these receptors would be primarily on the road.</p> | <p>Magnitude of change: Negligible</p> <p>The magnitude of change is considered to be negligible within the context of: illumination levels from Campbell Street reducing the visibility of project lighting; the majority of lighting being located to the lower levels subject to light spill cut-off measures and screening from streetscape planting and limited duration that these receptors would have to view the project.</p> | Negligible |

Receptor Location SP2 – View from Campbell Road verge looking west

Existing situation

This receptor location is situated on the northern verge of Campbell Road just west of the land bridge crossing to the St Peters interchange recreation area, and is representative for: pedestrians walking west along Campbell Road; and motorists/cyclists travelling west along Campbell Road. A recent view looking towards the project site (ie prior to completion of the New M5 project) from this receptor is shown in **Figure 7-55**.

The existing view would comprise the landscape batter edge treatment of Sydney Park to right of frame, and widened Campbell Road, with broad verges and street tree planting to both sides of the road. The tree planting would increase in width along most of the frontage to the project site. The newly established planting to Campbell Road would still be relatively small with about five years growth. The M4-M5 Link construction site would be visible beyond this planting.

Active transport routes would run both sides of Campbell Street and Campbell Road as described above. Some of the two storey industrial buildings west of the project site would be visible from this location.

Project effects

The change in view from this receptor location is shown in **Figure 7-56** and **Figure 7-57**. The key project effects that would be visible from this receptor location are:

- The ventilation facility and outlets, which would be seen above the existing street verge planting and vegetated setting, at a viewing distance of between about 150 and 220 metres
- Early to intermediate stage planting along Campbell Street and Campbell Road.

Lighting

Additional lighting would be introduced to this area during operation, commensurate with safety and security requirements and as per crime prevention through environmental design (CPTED) considerations. The lighting would not be expected to be visually prominent from this location due to the intensity of the Campbell Road street lighting within the immediate foreground of the view. Visibility of lit areas would be expected to further diminish with the maturing of the avenue and planting along the southern edge of Campbell Street and Campbell Road.



Figure 7-55 Receptor location SP1 – Recent view from Campbell Road verge looking west



Figure 7-56 Receptor location SP2: artist's impression at 12–18 months of operation of view from Campbell Road verge looking west



Figure 7-57 Receptor location SP2: artist's impression at 10 years of operation from Campbell Road verge looking west

Visual impact assessment

Table 7-66 Receptor location SP2 visual impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|--|--|--|---------------------|
| Pedestrians | <p>Sensitivity to change: Low</p> <p>This receptor can be expected to primarily be walking along the busy road for functional needs, eg taking the most direct route to a rail station, workplace or similar destination, rather than for recreation. The number of receptors is considered to be moderate. The quality of the view is considered to be moderate within the context of the still young but well-considered streetscape, St Peters interchange recreation area and adjoining Sydney Park landscape, notwithstanding the busy arterial road. The importance of the view is considered to be low given the arterial road.</p> | <p>Magnitude of change: Moderate</p> <p>The view is seen through a closely adjacent avenue planting of intermediate age Broad-leaved Paperbarks between six and seven metres high, and planted about eight metres apart. This would provide opportunity to view the project between each centre median tree. The ventilation buildings and outlets would be seen projecting above this tree line. They would be seen at a distance of between about 150 and 220 metres, along both its short and long edges, as a structure that is highly contrasting to adjoining low rise industrial development. The planted trees in the foreground of the view would minimise the visual prominence of these structures in the context of the wider view.</p> | Moderate-Low |
| Motorists/ public transport/ cyclists | <p>Sensitivity to change: Low</p> <p>These receptors can be expected to primarily be travelling along the busy road for destination focussed purposes, rather than for recreation for example. The number of motorist and public transport receptors is considered to be high, and number of cyclists to be moderate. The quality of the view is considered to be moderate within the context of the still young but well-considered streetscape, and adjoining St Peters interchange recreation area and Sydney Park landscape settings, notwithstanding the busy arterial road. The importance of the view is considered to be low given the arterial road, and the nature of the journey that receptors are undertaking. Overall, the sensitivity to change is considered to be low.</p> | <p>Magnitude of change: Moderate</p> <p>The magnitude of change for motorists and cyclists is considered to be Moderate taking into consideration the contrasting scale and form of the project within the context of the avenue planting and adjoining open space settings. The project would be visible for both cyclists (who travel on the kerb side of the northern avenue planting), and motorists within the broad open carriageway, notwithstanding both forms of transport would often be travelling at a relatively high speed and have their attention primarily on the road.</p> | Moderate-Low |

Table 7-67 Receptor location SP2 lighting impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|--|--|--|-------------------|
| Pedestrians | <p>Sensitivity to change: Low</p> <p>The sensitivity of pedestrians to additional lighting is considered to be low within the context of the project being part of a longer walk through a diverse range of settings and lighting levels.</p> | <p>Magnitude of change: Low</p> <p>The magnitude of change is considered to be low given the well-lit share pathway running past the project and the relatively low lighting levels associated with the facility.</p> | Low |
| Motorists/ public transport/ cyclists | <p>Sensitivity to change: Negligible</p> <p>The sensitivity of motorists, public transport users and cyclists to project lighting is considered to be negligible within the context of the busy and well illuminated Campbell Street and Campbell Road, where the focus of motorists and cyclists would be primarily on the road, and public transport users on factors within the vehicle (eg reading, listening to music) rather than the predominantly darkened landscape beyond the road verge.</p> | <p>Magnitude of change: Negligible</p> <p>The magnitude of change is considered to be negligible within the context of: illumination levels from Campbell Street reducing the visibility of project lighting; the majority of lighting being located to the lower levels subject to light spill cut-off measures, screening from streetscape planting, and limited capacity to view the project given it is night-time.</p> | Negligible |

Receptor Location SP3 – View looking north from St Peters interchange share pathway

Existing situation

This receptor location is situated about 130 metres south of the project on the share pathway that runs alongside the western edge of the St Peters interchange. This parkland corridor ranges between about 10 and 40 metres wide, located between existing industrial and commercial development to the west, and a large retaining wall to the east, at the base of which is situated the M4-M5 Link carriageways and portals, set within the extensive well wooded landscape.

The existing view would comprise⁶:

- Adjoining industrial development
- A fenced leachate treatment plant, fire pumps building and water tanks, and a gas flare adjoining the west side of the corridor
- A relatively even grade open space setting comprising share pathway, within an open grassed area with early stage plantings of trees up to a height of 1.5-2.0 metres and generally low shrubs up to a height of about 0.3-0.5 metres along corridor edges
- A security fence situated close to the retaining wall that separates this elevated area from the operational portion of the St Peters interchange below.

This location would also provide broad views east to the project construction site concrete deck atop the M4-M5 Link portals/tunnel stubs, and the adjoining, grassed construction site compound area retained from the New M5 project. These would be set against the early stage avenue planting to Campbell Street/Campbell Road, behind which would be seen the mature wooded backdrop of elevated land within Sydney Park.

Project effects

The change in view from this receptor location is shown in **Figure 7-58** and **Figure 7-59**.

The ventilation facility comprises a concentrated grouping of large, architecturally well-considered buildings (refer to General arrangement/landscape setting), with no vegetative treatments proposed within the secure perimeter. The scale, form, utilitarian character and proximate location of the auxiliary buildings/large tanks delivered by the New M5 project is visually congruent with the ventilation outlet building provided by the M4-M5 Link project, notwithstanding its significantly increased scale.

The two portals upon which the ventilation facility sits are each about 18 metres wide and 15 metres high, and although not seen from this location, these may be visible further north through the parkland corridor boundary fence/landscape planting edge where the corridor narrows.

Lighting

Additional lighting would be introduced to this area during operation, commensurate with safety and security requirements. Visibility of lit areas would be expected to further diminish with the maturing of the parkland planting within the share pathway corridor.

⁶ No 'recent view' shown for this receptor location as it was inaccessible for photography at the time of report preparation.



Figure 7-58 Artist's impression at 12–18 months of operation looking north from St Peters interchange share pathway



Figure 7-59 Artist's impression at 10 years of operation looking north from St Peters interchange share pathway

Visual impact assessment

Table 7-68 Receptor location SP3 visual impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|--|---|--|---------------------|
| Pedestrians/ recreational cyclists | Sensitivity to change: Low This receptor is assumed to primarily be walking for recreational purposes. The view is seen within the context of the broader, major interchange landscape (created by the New M5 project) alongside which this share pathway runs, including extensive sections of elevated carriageway, the New M5 ventilation facility, and the proposed New M5 viewing hill on Canal Road. The view to the west is of low rise commercial and industrial development. The number of receptors is considered likely to be moderate to high. The quality of the view is considered to be moderate within the context of the architecturally well-considered project buildings. The importance of the view is considered to be low given the focus on motorway service facilities. | Magnitude of change: Moderate The project would comprise a building of large bulk and scale. It would be highly visible, particularly given it being viewed against the skyline. However, it would also comprise an element of moderate to low contrast within the context of the broader interchange landscape. | Moderate–Low |

Table 7-69 Receptor location SP3 lighting impact assessment

| Receptor | Sensitivity | Magnitude | Rating |
|--|---|---|------------|
| Pedestrians/ recreational cyclists | Sensitivity to change: Low The sensitivity of pedestrians to additional lighting is considered to be low within the context of the project being part of a longer walk through a diverse range of settings and lighting levels. | Magnitude of change: Low The magnitude of change is considered to be low given the well-lit share pathway running past the project and the relatively low lighting levels associated with the facility. | Low |

7.3.3 View Loss

View loss across each of the projects areas has been considered as part of the operational impact assessment. The following locations have been identified as potentially being impacted. There was no assessed view loss at Darley Road and St Peters interchange.

Rozelle Rail Yards

General arrangement

The new parkland landscape would be in the order of one kilometre long, and vary between about 100 metres and 200 metres wide. Major infrastructure buildings within the parkland would comprise a consolidated group of buildings including the air intake building, substation, and water treatment plant, and the ventilation facility and associated ventilation outlets which are 35 metres in height.

Free-standing dwellings located on Foucart Street near the corner of Lilyfield Road

Existing situation

This receptor location is located on the corner of Foucart Street and Lilyfield Road looking west across the project site towards the city skyline (receptor location R4 as shown on **Figure 7-21**). Due to the north-south orientation of the streets which run up the hill from Lilyfield Road, most dwellings would look out either onto these residential streets, or towards the back yards of adjoining housing. However, a substantial number of these dwellings have upper floors, or are located within high point of the street from which views to the city skyline are intermittently available.

Project effects

The ventilation facility would be located between about 300 metres from these dwellings. A low and potentially moderate number of these visual receptors would have various degrees of views to the CBD skyline, which would have the potential for the skyline view to be interrupted by the ventilation facility. The ventilation outlets would be seen at angle that would tend to create a relatively short 'wall' of development, which has the potential remove a portion of the skyline view in addition to interrupting the extent of the view as shown on **Figure 7-22**. As the ventilation facility would have a total height of about 35 metres above the existing ground level, and the top of the hill at Foucart Street is at a level of about 22 metres above existing ground level, the ventilation outlets have the potential to interrupt the skyline view from houses in the street.

The view loss assessment for these dwellings is provided in **Table 7-70**.

Table 7-70 View loss assessment – Foucart Street dwellings

| Receptor | Sensitivity | Magnitude | Rating |
|--|---|---|-------------|
| Foucart Street near corner of Lilyfield ventilation facility | Sensitivity to change: High The sensitivity of residents to view loss arising from the proposed ventilation facility is considered likely to be High within the context of: <ul style="list-style-type: none">• An elevated residential setting• A likely low to potentially moderate number of affected properties• The quality of the CBD skyline view which is high. | Magnitude of change: High The magnitude of view loss arising from the proposed ventilation outlet is considered to be High given: <ul style="list-style-type: none">• The potential for a possibly moderate portion of the view being lost, in addition to interruption of the broader view• The scale, form and mass of the facility that would comprise a highly contrasting, and therefore visually disruptive element within the view. | High |

Residences within the vicinity of Hutcheson Street and Denison Street near Lilyfield Road

Existing situation

This corner location comprises a locally steep hillside that facilitates views along and across steep streets, and from residences across lower rooftops towards the CBD skyline. The height of this area above the parkland ground level ranges from about seven metres along Denison Street, to 18 metres at Hutcheson Street, to about 21 metres at the top of Albert Street.

Residences located alongside Lilyfield Road between Hutcheson Street and Denison Street sit atop a raised sandstone outcrop, perched in the order of three to four metres above street level, which provides them with a sweeping view across the Rozelle Rail Yards to the City.

Project effects

The ventilation facility would be located between about 150 and 300 metres from these dwellings. The removal of the industrial development alongside Lilyfield Road has the potential to open up further views to the city skyline, including potentially from dwellings on Denison Street. A low and potentially moderate number of these visual receptors would have various degrees of views to the CBD skyline, which would have the potential for the skyline view to be interrupted by the ventilation facility.

The view loss assessment for these dwellings is provided in **Table 7-71**.

Table 7-71 View loss assessment – Hutcheson Street and Denison Street residences

| Receptor | Sensitivity | Magnitude | Rating |
|---|---|---|---------------|
| Vicinity of Hutcheson Street and Denison Street near Lilyfield Road | Sensitivity to change: High The sensitivity of residents to view loss arising from the proposed ventilation facility is considered likely to be High within the context of: <ul style="list-style-type: none">• An elevated residential setting• A likely low to potentially moderate number of affected properties• The quality of the CBD skyline view which is high. | Magnitude of change: High The magnitude of view loss arising from the proposed ventilation outlet is considered to be High given: <ul style="list-style-type: none">• The potential for a possibly moderate portion of the view being lost, in addition to interruption of the broader view• The scale, form and mass of the facility that would comprise a highly contrasting, and therefore visually disruptive element within the view. | High |

Iron Cove Link

General arrangement

The ventilation outlet would be 20 metres high and would be set towards the middle of the upgraded Victoria Road carriageway east of the corner of Terry Street. The structure would have trees planted to provide some visual screening. Planting would also be present within a pedestrianised median adjoining the Iron Cove Link portals. These trees would be expected to attain a height of about 12 to 15 metres, and provide a 'soft', visual setting for the structure.

Medium rise residential apartments ('Union Balmain'), Nagurra Place

Existing situation

Located along Nagurra Place, these apartment blocks comprise a first apartment block on the south side of the road about 40 metres from the intersection with Terry Street, and a second building offset from the first, at a distance of about 60 metres from the intersection with Terry Street. These southwest facing apartments are afforded views across Victoria Road towards Callan Park and Iron Cove, with the extent of the view increasing with height in the building. The elevated, heritage listed Sydney School of the Arts building complex comprises a primary feature view from this location. Both buildings are also afforded views to Iron Cove. The view is seen within the context of a foreground

comprising industrial and commercial development adjoining Victoria Road, which is shown in **Figure 7-41**.

Project effects

The ventilation outlet would be located between about 100 and 200 metres away from the apartments. The outlet would partially interrupt the more oblique view towards King George Park, Callan Park foreshore and to Iron Cove beyond that, with the extent of interruption diminishing in response to increasing height within the buildings. The outlet would have tall trees planted to either end of it, with a long 'tail' running up the middle of Victoria Road, in addition to being seen against a well vegetated backdrop planting incorporating tall trees, located above the portals.

The view loss assessment for these apartments is provided in **Table 7-72**.

Table 7-72 View loss assessment – Nagurra Place

| Receptor | Sensitivity | Magnitude | Rating |
|--------------------------------|---|--|---------------------|
| 'Union Balmain', Nagurra Place | <p>Sensitivity to change: Moderate</p> <p>The sensitivity of residents to view loss arising from the proposed ventilation outlet is considered to be Moderate within the context of:</p> <ul style="list-style-type: none"> Their being a moderate to high number of affected residents who currently enjoy to vary degrees substantially unimpeded views across Callan Park and Iron Cove The view is one of high quality which would be considered to be of primary importance to these receptors. | <p>Magnitude of change: Low</p> <p>The magnitude of view loss caused by the ventilation outlet is considered to be Low given that:</p> <ul style="list-style-type: none"> The extent of the change in visibility is relatively minor, with the view to The Sydney School of the Arts heritage building complex being uninterrupted, and interruption to the water view in particular considered likely to comprise a small part of the total view. | Moderate–Low |

Low rise residential apartments 'Balmain Shores'

Existing situation

Low rise residential apartments within the 'Balmain Shores' development on the corner of Terry Street. The corner three storey apartments each have an angled, protruding room with balcony orientated southeast orientated to the towards Darling Street along the Victoria Road corridor, with associated commercial development, and is therefore an unattractive one. Balconies are also present on the protruding north-east facing wall from which the above view can also be obtained. Substantial tree planting on the Terry Street frontage is located in front of the east facing end wall of the building, which would be expected to reduce the seen extent of the above view from most of the windows within it.

Project effects

The ventilation outlet would be located about 50 metres from the facing balconies, presenting its short face and long edge to these visual receptors. The outlet would comprise the primary feature within the view. It would have tall trees planted in front of and behind it, in addition to being seen within the context of a larger nearby centre median planting adjoining the portals, as described above. The structure would be visually prominent given the 12 to 18 months period into operation and associated tree growth at which it is being assessed.

The view loss assessment for these apartments is provided in **Table 7-73**.

Table 7-73 View loss assessment – Balmain Shores

| Receptor | Sensitivity | Magnitude | Rating |
|--------------------------------|--|---|----------------------------|
| 'Balmain Shores', Terry Street | <p>Sensitivity to change: Moderate</p> <p>The sensitivity of residents to view loss arising from the proposed ventilation outlet is considered to be Moderate within the context of:</p> <ul style="list-style-type: none"> • The outlet would be located within the Victoria Road corridor • There being a moderate to high number of affected residents who currently enjoy substantially unimpeded views across Callan Park and Iron Cove • The existing view is one of moderate to high quality, notwithstanding the context of the foreground view across industrial/commercial development and Victoria Road • The view would be of high importance to these receptors. | <p>Magnitude of change: Low</p> <p>The magnitude of view loss arising from the proposed ventilation outlet is considered to be Low given that:</p> <ul style="list-style-type: none"> • The extent of the change in visibility is considered likely to be relatively minor • The view to The Sydney School of the Arts building complex remains uninterrupted • Interruption to the view of King George Park, the Callan Park Foreshore and Iron Cove is considered likely to comprise a small part of the total view • The extent of the view disruption would decrease with the height of the visual receptor within the building. | <p>Moderate–Low</p> |

Over time, the visual effect would be increasingly softened as the tree planting matured, while also minimising the seen area of the Victoria Road carriageway from this location.

Low rise residential apartments '43 Terry Street'

Existing situation

Apartments facing onto Terry Street adjoining the Balmain Shores development. These three storey apartments are located about 30 metres from the corner with Victoria Road, stepping up a moderate incline over a distance of about 100 metres to the intersection with Nagurra Place. All of the apartments have either balconies or ground floor front garden areas facing the street.

Project effects

A moderate to potentially high number of these visual receptors would have views to the ventilation outlet, which would be seen projecting above low rise development on the opposite side of the street. However, these views would become increasingly oblique with distance from the project. The ventilation outlet would present its long face to the view. The view from the upper storey apartments would be likely to comprise partial district views across Rozelle, seen above the roofline of adjacent buildings, with lower units viewing the ventilation outlet against the skyline, ie with no 'view' behind. The first three to six apartments would be most directly affected given their proximity to the structure, comprising a low to moderate number of sensitive receptors.

The view loss assessment for these apartments is provided in **Table 7-74**.

Table 7-74 View loss assessment – Terry Street apartments

| Receptor | Sensitivity | Magnitude | Rating |
|--|--|--|-----------------|
| Low rise apartments – 43 Terry Street | Sensitivity to change: Moderate The sensitivity of residents to view loss arising from the proposed ventilation outlet is considered to be Moderate within the context of: <ul style="list-style-type: none"> There being a potentially low to moderate number residents affected by view loss of the Rozelle ridgeline and hillslope The existing partial district view, seen across a line of rooftops would be considered to be a relatively common view of low to moderate quality, eg as compared with the full view of the Sydney School of the Arts building complex seen from apartments in Nagurra Place. | Magnitude of change: Moderate The magnitude of view loss arising from the proposed ventilation outlet is considered to be Moderate given: <ul style="list-style-type: none"> The proximity of the ventilation outlet to the closest three to six apartment blocks, that would have its long face presented in this view, and in conjunction with increasing proximity to the structure, result in an increasing portion of the view being lost. | Moderate |

7.3.4 Overshadowing

An overshadowing assessment of permanent buildings and structures which have the potential to result in overshadowing on neighbouring residential properties and open space has been undertaken as part of **Chapter 12** (Land use and property) of the EIS. Shadow diagrams indicating the extent of overshadowing on properties that is currently expected as a result of permanent operational infrastructure are provided in **Appendix M** (Shadow diagrams and overshadowing) of the EIS. The assessment of the potential overshadowing impacts in mid-winter (21 June) expected as a result of permanent operational infrastructure concluded:

- There would be no impacts on nearby residential properties as a result of the Darley Road motorway operations complex (MOC1), Rozelle West motorway operations complex (MOC2) and pedestrian and cyclist facilities, Rozelle East motorway operations complex (MOC3) and pedestrian and cyclist facilities, and at Campbell Road motorway operations complex (MOC5)
- A small number of residential properties at Callan Street and Springside Street south of the Iron Cove Link ventilation facility may be affected by overshadowing based on the concept design.

Detailed design of the ventilation facility building at the Iron Cove Link motorway operations complex (MOC4) will include consideration of treatments to minimise overshadowing on properties south of Victoria Road. This may include reducing the height of the building and/or increasing building setbacks or recessing the building.

7.3.5 Summary of visual impacts

A summary of the impact assessments for representative visual receptor locations impacted by the project during operation is provided below in **Table 7-75**, and night lighting impacts provided in **Table 7-76**. A summary of assessed view loss is provided in **Table 7-77**. Mitigation measures and design recommendations are provided in **Chapter 9** to minimise visual impacts, particularly where impacts are predicted to be high.

Table 7-75 Summary of operation impacts – general

| Receptor | | Sensitivity to change | Magnitude of change | Overall rating |
|---|-------------------------------------|-----------------------|---------------------|----------------|
| Receptor location D1 – View looking east from Darley Road near corner of Charles Street | | | | |
| 1 | Residents | Low | Moderate | Moderate–Low |
| 2 | Pedestrians | Low | Low | Low |
| Receptor location D2 – View looking west from Darley Road at entry to lane between James Street and Francis Street | | | | |
| 1 | Residents | Low | Low | Low |
| 2 | Pedestrians | Low | Low | Low |
| Receptor location R1 – View looking east from Catherine Street entry to Lilyfield light rail stop | | | | |
| 1 | Light rail users | Low | Moderate | Moderate–Low |
| 2 | Residents | Low | Low | Low |
| Receptor location R2 – View looking west along City West Link to M5 portals | | | | |
| 1 | Motorists | Low | Moderate | Moderate–Low |
| Receptor location R3 – View looking west along City West Link to The Crescent | | | | |
| 1 | Pedestrians/cyclists | Low | Moderate | Moderate–Low |
| 2 | Motorists | Low | Moderate | Moderate–Low |
| Receptor location R4 – View looking east along Lilyfield Road at corner of Foucart Street | | | | |
| 1 | Residents | Moderate | Moderate | Moderate |
| 2 | Motorists | Negligible | Moderate | Negligible |
| Receptor location R5 – View looking south from Easton Park to the project | | | | |
| 1 | Residents | High | High | High |
| 2 | Active recreational users | Low | Moderate | Moderate–Low |
| 3 | Passive recreational users | Moderate | High | High–Moderate |
| Receptor location R6 – View looking north from Glebe Foreshore Parklands to the project | | | | |
| 1 | Passive recreational users | High | Moderate | High–Moderate |
| 2 | Active recreational users | Low | Moderate | Moderate–Low |
| Receptor location R7 – View looking north from Rozelle Bay light rail stop to the project | | | | |
| 1 | Light rail patrons | Moderate | High | High–Moderate |
| 2 | Residents | High | Moderate | High–Moderate |
| 3 | Pedestrians | High | High | High |
| Receptor location IC1 – View looking east along Victoria Road near Iron Cove Bridge | | | | |
| 1 | Residents | Moderate | Moderate | Moderate |
| 2 | Pedestrians | Low | Moderate | Moderate–Low |
| 3 | Recreation | Moderate | Moderate | Moderate |
| 4 | Motorists/public transport/cyclists | Low | Moderate | Moderate–Low |
| Receptor location IC2 – View looking west from Manning Street towards bioretention facility | | | | |
| 1 | Residents | Moderate | Low | Moderate–Low |

| | Receptor | Sensitivity to change | Magnitude of change | Overall rating |
|---|---|-----------------------|---------------------|----------------|
| 2 | Recreation | Moderate | Low | Moderate–Low |
| 3 | Pedestrians | Moderate | Low | Moderate–Low |
| Receptor location IC3 – View looking east along Victoria Road near Terry Street | | | | |
| 1 | Pedestrians | Low | Moderate | Moderate–Low |
| 2 | Motorists/public transport/cyclists | Low | Moderate | Moderate–Low |
| Receptor location IC4 – View looking south along Terry Street towards Victoria Road | | | | |
| 1 | Residents – Balmain Shores corner of Terry Street | Low | Moderate | Moderate–Low |
| 2 | Residents – Nagurra Place: north side | Low | Low | Low |
| 3 | Residents – Nagurra Place: south side | Moderate | High | High–Moderate |
| 4 | Residents – Terry Street: west side | High | High | High |
| 5 | Residents – Terry Street: east side | Moderate | Low | Moderate–Low |
| 6 | Pedestrians | Low | Low | Low |
| 7 | Motorists/cyclists | Low | Low | Low |
| Receptor location IC5 – View looking north along Springside Street towards Victoria Road | | | | |
| 1 | Residents | Moderate | Moderate | Moderate |
| 2 | Pedestrians | Moderate | Moderate | Moderate |
| Receptor location IC6 – View looking west along Victoria Road at corner of Crystal Street t | | | | |
| 1 | Pedestrians | Low | Moderate | Moderate–Low |
| 2 | Cyclists | Low | Moderate | Moderate–Low |
| Receptor Location SP1 - View looking south from corner of Barwon Park Road and Campbell Road | | | | |
| 1 | Residents | Moderate | Moderate | Moderate |
| 2 | Pedestrians | Moderate | Moderate | Moderate |
| 3 | Motorists/cyclists | Low | Moderate | Moderate–Low |
| Receptor Location SP2 – View from Campbell Road verge looking west | | | | |
| 1 | Pedestrians | Low | Moderate | Moderate–Low |
| 2 | Motorists/public transport/cyclists | Low | Moderate | Moderate–Low |
| Receptor Location SP3 - View looking north from St Peters Interchange share pathway | | | | |
| 1 | Pedestrians/recreational cyclists | Low | Moderate | Moderate–Low |

Table 7-76 Summary of operational impacts – night lighting

| | Receptor | Sensitivity to change | Magnitude of change | Overall rating |
|--|-------------------------------------|-----------------------|---------------------|----------------|
| Receptor location D1 – View looking east from Darley Road near corner of Charles Street | | | | |
| 1 | Residents | Low | Low | Low |
| 2 | Pedestrians | Low | Low | Low |
| Receptor location D2 – View looking east from Darley Road near corner of Charles Street | | | | |
| 1 | Residents | Low | Negligible | Negligible |
| 2 | Pedestrians | Negligible | Low | Negligible |
| Receptor location R1 – View looking east from Catherine Street entry to Lilyfield Light Rail Stop | | | | |
| 1 | Light rail users | Low | Low | Low |
| 2 | Residents | Low | Low | Low |
| Receptor location R2 – View looking west along City West Link to M5 portals | | | | |
| 1 | Motorists | Low | Moderate | Moderate-Low |
| Receptor location R3 – View looking west along City West Link to The Crescent | | | | |
| 1 | Pedestrians/cyclists | Low | Moderate | Moderate-Low |
| 2 | Motorists | Low | High | Moderate |
| Receptor location R4 – View looking east along Lilyfield Road at corner of Foucart Street | | | | |
| 1 | Residents | Negligible | Low | Negligible |
| 2 | Motorists | Low | Low | Low |
| Receptor location R5 – View looking south from Easton Park to the project | | | | |
| 1 | Residents | Negligible | Low | Negligible |
| 2 | Passive recreational users | Negligible | Low | Negligible |
| 3 | Active recreational users | Negligible | Low | Negligible |
| Receptor location R6 – View looking north from Glebe Foreshore Parklands to the project | | | | |
| 1 | Passive recreational users | Low | Moderate | Moderate-Low |
| 2 | Active recreational users | Negligible | Moderate | Negligible |
| Receptor location R7 – View looking north from Rozelle Bay light rail stop to the project | | | | |
| 1 | Light rail patrons | Low | High | Moderate |
| 2 | Residents | High | High | High |
| 3 | Pedestrians | Moderate | High | High-Moderate |
| Receptor location IC1 – View looking east along Victoria Road near Iron Cove Bridge | | | | |
| 1 | Residents | Moderate | Moderate | Moderate |
| 2 | Pedestrians | Low | Moderate | Moderate-Low |
| 3 | Recreation | Low | Moderate | Moderate-Low |
| 4 | Motorists/public transport/cyclists | Low | Moderate | Moderate-Low |
| Receptor location IC2 – View looking west from Manning Street towards bioretention facility | | | | |
| | N/A | N/A | N/A | N/A |

| Receptor | | Sensitivity to change | Magnitude of change | Overall rating |
|---|-------------------------------------|-----------------------|---------------------|----------------|
| Receptor location IC3 – View looking east along Victoria Road near Terry Street | | | | |
| 1 | Pedestrians | Low | Low | Low |
| 2 | Motorists/public transport/cyclists | Low | Low | Low |
| Receptor location IC4 – View looking south along Terry Street towards Victoria Road | | | | |
| 1 | Residents | Low | Low | Low |
| 2 | Pedestrians | Low | Low | Low |
| 3 | Motorists/cyclists | Low | Low | Low |
| Receptor location IC5 – View looking north along Springside Street towards Victoria Road | | | | |
| 1 | Residents | Low | Low | Low |
| 2 | Pedestrians | Low | Low | Low |
| Receptor location IC6 – View looking west along Victoria Road at corner of Crystal Street | | | | |
| 1 | Pedestrians | Low | Moderate | Moderate–Low |
| 2 | Cyclists | Low | Low | Low |
| Receptor Location SP1 – view looking south from corner of Barwon Park Road and Campbell Road | | | | |
| 1 | Residents | Low | Low | Low |
| 2 | Pedestrians | Low | Low | Low |
| 3 | Motorists/cyclists | Negligible | Negligible | Negligible |
| Receptor Location SP2 – View from Campbell Road verge looking west | | | | |
| 1 | Pedestrians | Low | Low | Low |
| 2 | Motorists/public transport/cyclists | Negligible | Negligible | Negligible |
| Receptor Location SP3 – View looking north from St Peters Interchange share pathway | | | | |
| 1 | Pedestrians/recreational cyclists | Low | Low | Low |

Table 7-77 Summary of operational impacts – view loss

| Receptor | | Sensitivity to change | Magnitude of change | Overall rating |
|---------------------------|---|-----------------------|---------------------|----------------|
| Rozelle Rail Yards | | | | |
| 1 | Free-standing dwellings located on Foucart Street near the corner of Lilyfield Road | High | High | High |
| 2 | Residences within the vicinity of Hutcheson Street and Denison Street near Lilyfield Road | High | High | High |
| Iron Cove Link | | | | |
| 1 | Medium rise residential apartments ('Union Balmain'), Nagurra Place | Moderate | Low | Moderate–Low |
| 2 | Low rise residential apartments 'Balmain Shores' | Moderate | Low | Moderate–Low |
| 3 | Low rise residential apartments '43 Terry Street' | Moderate | Moderate | Moderate |

7.4 Long-term visual and landscape outcomes

Although elements of the project will have a range of landscape and visual impacts on a number of receptors (ranging from low to high impacts), the overall impacts of the project have been minimised through urban design, as outlined in **section 2.4** and further detailed in **Appendix L** (Urban Design Report) of the EIS. This includes the provision of landscape planting along and around key visible infrastructure such as ventilation facilities and MOCs. The assessments provided in **section 7.3** consider these plantings at a young age (12 to 18 month growth). Over time and as these trees mature, the benefits provided by landscape planting will improve. These benefits include providing additional visual screening from some receptors, reducing contrast with the existing landscape setting, and improving streetscapes and amenity.

Urban Design and Landscape Plans have been prepared for the M4 East and New M5 projects, including land around the Wattle Street interchange at Haberfield and the St Peters interchange at St Peters. Similar plans will be prepared for the M4-M5 Link project. It is anticipated these plans will provide further guidance for specific project elements, and allow for additional architectural treatments and landscape works to further minimise project impacts. These would be developed with consideration to the recommended mitigation measures provided at **section 9.1**.

8 Assessment of cumulative impacts

8.1 Other WestConnex projects

As outlined in **section 1.1**, this project (M4-M5 Link) is part of WestConnex program of works. The potential for cumulative impacts with these other WestConnex projects are described in **Table 8-1**.

Table 8-1 Cumulative impacts – WestConnex projects

| Sub-project | Assessment |
|--|---|
| M4 Widening (Parramatta to Homebush) | <p>The M4 Widening project involved widening the existing M4 Motorway from three to four lanes in each direction for approximately 7.5 kilometres between Pitt Street, Parramatta and Homebush Bay Drive, Homebush.</p> <p>The M4 Widening project would not be expected to cause cumulative visual amenity impacts for the M4-M5 Link project, given the geographical separation of the projects which would not result in any overlap of landscape character zones or visual receptors. The M4 Widening is complete and open to traffic.</p> |
| M4 East (Homebush to Haberfield) | <p>The M4 East project involves upgrade and extension of the M4 Motorway from Homebush Bay Drive at Homebush to Parramatta Road and City West Link (Wattle Street) at Haberfield. This includes twin tunnels about 5.5 kilometres long and associated surface works to connect to the existing road network.</p> <p>The overlapping construction footprints of the M4 East and M4-M5 Link projects would result in nearby residents in Haberfield and Ashfield being subject to further motorway construction work within their neighbourhood. This would similarly affect motorists who regularly travel through the area. The M4-M5 Link project would result in a high cumulative visual amenity impact on affected Haberfield and Ashfield residents due to the continued presence of visible construction facilities and construction activities occurring over this period. Compensatory mitigation could be considered for residents, subject to sustained cumulative impacts, eg provision of streetscape treatments to be undertaken in conjunction with the M4-M5 Link project.</p> |
| New M5 (Beverly Hills to St Peters) | <p>The New M5 project involves construction and operation of a new, tolled multi-lane road link between the existing M5 East Motorway, east of King Georges Road, and St Peters. The project also includes an interchange at St Peters and connections to the existing road network.</p> <p>At Campbell Road, St Peters part of the New M5 project overlaps with the construction site for the M4-M5 Link project. The construction footprint of the M4-M5 Link project would be small in comparison with the New M5 project. The number of sensitive residential receptors affected by the project is likely to be relatively small. However, for this small group of residents, the project will result in a further prolonged period of construction, also impacting on motorists who regularly drive through this area. Once both projects are completed, substantial levels of amenity for local residents will be provided, notwithstanding the early stage of landscape development.</p> |
| King Georges Road Interchange Upgrade (Beverly Hills) | <p>The King Georges Road Interchange Upgrade involves construction works to increase capacity on the King Georges Road on and off ramps to the M5 Motorway. This work is now completed. No further cumulative visual impacts are therefore anticipated with the M4-M5 Link project, in particular given the geographic separation of the projects.</p> |

Large parts of WestConnex have low to negligible landscape and visual impacts during operation due to the subterranean nature of the majority of the project. However, ventilation buildings/outlets, substations and other above ground elements such as dive structures with associated retaining walls, portals, and wide expanses of motorway, have the potential to be visually intrusive unless well-considered within an architectural, urban design framework.

The overall cumulative impacts of the WestConnex project can be described as high and irreversible given the scale of and time required for construction, and the impacts on communities where the project connects to the surface road network and other discrete locations such as ventilation facilities, substations and water treatment plants. It comprises one of the most comprehensive program of changes to the road network that the city has experienced in recent years.

However, the cumulative impacts of WestConnex have been reduced as far as practicable by tunnelling and through the site selection process for construction and surface operation locations. WestConnex is also providing beneficial landscape character and visual amenity outcomes, including extensive landscaping at the St Peters interchange setting with direct linkage created to Sydney Park, and the provision of new open space at the Rozelle Rail Yards site. Active transport connections would also be provided at Rozelle, Iron Cove and St Peters and landscaping works would be delivered across the project, to provide positive urban design outcomes.

8.2 Other transport projects

8.2.1 Rozelle Rail Yards site management works

NSW Roads and Maritime Services has determined the site management works project under Part 5 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act). The Rozelle Rail Yards have remained largely disused for a number of years and had accumulated redundant rail infrastructure, waste and contamination. Various fast growing and noxious weeds also grew over a large part of the site. The site management works would manage the existing environmental and safety issues at the site and improve access to surface conditions.

The works comprise:

- Site establishment – including fencing, installing temporary site offices, arranging site access, erosion, sediment and drainage controls and defining lay down, stockpile and transfer areas
- Utility location and site investigations
- Removal of waste, existing stockpiles and vegetation
- Removal of existing above ground rail infrastructure, including gantries, railway lines, ballast, sleepers and buildings (but excluding the southern penstock, the switching station, the transformer and rail infrastructure to the east of Victoria Road bridge) and redundant services where intercepted when removing infrastructure (eg gantries and ballast) generally to a depth of 500 millimetres below ground level, except where drainage channels and sediment basins are required
- Site stabilisation comprising reshaping of the ground surface as a result of the site management works and installation of stormwater controls including the construction of drainage channels and sediment basins
- Site completion and handover – demobilise all temporary construction materials, plant and equipment installed for the works and leave the site secure.

The site management works are expected to be completed prior to construction of the M4-M5 Link project commencing.

Operation landscape character and visual impacts were assessed as part of the site management works review of environmental factors (REF) and found:

- After the site management works are completed, the landscape character of the site would be altered through the removal of vegetation, structures and redundant rail infrastructure, and subsequent increase in the extent of open land and a largely vacant site. This largely vacant use is unlikely to have an impact on the landscape character of the local area, as it would neither add nor detract from the area's inner city urban character. However, the change would be noticeable to some receptors
- Once the works are complete the site will be managed but the level of activity would be minor. Views to the site would have changed (eg the site may be slightly lower and would contain sediment basins) but no views would be blocked or obstructed. Certain views to City West Link

may change but the trees to the north of the site and within the City West Link road corridor screen the road

- The potential impacts on landscape character and visual amenity range from negligible to low. Overall it is therefore considered that the finished site of the proposal is not considered to have a significant impact on landscape character and visual amenity.

While the site management works are unlikely to result in a significant impact, there is a potential for cumulative visual impacts when considered in conjunction with the M4-M5 Link project. This is due to the removal of vegetation, which would result in more prominent views of the M4-M5 Link project both during its construction and operation.

The site management works are scheduled to be completed in mid-2018 prior to the start of construction for the M4-M5 Link project. As a result, cumulative construction impacts have not been assessed here.

8.2.2 Central Business District (CBD) and South East Light Rail Project (CSELR) – Rozelle maintenance depot

The CBD and South East Light Rail project involves the construction of about 13 kilometres of new light rail track from Circular Quay to Central, Kingsford and Randwick via Surry Hills and Moore Park and maintenance and stabling facilities.

Of relevance to the M4-M5 Link project, the Rozelle maintenance depot would be located next to the existing Lilyfield light rail stop, west of the site within the western portion of the Rozelle Rail Yards. Construction works have begun for the Rozelle maintenance depot and are expected to be completed in 2018 (operational in 2019). The construction of the depot would therefore potentially coincide with the M4-M5 Link project for a limited period of time in late 2018.

Construction landscape character and visual impacts were assessed as part of the CSELR EIS with the following relevant findings:

- There would be moderate adverse landscape impact during construction due to removal of trees from the southern boundary adjacent to City West Link. These works have already taken place and, as anticipated, have resulted in a considerable break in the continuity of the roadside vegetation at this location
- Moderate adverse visual impacts would result from lighting for night works
- There would be a neutral impact on the Catherine Street Railway Bridge (heritage-listed).

Operation landscape and visual impacts were also assessed with the following relevant findings:

- Minor adverse landscape impact during operation as a result of the removal of trees from the southern boundary
- Moderate adverse visual impacts are anticipated from Lilyfield Road and Catherine Street, primarily associated with the erection of larger structures on the site and removal of vegetative screening which would result in more prominent views of the site
- Views of the city and Harbour Bridge from the west may also be partially obscured.

Both the construction and operational impacts of the CSELR project may result in cumulative impacts when considered in conjunction with the M4-M5 Link project. Removal of vegetation which has recently been undertaken as part of the CSELR project has provided unfiltered views at some locations to the construction of the project. The removal of this vegetative screening could additionally lead to more prominent views to parts of the M4-M5 Link project both during its construction and operation for sensitive receptors such as the residences along Lilyfield Road.

There is also potential for community construction fatigue to occur as a result of the combination of these two projects, resulting from extended duration of views to construction works. Construction programs for each estimate the completion of one at the same time as the commencement of the other which would lead to continuity of construction works over a prolonged period. This is particularly the case for residential receptors surrounding the site.

Relevant mitigation proposed for the CSELR comprises:

- Provision of tree and shrub planting to the northern side of the site, adjacent to Lilyfield Road, to restore the green edge and filter views.
- Investigation of opportunities to provide screen planting along the southern edge of the site to filter views from the Lilyfield light rail stop.

8.2.3 Sydney Gateway

Sydney Gateway would provide for a new connection between the new St Peters interchange and Sydney Airport and Port Botany. No design information is available at this time that would enable a cumulative assessment of landscape and visual impacts. It is anticipated the Sydney Gateway project would consider the landscape and visual assessment outcomes of interfacing stages of WestConnex as part of a cumulative impact assessment which would be undertaken during the project's planning and assessment stage.

8.3 Urban renewal strategies

8.3.1 The Bays Precinct Transformation Strategy

As outlined in **section 4.3**, a strategic planning process is currently being led by UrbanGrowth NSW for an area of land and harbour known as The Bays Precinct.

A Transformation Plan has been developed by UrbanGrowth NSW which represents a blueprint to transform The Bays Precinct into a hub of enterprise, activity and public spaces. The Plan also sets out immediate, medium term and long term priorities for the sub-precincts. Immediate Priority Destinations (works commencing 2015 – 2019) include the Bays Waterfront Promenade (Stage 1 Pyrmont to Blackwattle Bay and future stages consistent with medium and longer-term priorities) and the White Bay Power Station (including surround). Medium-term Priority Destination (works commencing 2019 – 2022) includes Rozelle Bay and Bays Waterways (Blackwattle and Johnston Bays). Longer-term Priority Destinations (works commencing 2022 and beyond) include the Rozelle Rail Yards.

The cumulative impacts of the M4-M5 Link and The Bays Precinct project could result in a considerable shift in land use, built form and landscape character as disused and under-utilised land areas are developed. Better public access to the waterfront and waterways and the introduction of community facilities such as the proposed waterfront promenade and on-water recreation facilities would also potentially lead to a greater numbers of receptors utilising the general area for recreation.

There is opportunity for integration between the sites to ensure a balanced outcome from a visual amenity, active transport and heritage interpretation perspective. Roads and Maritime has been working with UrbanGrowth NSW to ensure their early plans for The Bays Precinct have been considered in relation to the design of the Rozelle interchange.

8.3.2 Parramatta Road Corridor Urban Transformation Strategy

The Parramatta Road Urban Transformation Strategy (approved in November 2016) is the NSW Government's 30-year plan, setting out how the Parramatta Road Corridor will grow and bring new life to local communities living and working along the corridor. The vision and principles of the Strategy are designed to optimise the benefits of the NSW Government's investment in WestConnex. The Strategy is enabled by removing significant volumes of traffic from Parramatta Road as a result of the M4-M5 Link project and other WestConnex stages.

The corridor spans 20 kilometres and includes eight identified urban renewal precincts. The Pyrmont Bridge Road tunnel site (C8) is located within the Camperdown precinct, the eastern most of the urban renewal precincts.

The strategy for the Camperdown precinct identifies the 'Camperdown Triangle' at the intersection of Parramatta Road, Pyrmont Bridge Road and Mallett Street as a potential biomedical hub. One of the key actions for the Camperdown precinct is to prioritise land use for biotechnology and employment uses that support the growth of the nearby institutions, such as RPA Hospital and Sydney University. Plans for the Camperdown precinct also include reinforcing active transport over private vehicle

movements and improving high capacity public transport connections along Parramatta Road to the Sydney CBD.

Development of the precinct is expected to occur over a longer timeframe (the next 20 years) and as a result, is unlikely to overlap with the construction period of the project, thereby avoiding potential simultaneous and cumulative construction impacts. Following construction, the Pyrmont Bridge Road tunnel site (C8) site would be remaining project land and subject to the Residual Land Management Plan. There is opportunity for this remaining project land to be developed in consideration of the objectives of the Parramatta Road Urban Transformation Strategy however this is beyond the scope of the project. Future development and/or use of this site would be detailed in the Residual Land Management Plan. This generally lends to the likelihood of positive cumulative visual impacts.

9 Management of impacts

The detailed design and construction of the M4-M5 Link project would be managed to ensure that, as far as possible, the identified landscape and visual impacts are minimised by implementation of a range of general and specific measures.

9.1 Landscape character and visual impact mitigation strategy

The landscape and visual impact mitigation strategy for the project is to:

- Avoid, reduce and manage identified potential landscape and visual impacts during construction and operation
- Provide substantial mature and semi-mature street-tree planting for screening and shade, and mixed sizing of planting where stratification of the canopy is desired
- Provide high quality finishes to buildings and ventilation facilities to facilitate long term durability of the design for effect with minimal maintenance, eg use of hard rock rather than concrete with a pigment which may fade over time
- Improve open space to offset additional infrastructure, eg provision of street trees to adjoining local streets affected by the project
- Improve active transport links to reduce reliance on motorway and local roads for short journeys.

An Urban Design and Landscape Plan (UDLP) would be prepared based on the detailed design of the project. The UDLP would be prepared with consideration of the recommendations made in this LVIA. The UDLP is to be prepared in consultation with relevant councils, the community and affected landowners and businesses.

9.1.1 General recommendations

A series of general recommendations are provided to mitigate construction and operational impacts, and are presented in **Table 9-1**.

Table 9-1 Landscape and visual impact mitigation strategy – general recommendations

| Impact | No. | Mitigation strategy | Timing |
|---|-----|---|--------------|
| General impacts to landscape and visual amenity | LV1 | Ancillary facilities, including the locations of visible structures and plant and perimeter fencing and treatments, will be developed to minimise visual impacts for adjacent receivers where feasible and reasonable. | Construction |
| | LV2 | Site lighting will be designed to minimise glare issues and light spillage in adjoining properties and would be generally consistent with the requirements of <i>Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting</i> . | Construction |
| | LV3 | Regular maintenance of site hoarding and perimeter site areas should be undertaken, including the prompt removal of graffiti. | Construction |
| | LV4 | Construction worksites and construction ancillary facilities will be established to minimise the need to remove screening vegetation wherever practicable. | Construction |
| | LV5 | Hoardings and temporary noise walls will be erected as early as possible within the site establishment phase to provide visual screening. | Construction |

| Impact | No. | Mitigation strategy | Timing |
|--------|------|---|--------------|
| | LV6 | Acoustic sheds will be designed to be visually recessive and minimise potential overshadowing impacts where possible. | Construction |
| | LV7 | Where necessary, construction lighting will comply with the requirements of the Civil Aviation Safety Authority and Sydney Airport at all times. | Construction |
| | LV8 | Visible elements of operational facilities will be designed to satisfy functional requirements and adopt the design principles detailed in the M4-M5 Link Urban Design Report. The proposed designs will be documented in the UDLP for the project. | Construction |
| | LV9 | The slopes of vegetated batters that form part of the final urban design and landscaping solution will be limited to no more than 1:4 where possible in order to maximise the impact of vegetation on these batters and minimise maintenance. | Construction |
| | LV10 | Where construction ancillary facilities are located in close proximity to sensitive residential receivers such as residents and users of recreational space, high quality fencing suitable for parks and public spaces should be considered. | Construction |

9.1.2 Design recommendations

A series of recommendations are provided in **Table 9-1** and have been developed to inform the detailed design of specific project elements. They have been developed to ensure the project would reduce and manage specific landscape and visual impacts during operation, previously identified in **Chapter 7** of this report.

Table 9-2 Landscape and visual impact mitigation strategy – design recommendations

| Impacts | No. | Mitigation strategy | Timing |
|--|------|---|--------------|
| Impacts to visual amenity as a result of the Darley Road motorway operations complex | LV11 | Investigate options for planting of vegetation to screen residents on the southern side of Darley Road from the Darley Road motorway operations complex. Include feasible and reasonable measures in the relevant UDLP. | Construction |
| | LV12 | Architectural design and detailing of the water treatment facility, substation and front fencing should achieve articulation, visual interest, and integrate with the streetscape. | Construction |
| Impacts to visual amenity at the Rozelle interchange | LV13 | Integrate the new open space at Rozelle with the Lilyfield Road streetscape through considered street tree planting and associated landscape works. | Construction |
| | LV14 | Implement urban design and landscape measures that allow permeable views between the City West Link carriageway and the new open space to provide a sense of openness and connection with the open space for motorists and the community. | Construction |

| Impacts | No. | Mitigation strategy | Timing |
|---|------|--|--------------|
| | LV15 | Investigate measures to minimise view impacts of the project to sensitive residential receptors in the vicinity of the Rozelle Rail Yards as described in this assessment and include in the UDLP where reasonable and feasible. | Construction |
| | LV16 | Develop a design that aims to incorporate the ventilation outlets at the Rozelle Rail Yards as an integral component of the larger open space composition, with reference and consideration to the Ventilation Facility Design Review (Annexure 2 of Appendix L (Technical working paper: Urban design)). | Construction |
| | LV17 | Consult with UrbanGrowth NSW regarding the interface between the project footprint and the White Bay Power Station precinct. Design the interface to ensure compatibility between the two areas from a landscaping, visual, heritage and active transport connectivity perspective. | Construction |
| | LV18 | Investigate measures to retain the mature trees of high retention value adjacent to the light rail corridor at the corner of The Crescent and City West Link, or provide screen planting alongside the retaining wall edge of the light rail corridor, to minimise landscape and visual impacts. | Construction |
| Impacts to visual amenity at Iron Cove Link | LV19 | Investigate vegetative and other screening measures along Victoria Road to improve the visual amenity of the streetscape and reduce impacts associated with the ventilation outlet and increased glare from the portals to residential dwellings to the north of Victoria Road. | Construction |
| | LV20 | Provide a well-articulated, integrated car parking and landscape design for the bioretention facility in Manning Street that is place sensitive, and enhances the interface between the project and both King George Park and adjacent residences. | Construction |
| Impacts to visual amenity at St Peters interchange | LV21 | The UDLP for the area adjoining Campbell Road motorway operations complex is to be consistent with the New M5 UDLP at St Peters. | Construction |
| Visual amenity impacts associated with design of ventilation outlets at Rozelle, Iron Cove Link and St Peters | LV22 | Investigate measures during detailed design to reduce the height, bulk, scale and enhance the landscape setting of the ventilation outlets, subject to achieving desired ventilation outcomes, and in accordance with the design principles detailed in the M4-M5 Link Urban Design Report. | Construction |

10 Conclusion

The project generally provides a moderate to low level of landscape character and visual impacts. This is due in large measure to the following elements which have been incorporated into the concept design through a process of design development which involved gradual refinement to avoid or minimise impacts where possible:

- Undergrounding of the majority of the road infrastructure at Rozelle Rail Yards, and provision of extensive and well-considered open space above including two major north south pedestrian/cycle connections over City West Link, linking Lilyfield with Rozelle, and one east west pedestrian/cycle connection under Victoria Road, with potential for future connection to Bays Precinct
- The integration of the Iron Cove Link within a well-considered streetscape setting, and locating of the ventilation outlet within the centre median rather than abutting existing residential development
- Integration of the Campbell Road ventilation facility within the New M5 portals and separated from nearby residences.

Key visual impacts of the project during construction primarily relate to residential receptors and result from building and tree removal, visibility and overshadowing of residences from acoustic sheds, noise walls and hoardings, and visibility of constructional activities such as spoil haulage. The magnitude of these impacts vary are due to the proximity of receptors, duration of the view and the scale and visibility of construction works. These impacts are temporary in nature and would be mitigated where possible through appropriate siting of infrastructure, materials and finishes of sheds and hoarding, and management of light spill.

The key landscape character impacts of the project relate to sensitive landscape character zones that are likely to experience a noticeable change in outlook as a result of new operational infrastructure or landscape elements. These areas include the Easton Park residential precinct, White Bay Power Station precinct, Callan Park residential precinct and Barwon Park precinct.

Visual impacts arising from the project primarily relate to new permanent operational infrastructure and landscape elements impacting on existing views. In particular, ventilation facilities at the Rozelle interchange, Iron Cove Link and St Peters interchange are of contrasting bulk, scale and form when compared to other built form elements within existing views. Key visual receptors subject to high visual impacts include:

- Residential and recreational receptors surrounding Easton Park at Rozelle, which would have open views of the Rozelle ventilation facility and outlets. Vegetation within the new open space created by the Rozelle interchange would eventually screen some of this view
- Recreational receptors at Glebe Foreshore Parklands, which, as a result of the clearing of vegetation at the south western corner of City West Link and The Crescent, opening views across Rozelle Bay and to the Rozelle ventilation facility and outlets. This view is in the context of other infrastructure visible in the skyline such as the Anzac Bridge and Glebe Island silos
- Residential, pedestrian and light rail patron receptors near the Rozelle Bay light rail stop, which would have new, open views toward the Rozelle interchange including ventilation outlets, new open space and associated active transport infrastructure. However, new views towards the city skyline would also be created
- Residential receptors along Terry Street at Rozelle, which would experience a change in view associated with the Iron Cove Link ventilation outlet encroaching into the existing view to Callan Park.

Other key visual impacts comprise assessed high view loss at two locations: free-standing dwellings located on Foucart Street near the corner of Lilyfield Road and residences within the vicinity of Hutcheson Street and Denison Street near Lilyfield Road. These dwellings look east across part of the Rozelle Rail Yards, and south across the western part of the Rozelle Rail Yards respectively with views to the city skyline to the city skyline. While these locations would experience a change in skyline view, there would also be an enhancement of foreground view associated with the new open space and active transport connections through the Rozelle interchange, providing additional community benefits to these areas.

Mitigation and design measures that have been recommended for the project to minimise identified visual impacts include:

- Integrating the new open space at Rozelle with the Lilyfield Road streetscape through considered tree planting and associated landscape works
- Investigating measures during detailed design to reduce the height, bulk and scale of ventilation outlets at Rozelle, Iron Cove and St Peters, and provide materials/finishes that reduce impacts to sensitive visual receiver locations
- Consultation with UrbanGrowth NSW to ensure that in the area where the project interfaces with the White Bay Power Station precinct, the design achieves appropriate integration from a landscaping/ visual, heritage and active transport connectivity perspective
- At the St Peters interchange, making provision for soft landscape works within the motorway operations complex, which has substantial areas of hardstand visible from the public domain.

Although elements of the project will have a range of landscape and visual impacts on a number of different receptors (ranging from low to high impacts), the overall impacts of the project have been minimised through urban design. This includes the provision of landscape planting along and around key visible infrastructure such as ventilation facilities and motorway operations complexes. Over time and as these trees mature, the benefits provided by landscape planting will improve.

UDLPs have been prepared for the M4 East and New M5 projects. Similar plans will be prepared for the M4-M5 Link project. It is anticipated these plans will provide further guidance for specific project elements, and allow for additional architectural treatments and landscape works to further minimise impacts.

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Annexures

Annexure A - Aboriginal and Non-Aboriginal heritage items

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|--|---------------------------------|---|
| I658 | Former general store, including interiors | Local (Leichhardt LEP 2013) | 2 Hubert Street. |
| I819 | Corner shop and residence, including interiors | Local (Leichhardt LEP 2013) | 79 Allen Street. |
| 4805738 | Leichhardt (Charles St) Underbridge | Local (RailCorp S 170 Register) | The Charles Street Underbridge is part of the original infrastructure for the Metropolitan Goods Line. It is a highly visible landmark structure over Charles Street. |
| C34 | Toxteth Heritage Conservation Area | Local (Sydney LEP 2012) | Jubilee Park forms part of the Toxteth conservation area which demonstrates the first period of European development in Glebe. |
| I648 | Jubilee Park and Oval including cricket pavilion, oval with picket fence and landscaping | Local (Sydney LEP 2012) | Once part of Federal Park, Jubilee Park was excised and named to mark the celebrations of fifty years of local government on 2 August 1909. It features Moreton Bay figs, Canary Islands palms and some rainforest trees planted between 1906 and 1910. A cricket pavilion was constructed in 1910. In 1923 a rotunda was built in the park to accommodate the Glebe Brass Band. |
| I647 | Pope Paul VI Reserve including trees | Local (Sydney LEP 2012) | Named to commemorate the first Papal visit to Australia in December 1970, the Reserve previously featured a wharf but reclamations created a marine reserve. Pope Paul alighted from a launch at this site. It includes two mature Moreton Bay Figs (<i>Ficus macrophylla</i>), located on a gently sloping open lawn area. The trees visually dominate the reserve and create a dramatic sense of place. |
| I630 | Johnstons Creek including canal and bridge | Local (Sydney LEP 2012) | Johnston's Creek was converted from a natural watercourse into a brick and concrete channel in the 1890s. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|--|-----------------------------|---|
| I815 | Allan truss bridge, former Federal Road Bridge | Local (Sydney LEP 2012) | This bridge was constructed in the 1890s and is a rare remaining timber road bridge within a City context. It crosses Johnston's Creek and connects Jubilee Park to Federal Park. It was reconstructed in 1998-2000 and converted into a footbridge. |
| I30 | Federal Park including landscaping | Local (Sydney LEP 2012) | The Park consists of open space, grassed surface and tree plantings. Park Land around Johnston's Creek including mature trees. Trees include Moreton Bay Figs, Weeping Willows, Willow Canary Island Palms, Brush Box. The Park and its landscaping is considered to have townscape, social and cultural significance. |
| C1 | Annandale Heritage Conservation Area | Local (Leichhardt LEP 2013) | One of a number of conservation areas that collectively illustrate the nature of Sydney's early suburbs and Leichhardt's suburban growth particularly between 1871 and 1891, with pockets of infill up to the end of the 1930s. Displays a fine collection of large detached Victorian Italianate boom period villas with most decorative details still intact, set in gardens. Demonstrates the most extensive example of the planning and architectural skills of Ferdinand Reuss. |
| I83 | Sandstone retaining wall | Local (Leichhardt LEP 2013) | Johnston Street, intersection with Rose Street (road reserve). |
| I65 | House 'The Abbey' including interiors | Local (Leichhardt LEP 2013) | <p>272 Johnston Street. Part of a group of eight (260-272) heritage houses known as the 'Johnston Street group'</p> <p>A complex mansion in the Gothic style incorporating an earlier residence now screened with a cloister. built in 1881-1882, The building steps down the site building up in mass toward the front centering on the tower, the whole being strengthened by numerous flanking chimneys, turrets and a ballroom. Walls are of rock faced coursed ashlar with chisel draughted edges and dressed copings. The roof is patterned terra cotta tiles with copper to the tower. Reinforced concrete is used extensively including the first known cantilever.</p> |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|---|-----------------------------|---|
| I64 | House 'Oybin' including interiors | Local (Leichhardt LEP 2013) | 270 Johnston Street. Part of the 'Johnston Street group' of houses. An example of a single storey Victorian Italianate villa constructed in 1880. The distinct central square tower, centre front porch with central archway, pilasters, entablature and balcony above with colonnade balustrade are significant and make a positive contribution to the streetscape. |
| I66 | Street trees Brush Box | Local (Leichhardt LEP 2013) | A row of Brush Box that line much of Johnston Street. |
| I59 | Large sandstone wall and gateways to homes | Local (Leichhardt LEP 2013) | 258-272 Johnston Street. Wall and gateways adjoining the 'Johnston Street group' of houses. |
| I63 | House 'Greba' including interiors | Local (Leichhardt LEP 2013) | 266 Johnston Street. Part of the 'Johnston Street group' of houses. Good example of a 19th century Italianate villa. |
| I62 | House 'Hockingdon' including interiors | Local (Leichhardt LEP 2013) | 264 Johnston Street. Part of the 'Johnston Street group' of houses. One of three of a group known as the 'Witches Houses'. |
| I61 | House 'Highroyd' including interiors | Local (Leichhardt LEP 2013) | 262 Johnston Street. Part of the 'Johnston Street group' of houses. One of three of a group known as the 'Witches Houses'. |
| I60 | House 'Kenilworth' including interiors | Local (Leichhardt LEP 2013) | 260 Johnston Street. Part of the 'Johnston Street group' of houses. One of three of a group known as the 'Witches Houses'. |
| I58 | Sandstone retaining wall and Winkworth steps | Local (Leichhardt LEP 2013) | The Johnston Street 'Winkworth Steps' are of local historic, aesthetic and technological significance as a late Victorian structure. The wall and stairs retain their original form but the palisade fence has been replaced. Overall the wall and fence make a positive visual contribution to this section of Johnston Street and the lower part of Rose Street. |
| I57 | North Annandale Public School including interiors | Local (Leichhardt LEP 2013) | 196 -212 Johnston Street. |
| I56 | House including interiors | Local (Leichhardt LEP 2013) | 191 Johnston Street. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|---|-----------------------------|--|
| I77 | War memorial | Local (Leichhardt LEP 2013) | Piper Street. |
| I76 | Hinsby Reserve | Local (Leichhardt LEP 2013) | Piper Street. |
| I55 | Substation including interiors | Local (Leichhardt LEP 2013) | 182 Johnston Street. |
| I54 | House including interiors | Local (Leichhardt LEP 2013) | 134 Johnston Street. |
| I53 | House including interiors | Local (Leichhardt LEP 2013) | 132 Johnston Street. |
| C1 | Annandale Heritage Conservation Area | Local (Leichhardt LEP 2013) | One of a number of conservation areas that collectively illustrate the nature of Sydney's early suburbs and Leichhardt's suburban growth particularly between 1871 and 1891, with pockets of infill up to the end of the 1930s. Displays a fine collection of large detached Victorian Italianate boom period villas with most decorative details still intact, set in gardens. Demonstrates the most extensive example of the planning and architectural skills of Ferdinand Reuss. |
| I79 | Avenue of Phoenix canariensis | Local (Leichhardt LEP 2013) | Row of mature Phoenix canariensis palms defining open space and associated with Inter War Period plantings located within the road reserve along Railway Parade. |
| I78 | Street Trees – row of palms | Local (Leichhardt LEP 2013) | Row of mature palms along Railway Parade located within the road reserve. |
| I10 | Street Trees row of brush box | Local (Leichhardt LEP 2013) | Row of brush box planted along the road way at Bayview Crescent. |
| I11 | Iron/sandstone palisade fence | Local (Leichhardt LEP 2013) | Fence located along the north western side of Bayview Crescent within the road reserve. |
| I7 | Semi-detached house, 'Pen Dinas', including interiors | Local (Leichhardt LEP 2013) | 342 Annandale Street, Annandale. |
| I8 | Shop and residence including interiors | Local (Leichhardt LEP 2013) | 349 Annandale Street, Annandale. |
| I4 | Former shop and residence, 'Craiglea' including interiors | Local (Leichhardt LEP 2013) | 291 Annandale Street, Annandale. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|---|----------------------------------|---|
| I9 | Street Trees | Local (Leichhardt LEP 2013) | Annandale Street, road reserve between Piper Street and Booth Street. |
| I6 | Terrace including interiors | Local (Leichhardt LEP 2013) | 302 Annandale Street. |
| I74 | White's Creek Aqueduct | State (SHR ,Leichhardt LEP 2013) | Completed in 1897, the Whites Creek Sewage Aqueduct is a major and highly visible component of the Northern Main Sewer extension of the Bondi Ocean Outfall Sewer. The arches and carrier of the aqueduct are one of the first major constructions undertaken using reinforced concrete in NSW and one of the first in Australia and the slender proportions of the supporting arches and sewage carrier make it not only functional, but also a major landmark for Sydney. |
| I26 | Substation, Sydney Water (SP:5), including interiors | Leichhardt LEP 2013 – Local I26 | 1B Hutchinson Streets, at the corner of Railway Parade near Whites Creek park. |
| #8 | Arched Bridge (at Whites Creek) | Local (SREP 26) | No information available and inaccessible to make a description. |
| I360 | House, "Tilba Tilba", including interiors | Local (Leichhardt LEP 2013) | 18 White Street. |
| I675 | Former factory, including interiors | Local (Leichhardt LEP 2013) | 111 Moore Street. |
| I705 | House, 'Rutherford', including interiors | Local (Leichhardt LEP 2013) | 243 Balmain Road. |
| I704 | 'Grenfell Cottage', including interiors | Local (Leichhardt LEP 2013) | 23 Ainsworth Street. |
| I674 | Former corner shop and residence, including interiors | Local (Leichhardt LEP 2013) | 77 Moore Street. |
| C16 | Brennan's Estate Heritage Conservation Area | Local (Leichhardt LEP 2013) | <p>This conservation area is sited on the southeast slopes of the main Lilyfield Road/Darling Street ridge. It overlooks Whites Creek and across to Annandale.</p> <p>This area comprises workers' housing built to serve the industries along Whites Creek and Rozelle Bay. It covers much of John Ryan Brennan's subdivision of the land.</p> |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|--|------------------------------------|---|
| I722 | Former shop and residence, including interiors | Local (Leichhardt LEP 2013) | 60 Ryan Street, Lilyfield. |
| I723 | Former shop and residence, including interiors | Local (Leichhardt LEP 2013) | 62 Ryan Street, Lilyfield. |
| I714 | Timber Cottage, including interiors | Local (Leichhardt LEP 2013) | 8 Fred Street, Lilyfield. |
| 45-6-2278 | Lilyfield Cave | Rock shelter with midden | Situated in the cliff face of 81 Lilyfield Road facing south-west is a rock shelter with primarily bare sandstone flooring and a slight midden deposit. |
| 4571704 | Sewage Pumping Station No.6 | Local (Sydney Water S170 Register) | 168 Lilyfield Road, Rozelle. SP0006 is of historic, aesthetic and technical/research significance forming part of an original network of 20 low level sewage pumping stations constructed at the end of the 19th century to serve Sydney. |
| C18 | Easton Park Heritage Conservation Area | Local (Leichhardt LEP 2013) | The Easton Park Conservation Area occupies a small knoll of land above Whites Creek, and the small valley to its north, now largely occupied by Easton Park (reclaimed from Rozelle Bay). One of a number of conservation areas which collectively illustrate the nature of Sydney's early suburbs and Leichhardt's suburban growth particularly between 1871 and 1891, with pockets of infill up to the end of the 1930s (ie prior to World War II). |
| C19 | Hornsey Street Heritage Conservation Area | Local (Leichhardt LEP 2013) | Situated around a small knoll of land above Victoria Road, and just above the Whites Creek estuary and the industrial areas of Rozelle Bay. There are views across to Rozelle Bay and the city skyline. One of a number of conservation areas which collectively illustrate the nature of Sydney's early suburbs and Leichhardt's suburban growth particularly between 1871 and 1891, with pockets of infill up to the end of the 1930s (ie prior to World War II). |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|---|-----------------------------|---|
| #2 | Former Hotel, 78 Lilyfield Road. | Local (SREP 26) | Late 19th Century building, in the Victorian regency style. No official statement of significance in the listing for this item. It is representative of the predominantly Victorian development of the area, which expanded in conjunction with industrialisation of the area. |
| I765 | Cottage and former broom factory, including interiors | Local (Leichhardt LEP 2013) | 84 Foucart Street, Lilyfield. |
| I752 | Easton Park | Local (Leichhardt LEP 2013) | Dension Street. |
| I755 | House, 'Rotherhithe Cottage', including interiors | Local (Leichhardt LEP 2013) | 73 Denison Street, Rozelle. |
| I753 | Corner shop and residence including interiors | Local (Leichhardt LEP 2013) | 67 Denison Street, Rozelle. |
| I754 | Corner shop and residence including interiors | Local (Leichhardt LEP 2013) | 69 Denison Street, Rozelle. |
| I730 | Semi-detached house, including interiors | Local (Leichhardt LEP 2013) | 15 Burt Street, Rozelle. |
| I731 | Semi-detached house, including interiors | Local (Leichhardt LEP 2013) | 17 Burt Street, Rozelle. |
| I732 | Smith's Hall including interiors | Local (Leichhardt LEP 2013) | 56 Burt Street, Rozelle. |
| I764 | House including interiors | Local (Leichhardt LEP 2013) | 206 Evans Street, Rozelle. |
| I767 | Semi-detached house including interiors | Local (Leichhardt LEP 2013) | 120a Foucart Street, Rozelle. |
| I766 | Semi-detached house including interiors | Local (Leichhardt LEP 2013) | 122 Foucart Street, Rozelle. |
| I771 | House, 'Hornsey', including interiors | Local (Leichhardt LEP 2013) | 42 Hornsey Street, Rozelle. |
| I768 | St Joseph's Catholic Church, Rozelle | Local (Leichhardt LEP 2013) | 7 Gordon Street Rozelle. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|---|--|---|
| I788 | St Joseph's presbytery, including interiors | Local (Leichhardt LEP 2013) | 15 Quirk Street, Rozelle. |
| PL1 | Victoria Road Bridge | Potential Local | The Victoria Road bridge dates from the 1920s, the same era as its Catherine Street counterpart which is listed as a local heritage item on the Leichhardt LEP. It is constructed of concrete on brick piers, which carries Victoria Road across the former rail yard, with the brick piers forming bays below. The bridge was likely constructed using bricks from the State Brickworks at Homebush Bay. The bridge has local significance as a representative example of brick overbridges constructed in the 1920s, as part of the roll out of the separate freight line across the Sydney rail network. The bridge is a noticeable landscape feature that provides evidence of the Rozelle Rail Yard's industrial and transport legacy. |
| 5001335 | White Bay Power Station | State (SHR, SREP 26, SHFA S170, Pacific Power S170 Register) | White Bay Power Station was the longest serving Sydney power station and is the only one to retain a representative set of machinery and items associated with the generation of electricity in the early and mid-20th century. It is a widely recognised and highly visible landmark, marking the head of White Bay and the southern entry to the Balmain Peninsula and its industrial waterfront. It retains a powerful physical presence and industrial aesthetic and is the most important surviving industrial building in the area. |
| PL2 | Former hotel site | Potential Local | Outside of the White Bay Power Station SHR curtilage, however, is identified as being of Moderate significance, in the 2013 Conservation Management Plan. |
| PL3 | Southern penstock | Potential Local | Outside of the White Bay Power Station SHR curtilage, however, is identified as being of High significance, in the 2013 Conservation Management Plan. |
| 5051118 | Glebe Island Bridge | State (SHR,SREP) | The Glebe Island Bridge, across Johnstons Bay, was constructed between 1899-1903 and demonstrates one of the earliest examples of an electric-powered swing bridge in Australia. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|---|----------------------------------|---|
| Need ref | Glebe Island Silos | Local (SREP 26) | The silos form part of the original Glebe Island Grain Terminal, one of the earliest terminals in Australia beginning operation in 1921. It utilised technologies that were influential in the development of the industry throughout the country. The silos are the most visible and easily interpreted elements of the former use and form a significant landmark. |
| 4570343 | Whites Creek Stormwater Channel No 95 | Local (Sydney Water S170) | Constructed progressively during the period 1898 to 1938, this is one of the earliest purpose built stormwater drains constructed. In general, the visual curtilage can be described as follows: 1) The upper reaches of the channel, located south of Booth and Moore streets Annandale, is an underground structure, and holds no cultural landscape value. 2) The open sections of the channel stretches from Booth and Moore streets to the discharge point at Rozelle Bay. 3) At its lower reaches visual curtilage is limited to where the channel can be observed between City West Link and Railway Parade and from within the Whites Creek Valley Park. |
| 4803231 | Annandale (Railway Parade) Railway Bridge | Local (SREP 26, Railcorp S170) | The Annandale (Railway Parade) railway bridge has local significance as an integral part of a separate railway network built between 1910 and 1922 for freight trains to traverse the metropolitan area independent of the passenger train network. This type of half-through Pratt truss is comparatively rare in the NSW railway system. The bridge retains its original fabric and structure. |
| 4801104 | Glebe Railway Viaduct | State (SHR, Leichhardt LEP 2013) | The Glebe Viaduct across Jubilee Park and Wentworth Park has state significance as an excellent example of large scale brick arch bridge construction. The 28-span Jubilee Park Viaduct is significant as the longest section of brick arch viaduct on the NSW system. It is a major engineering work, built on reclaimed land with the brickwork sitting on timber piles. The viaduct is an elegant structure built on a curve with well detailed arches. It is situated in Federal Park. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|--|------------------------------------|---|
| SREP 26 #9 | Annandale (Johnston Street) Underbridge | Local (SREP 26, Railcorp S170) | Johnston Street Annandale. The underbridge has local significance as an integral part of a separate railway network built between 1910 and 1922 for freight trains to traverse the metropolitan area independent of the passenger train network. The riveted steel half-through Pratt truss bridge is significant as an example of a heavy-duty structure in keeping with NSW Railways design policy to allow for anticipated future heavy traffic loads, locomotives and rolling stock. This type of half-through Pratt truss is comparatively rare in the NSW railway system. The bridge retains its original fabric and structure. |
| 4571704 | Sewage Pumping Station No.6 | Local (Sydney Water S170 Register) | Historically the sewage pumping station formed part of an original network of 20 low level sewage pumping stations constructed at the end of the 19th century to serve Sydney. |
| #3 | "Cadden Le Messurier", 84 Lilyfield Road | Local (SREP 26) | Modified late 19th century commercial building, with significant changes to the façade and joinery. No official statement of significance in the listing for this item. It is representative of the predominantly Victorian development of the area, which expanded in conjunction with industrialisation of the area. |
| #6 | Lilyfield stormwater canal | Local (SREP 26) | The Lilyfield stormwater canal is exposed and extends under the study area. However, no physical inspection could be undertaken on this portion of the canal to enable an assessment of the elements present on the site and their relative heritage significance. |
| PL4 | Sandstone cutting, Rozelle | Potential Local | The sandstone cutting represents the scale and nature of works undertaken for the construction and alignment of the goods rail line. The height and size of the cutting provides evidence of the early ambitions for the train marshalling yard to be a busy interchange. The cutting is a prominent landscape feature, defining the northern limit of the marshalling yard and more generally the topography of the twentieth-century industrial-maritime landscapes of White Bay and Rozelle Bay. There are potential links to quarrying activities on Glebe Island. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|---|-----------------------------------|---|
| 4800245 | Lilyfield (Catherine St) Overbridge | Local (Railcorp S170 and SREP 26) | This item has significance as a good representative example of a large brick overbridge constructed in the 1920s as part of the NSW railway network. It is an important functioning component of the inner Sydney road and rail network and a tangible link to the former goods line and yards. |
| 17 | Iron Cove Bridge | State (SREP SHC, RTA S170) | <p>Iron Cove Bridge is an impressive steel truss bridge. It forms a local landmark that has a "gateway" quality for the suburbs of Balmain and Drummoyne due to its impressive size. The Bridge is comprised of aesthetically distinctive piers and abutments reflecting the Inter-War Art Deco style that was prevalent when it was first designed in 1942.</p> <p>It was the last steel truss bridge to be constructed in NSW using rivets for field connections prior to the introduction of high-strength bolts. The Iron Cove Bridge has been assessed as being of State significance.</p> |
| C7 | The Valley Heritage Conservation Area | Local (Leichhardt LEP 2013) | Comprises a large but tightly formed valley which falls south and east from the Darling Street ridge towards White Bay. It includes the civic buildings and the commercial zone of Rozelle on both sides of Victoria Road. This area is important for illustrating development for workers' and artisan housing particularly from 1871–1891. Through the mixture of shops, pubs and industrial buildings it demonstrates the nature of a Victorian suburb, and the close physical relationship between industry and housing in nineteenth century cities. |
| I746 | York Buildings including interiors | Local (Leichhardt LEP 2013) | 678 Darling Street. |
| I806 | Former mechanics Institute, including interiors | Local (Leichhardt LEP 2013) | 114 Victoria Road, Rozelle. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|--|-----------------------------|---|
| PL5 | House | Potential local | 260 Victoria Road, Rozelle As a group of four (260 – 266) these properties may have local significance as representative of a transitional early Federation style typical of their period. The houses have some historical interest as evidence of the late nineteenth century and early twentieth century development and subdivisions which occurred along Victoria Road. |
| PL6 | House | Potential local | 262 Victoria Road, Rozelle. |
| PL7 | House | Potential local | 264 Victoria Road, Rozelle. |
| PL8 | House | Potential local | 266 Victoria Road, Rozelle. |
| PL9 | House | Potential local | 248 Victoria Road, Rozelle. As a relatively intact example of a pair (248-250) of early twentieth century residences the properties may have local significance as representative of Federation style. The houses have some historical interest as evidence early twentieth century development. |
| PL10 | House | Potential local | 250 Victoria Road, Rozelle. |
| C6 | Iron Cove Heritage Conservation Area | Local (Leichhardt LEP 2013) | The Iron Cove Heritage Conservation Area is a northwest-facing shoreline area, running from Victoria Road along the back of the Darling Street commercial zone and the Darling Street ridge to Rowntree Street and Cove Street. One of a number of conservation areas that collectively illustrate the nature of Sydney's early suburbs and Leichhardt's suburban growth particularly between 1871 and 1891, with pockets of infill up to the end of the 1930s (ie prior to World War II). |
| I743 | Rozelle Public School, including interiors | Local (Leichhardt LEP 2013) | 663 Darling Street, Rozelle. |
| I744 | St Paul's Church and neighbourhood centre, including interiors | Local (Leichhardt LEP 2013) | 665A Darling Street. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|---|--|---|
| I786 | Former Balmain Power Station administration building, including interiors | Local (Leichhardt LEP 2013) | Margaret Street, Rozelle. |
| I787 | Former Balmain Power Station pumping station, including interiors | Local (Leichhardt LEP 2013) | Margaret Street, Rozelle. |
| I810 – I817 | Terraces, including interiors | Local (Leichhardt LEP 2013) | 2-16 York Place. |
| I751 | Maxwell House, including interiors | Local (Leichhardt LEP 2013) | 757 Darling Street, Rozelle. |
| PL11 | House | Potential Local | 8 Callan Street, Rozelle. The house at this location has aesthetic and representative significance at the local level as a good example of an interwar house with Arts and Craft Style details. |
| 5051544 | Callan Park Conservation Area and Buildings | State (SHR, S 170, SREP 22, Leichhardt LEP 2013) | The Kirkbride Block is the largest remaining mental institution in NSW and the first to be designed as a curative and therapeutic environment. The design and philosophy of 'moral therapy' treatment is evidenced in the intimate design of courtyards through to the long vistas over the hospital grounds and surrounding country. Much of the original fabric, character and setting for this major Victorian period design remain intact. Kirkbride complex's grounds include a number of landscape plantings and elements dating from the site's long involvement with the Director of the Royal Botanic Gardens. |
| 45-6-1481 | Midden | Midden | This midden (a collection of shells discarded from meals) is located within fill material on the reclaimed waterfront. |
| I15 | Former Police Station, including interiors | Local (Leichhardt LEP 2013) | 707 Darling Street, Rozelle. |
| I748 | Single story shops including interiors | Local | 731 – 735 Darling Street, Rozelle. |
| I749 | Single storey commercial building, including interiors | Local (Leichhardt LEP 2013) | 736 Darling Street, Rozelle. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|--|--|--|
| I750 | Former Fire Brigade and Ambulance Training Centre, including interiors | Local (Leichhardt LEP 2013) | 747 Darling Street, Rozelle. |
| I749 | Single storey commercial building, including interiors | Local (Leichhardt LEP 2013) | 736 Darling Street, Rozelle. |
| I744 | St Paul's Church and neighbourhood centre, including interiors (Chapel Hill Rozelle Presbyterian church) | Local (Leichhardt LEP 2013) | 665A Darling Street. |
| I745 | St Thomas' Church group, including interiors | Local (Leichhardt LEP 2013) | 668 Darling Street. Designed by Edmund Blacket in 1874 the Church was built, and later extended, in an early English Gothic style. The adjacent rectory, was constructed in 1882, in Victorian filigree style. |
| I27 | Former Bedford Brickworks Group including chimneys, kilns and grounds | Local (Sydney LEP 2012) | Located on the corner of the Princes Highway and Sydney Park Road, the brickworks group includes two Patent kilns (Hardy Patent Kiln and Hoffman Patent Kiln), three downdraught kilns, four chimneys and some building remnants. The site represents an early brickworks that is still reasonably intact and retains good integrity with much of the original built fabric retained. The large chimneys and kilns are a landmark and a focus in the St Peters / Alexandria skyline. |
| I12 | Terrace group including interiors, 2–34 Campbell Road | Local (Marrickville LEP 2011) | Two storey Victorian Regency style terrace house group. Continuous front parapet, and continuous front galvanised iron roof for balconies, face brick front wall (painted over) and timber vertical slat balcony balustrade. The houses represent early housing associated with the nearby brick making and potting works. |
| 4571712 | Alexandra Canal | State (SHR, Sydney Water S170, Sydney LEP 2012,) | Alexandra Canal is a rare example of 19th century navigational canal construction in Australia, being one of only two purpose built canals in the State. Intact original sections of the canal, comprising pitched dry packed ashlar sandstone, provides a textured and coloured finish which is aesthetically valuable in the cultural landscape. |

| Figure ID reference | Name | Significance / Site Type | Description |
|---------------------|--|------------------------------------|---|
| 45-6-0751 | Aboriginal site Shea's Creek | Artefact scatter, midden, deposit | This site was identified during construction of the canal in 1896 and comprised dugong bones and axe heads (500 metres apart) located within a layer of unctuous plastic dark bluish grey sandy clay with marine shells approximately five metres below the current ground surface. AHIMS currently lists the site as valid however the site card identifies that artefacts identified at the site were salvaged during construction of the canal. |
| I283 | Remaining brick road and footpath paving and stone guttering, Victoria Street (near 2 Bishop Street) | Local (Marrickville LEP 2011) | The brick road, footpath paving and stone guttering of Victoria Street south of Princes Highway. An early road complex which includes a partially exposed brick road surface in a herringbone pattern. Timber boarding separates the sandstone guttering from the road. The footpaths have also been brick paved. |
| 2030185 | St Peters Anglican Church, 187-209 Princes Highway, St. Peters | State (SHR, Marrickville LEP 2011) | The site contains three main buildings (St Peters Church and hall; a former rectory, built in 1906; and the present rectory, built in 1996) and a remnant graveyard. The church's foundation stone was laid in 1838 and it was completed in November 1839, making it one of the oldest churches in Sydney. The church building is unique in that it is built of sun-dried bricks with stuccoed finish forming the walls. |
| C16 | Goodsell Estate Heritage Conservation Area | Local (Marrickville LEP 2011) | Historically significant for demonstrating the principles and patterns of Marrickville's development from Colonial to contemporary eras. Frederick Goodsell's Steam Brick Factory and pit, located in the Heritage Conservation Area, was Sydney's first full steam-powered brickworks and the leading producer of its period (1869 onwards). The footprint of Camdenville Park overlays the site of the brickworks and the surviving terrace facing May Street was built by Goodsell and occupied by brick makers. |
| I273 | Terrace housing, including interiors | Local (Marrickville LEP 2011) | 105–119 May Street. |
| I276 | Service garage | Local (Marrickville LEP 2011) | 316 Princes Highway. |

Annexure B - Assumptions and inputs to assessment

Rozelle interchange assessment assumptions

It is assumed:

- There would be lighting within the project parkland to share pathways and some nodal activity areas within the park.
- Rozelle maintenance depot:
 - The Rozelle maintenance depot is under construction at the time of writing. For the purposes of this assessment, this facility is considered to be operational to avoid confusion when looking at the photomontages, between 'existing' development which has approximated surface render treatments, and built form (eg buildings and pedestrian bridges) within the project site which is shown at white block forms. Architectural design and detailing of these elements would take place in the next phase of the project.

Iron Cove Link assessment assumptions

Noise walls or other noise attenuation measures may be required along or within the vicinity of the southern edge of the project. Given that the design of these walls would be subject to detail design as part of future stages of the project, and potentially noise attenuation requirements could be achieved by other means as part of an integrated design for remaining project land, a preliminary notional noise wall concept has been undertaken for separate assessment. This assumes a worst case scenario of an effectively continuous noise wall being required along the southern edge of the project.

St Peters interchange assessment assumptions

- The project works are broadly limited to the immediate area of the M4-M5 Link portals, and the ventilation and associated facilities above. The remainder of the St Peters interchange has been approved as part of the New M5 EIS process, and is at the time of writing in the early stages of construction.

For the purposes of this assessment, it is assumed that these approved New M5 works have been completed, with the 'existing situation' soft landscape treatments assumed to be at an early stage of development, at 12–18 months into operation⁷, and that these landscape works closely about the M4-M5 Link project site. Therefore, the New M5 works are referred to as the 'existing situation' within this assessment, eg from Receptor Location SP1 below: '*The project is set within the existing recently widened Campbell Street and Campbell Road, with broad verges and street tree planting to both sides*' The 'existing situation' therefore comprises photomontages for this location, with only a limited amount of existing landscape and built form elements within them.

This M4-M5 Link project is assessed as having been at operation for between 12 and 18 months, (refer Assessment Methodology – **section 2.3.4**), placing it at the end of 2024⁸. No landscape is proposed within the project site, ie all of the landscape associated with the M4-M5 Link project would already be in place as part of the New M5 project

- Street tree species within proximity of the project comprise Sydney Red Gum (*Angophora costata*) along Campbell Street (large trees conservatively estimated to achieve a mature height of 15–18 metres in this setting), and Broad-leaved Paperbark (*Melaleuca quinquenervia*) along

⁷ Completion of the New M5 is programmed for the end of 2019. For the purposes of this assessment, the 'existing situation' is set at 12–18 months into operation (say mid-2021), such that there is sufficient landscape in place to clearly define the extent and nature of the landscape works. This is also the period at which this project was assessed within the New M5 EIS.

⁸ This project (M4-M5 Link) is scheduled to be completed midway through 2023. If we then add 12–18 months to this date, we will be assessing the landscape at a period between the middle and end of 2024. Therefore, assuming completion of the New M5 project at the end of 2019, soft landscape works will be about five years old at the end of 2024.

Campbell Road (medium size trees conservatively estimated to achieve a mature height of 8–11 metres in this setting). Assumed tree heights were derived for the New M5 works to facilitate the preparation of the required photomontages. Refer below table.

| Assumed Tree Heights | | | |
|---|---|------------------------|----------------|
| New M5 | M4-M5 | New M5 | |
| Project complete end 2019 | Project complete mid 2023 | Broad-leaved Paperbark | Sydney Red Gum |
| 'Existing situation' Photomontage #1: 12–18 mths @ mid 2021 | | 2.5–3.0 m | 3.5–4.0 m |
| | Photomontage #2: 12-18 mths into operation @ end 2024 | 4.0–5.0 m | 5.0–7.0 m |
| | Photomontage #3: 10 years into operation @ mid 2033 | 7.0–9.5 m | 12.0–15.0 m |
| Estimated mature height | | 8.0–11.0 m | 15.0–18.0 m |

- All other trees within proximity of the project, ie alongside the eastern and western edges of the project, are conservatively assumed to have a mature height of 10–12 metres given that specific tree species of these areas were not available at the time of writing.

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